Lighting Catalog

Lamp Specification and Application Guide 2011

PHILIPS

sense and simplicity

Content

Illuminating experiences

Solutions for End Users' Needs

From the cities we live in, to the places we work and shop, to our schools and care facilities, lighting touches our lives like nothing else. As a world leader in Lighting, Philips is dedicated to improving people's lives through the introduction of innovative and energy-efficient solutions.

Philips is leading the way in energy-efficient solutions, helping professionals in all segments—retail, office, and industrial, hospitality, healthcare and home—by delivering sustainable and environmentally-friendly lighting technologies and initiatives to the marketplace that also meet design requirements.

Philips is a leader in shaping the future with exciting new lighting applications and platforms such as LED technology, which, besides energy efficiency, provides attractive benefits and endless new 'never-before-possible' lighting solutions.

At Philips, every innovation is driven by the needs of the people, to help them feel more comfortable and to improve the functionality of their surroundings. Our approach is based on obtaining direct input both from customers and from end-users. Through this segment-based approach, we can assess specific customer needs, track changes over time, define new insights that fuel our innovation process, and ultimately help to bring the ideal new products into the market.

RETAIL

Brighten the shopping experience

Our high-quality, energy efficient, lighting solutions open the door for retail brands to benefit from sustainable practices and build a shopper-centric experience.

As every retailer knows, a store's success depends on projecting the right image. The right lighting is vital to creating aspirational, motivating spaces. From the sparkle in storefront displays to the engaging ambience of the interior, effective scene lighting draws shoppers in, keeps them there longer—and brings them back again.

Philips can help create enticing, effective and efficient retail spaces to bring better results.

HOSPITALITY

Make guests feel at home

From the welcoming atmosphere of a lobby to flexible guest room lighting or the subdued glow of an intimate restaurant, the right light creates a backdrop for a pleasant stay.

Hospitality is all about creating memorable travel experiences, with services and surroundings that win guest loyalty. From the seasoned business travelers to families on vacation, today's hotel guests seek properties that measure up to cultivated lifestyle expectations. Good lighting is a key component to meeting those expectations and creating favorable surroundings.

Philips can help elevate a brand and delight your guests, while reducing operational costs.

Illuminating experiences

HEALTHCARE

Improving the patient experience

Lighting can help create a world so inviting that your hospital becomes the premier choice for patients and healthcare professionals alike.

Patients are changing, and with them the character of hospitals is changing too. To compete in today's healthcare market, facilities must be designed around the needs of patients, visitors, healthcare providers and administrators. Lighting is essential to creating a welcoming, efficient facility that can contribute to patient and staff comfort, and be an influential factor in achieving your financial goals.

Philips lighting solutions can help create welcoming, efficient spaces that result in better facility operations and patient experiences.

OUTDOOR

Bringing the city to life

The use of light in outdoor areas allows a city to enhance public spaces and public life, creating a more livable community that residents are proud of.

As cities continue to grow and reinvent themselves, the use of light in urban design is becoming a key driver in creating a visual identity and experience for a city and its residents. Lighting plays an important role in transforming the look of an outdoor space—whether creating a unique identity for a city, adding a sense of safety and security to public outdoor spaces, or looking to light a local sports stadium.

Philips outdoor lighting products can light up city neighborhoods and help bring people back into the city at night.

OFFICE

Bright ideas for a world-class workplace

Choosing high-performance, green lighting solutions shows that your organization takes its role as an environmental steward seriously—and translates into better financial performance.

To make today's office facilities as responsive, productive and attractive as possible, it's important to adapt the spaces to the occupants' ever-changing demands. In creating an office environment that fulfills those needs, you create higher value and return. New lighting technologies are helping to reshape the office environment. More efficient, more adaptable, and more sustainable lighting solutions can help provide a workplace that puts tenants and building owners under the best light.

Philips sustainable lighting solutions can help transform ordinary buildings into high-performance facilities.

INDUSTRIAL

A greener, more efficient future

A lighting upgrade is an investment, not only in reducing electricity consumption, but also in improving the performance of the building and its occupants.

The pressure is on for industrial facilities to perform better and more reliably to meet their quality targets, customer expectations and financial goals. They need creative ways to improve operational efficiencies and boost productivity. Better lighting is a valuable tool for brightening industrial prospects. An effective, well-illuminated environment can positively impact employee performance, support operational objectives and reduce a facility's environmental impact.

Philips energy efficient lighting systems will help put industrial facilities in a better position to drive performance.

Lighting can change your

Lighting the Task

How much light you need depends on the visibility of the task (its size and contrast), the speed and accuracy of the task and the age of the person performing the task. Requirements can vary widely so choosing the right light source is critical.

The colors of the walls, ceilings and furniture also affect lighting since darker finishes can absorb more light than more reflective surfaces.

Lighting People

To read people's expressions, you need lighting that renders facial tones well. Lighting that reveals a healthy skin tone also makes people feel better and more motivated. Most people feel that better color aids visual acuity and productivity.

Older lighting systems are particularly poor with respect to color but can be easily upgraded with today's systems, which have better color rendering and are more energy efficient.

What is Color Rendering?

Color rendering is the ability of a light source to represent colors in objects. Commonly called CRI or color rendering index, it is a relative measurement which rates light sources on a scale of 0–100, the higher the CRI, the more vibrant colors appear.

Light from lamps with good (80 CRI) and excellent (80+ CRI) color rendering properties is said to be "high quality light" because objects and people look more appealing and the light level itself appears to be higher.

Excellent CRI is critical in settings where it is important that people appear natural, such as in retail applications where merchandise must look appealing and in restaurant applications where food must look appetizing. In office and factory applications, high color rendering can increase visual clarity and create a more pleasing and productive work environment.

Color Temperature

The overall color appearance of the light that comes from a light source is called color temperature or chromaticity. Also referred to as Correlated Color Temperature (CCT) and measured in degrees Kelvin or "K", color temperature creates the mood or ambience of the space you are lighting and can influence shopping behavior or work performance.

To help visualize color temperature in lamp types designated as "warm" or "cool," imagine a piece of iron (or a horseshoe, for instance) in a fire. At first, the iron becomes "red-hot" and will be reddish-yellow in color. The reddish-yellow color corresponds to a warm color temperature. It would be equivalent to incandescent lamps operating at 2700K.

As you continue to heat the iron, it will become "white-hot" and will be white in color. This corresponds to cool white fluorescent lamps operating at 4100K.

Heating the iron further causes it to become "blue-hot" or blue in appearance (like flash bulbs or stars), such as in metal halide sources operating at 5000K.

Luminous Efficacy

Luminous efficacy is the rate at which a lamp is able to convert electrical power (watts) into light (lumens), expressed in terms of lumens per watt (LPW). Put simply, a watt of electricity is the amount of power into a lighting system and a lumen or light is the amount of power out of a lighting system. Luminous efficacy is key when evaluating a lamp because lighting represents a large portion of the total operating cost of a typical installation and can affect related costs such as air conditioning. By investing in energy efficient lighting upgrades, you can leverage the energy cost savings to achieve significant reductions in your operating costs. In addition, an energy efficient system benefits the environment.

environment

TIPS ON COLOR TEMPERATURE

Tip: A warm atmosphere, achieved with compact fluorescent lighting, can create a friendly, intimate or inviting surrounding. Philips Energy Saver compact fluorescents create a warm atmosphere.

Tip: Cooler light, in the 4100K range, communicates neatness and efficiency. It's appropriate for the work areas in most offices. Philips T8 lamps are perfect for creating a cooler atmosphere.

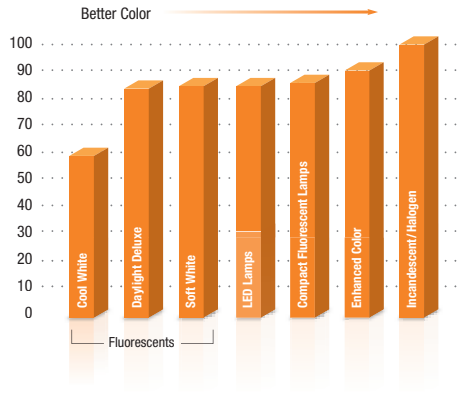
Tip: Meant to closely match daylight, 6500K gives a cooler, bluer tone well suited for hot, dry climates. Philips Energy Saver Daylight creates an outdoor atmosphere inside.

Color Temp.	Warm		Neutral	Cool	Natural	Daylight
Kelvin	2700K	3000K	3500K	4100K	5000K	6500K
Atmosphere	Soft, Comfortable, Relaxing		Efficient, Balanced	Clean, Efficient	Bright, Simulates Outdoors	Crisp, Refreshing, Energetic

Tip: Color temperature is a measure of the light bulb's color when illuminated, and is measured in degrees Kelvin. The higher the number, the whiter, and then bluer, or cooler. The lower the number, the more yellow, or warmer the color. The whiteness of the light itself creates a mood in the lighted space.

COLOR RENDERING INDEX (CRI)

- CRI is the ability of a light bulb to show the colors of objects accurately on a scale of 0 to 100
- As a general rule "the higher the better"— light bulbs with high CRI (80–100 CRI) tend to make people and objects look better than light bulbs with lower CRIs
- Light sources with a 100 CRI are incandescent bulbs, halogen bulbs, and outdoor sunlight
- Good = 60–79 CRI
- Better = 80–89 CRI
- Best = 90–100 CRI



Make a difference

Philips Sustainable Lighting Solutions

At Philips, transforming the way the world thinks and acts towards reducing its ecological footprint has long been our passion. We meet the energy efficiency challenge with new solutions to drive responsible energy practices and savings and by inspiring individuals to make simple changes that can have profound results, while still providing the high quality of light our customers require.

At Philips, we know that being Green starts with a simple switch.

Changing a light bulb does make a difference. Worldwide, lighting consumes 19% of electricity.[1] Every incandescent lamp we replace with an ENERGY STAR®–qualified bulb saves approximately 75% in energy consumption.[2] Energy saving light bulbs like CFLs can last up to 10 times as long as traditional incandescents[2], and LEDs can last up to 45 times as long as traditional incandescents, so resources are also conserved in manufacturing, transportation and building maintenance.

Conserving energy through this simple act can create ripples affecting our community, nation and the entire earth. We're reducing the pressure to build new power plants and generating less waste for our landfills. And most important of all, we're cutting the greenhouse gas emissions that contribute to global warming.

Visit **www.philips.com** to learn more about Philips sustainability leadership.

To see the difference Philips sustainable products can make, go to asimpleswitch.com

1) "Let there be light—for the next 35 years: the green gift that keeps on giving" Dec. 4, 2007, www.enn.com, Environmental News Network
2) www.energystar.gov "Compact Fluorescent Light Bulbs"

Philips Lighting is committed to providing lighting solutions that improve people's lives and are environmentally sound. This philosophy is a cornerstone of our sustainability policy, which balances social, environmental and economic action.

Present Bulb Wattage		Watts
Subtract		
Replacement Bulb Wattage		Watts
Equals Wattage Saved		Watts
Multiply		
By Replacement Bulb Life		Hours Rated Average Life
Equals Energy Saved		Watt-Hours
To Convert to Kilowatt Hours Divide by 1000	÷1000	
Equals Energy Saved		KiloWatt Hours
Multiply		
By Your kWh Rate		
Equals Energy Dollars Saved by Each Bulb		
Multiply		
By Number of Bulbs in Your Facility		
TOTAL DOLLARS SAVED Over the Rated Average Life of the Bulbs		

Energy Savings Worksheet

To calculate potential energy dollars saved over the life of a lamp, use this formula. All you need is your present lamp wattage, the replacement lamp wattage and lamp life.

Professional Lighting eCatalog

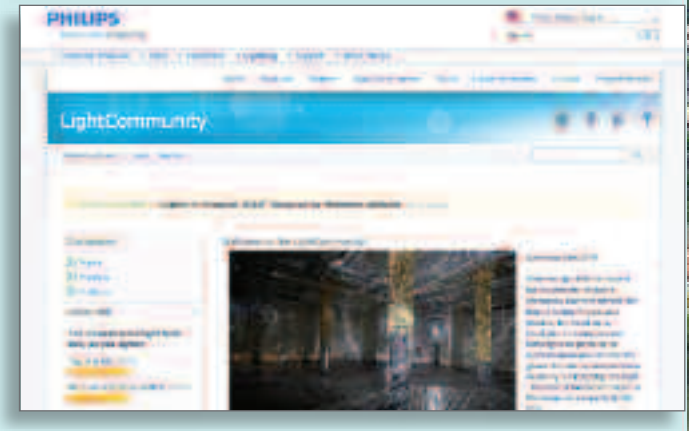
Single online source of information for Philips Professional Lighting products

www.philips.com/ecatalog

LightCommunity

Networking forum for lighting professionals to discuss their thoughts and ideas

www.philips.com/lightcommunity



Tools and Literature

Browse the latest Philips Lighting product material and tools

www.philips.com/literature

Where to Buy

Search for a Philips Lighting distributor near you

www.philips.com/wheretobuylighting

Lighting the virtual world

The Philips Lighting Professional Website

The Philips Lighting Professional website is an online lighting resource for our professional customers and users. The vibrant design and clean navigation of the site allow easy access to product information, helpful tools and project inspiration.

The cornerstone of the site, the Philips Lighting Professional eCatalog, is the single source of information for Philips professional lighting products online. The Lamps eCatalog features a "Where to Buy" tool, powered by Google Maps, and social media functionality which allows customers to share Philips news and product information to blogs, Twitter, Facebook and other social media tools. Additionally, lamps product datasheets can be auto-generated, at the click of the mouse, directly from the eCatalog product pages.

www.philips.com/lighting

LED lighting

Making possible uses where before it just didn't seem practical

Suited for accent, hard-to-maintain areas and around-the-clock operations, Philips LED retrofit lamps are a simple replacement for existing inefficient technology, reducing installation cost and complexity.

Transforming conventional light sources to LED improves ambience and energy efficiency and reduces maintenance.

Philips EnduraLED retrofit lamps address key issues of heat management and overall lifespan. Designed for superb color consistency and sharp optics, EnduraLED is ideal for close-range and general accent lighting. With no harmful UV radiation and virtually no heat, LEDs won't fade colors and avoid inventory spoilage.

The EnduraLED 800 Series retrofit lamps offer smooth dimming✤ and improved lumens for more 'punch' where you need it.

UPGRADE TO ENERGY EFFICIENT LAMPS

CURRENT PRODUCT	PHILIPS UPGRADE PRODUCT	BENEFIT	PAGE
60W A19 Incandescent (450 lumens)	EnduraLED A-lamp 800 Series 12.5W	> Smooth dimming to 10% of full light levels > Up to 25,000 hours rated average life > 3-year limited warranty	14
90W PAR38 Halogen	EnduraLED PAR38 800 Series 17W	> Smooth dimming to 10% of full light levels✤ > Improved lumens > Increased candela	18
50W Halogen	EnduraLED MR16 10W	> Active cooling > Improved lumens > Increased transformer compatibility	15

✤ Dimmable when using leading edge dimmers. Visit www.philips.com/beautifullight to find up to date compatibility information

LED LAMPS

EnduraLED A-Type, R20, PAR20 and Candle Lamps

Watts	Bulb Type	Base	Product Number	Ordering Code	Volts	Description	Case Qty.	Rated Avg. Life (Hrs.) (501,502)	Approx. Lumens (503)	Approx. MBCP♦	CRI	Color Temp. (Kelvin)	MOL (In.)
ENDURALED A-TYPE LAMPS													
7	A-Type	Med	40795-6	7A19/END/2700-325 120V 6/1	120	A19 Dimmable✤	6	25,000	325	—	80	2700	4.3
8	A-Type	Med	40993-8	8A19/END/450lm/2700/ 120V/DIMM	120	A19 Dimmable✤	6	25,000	450	—	80	2700	4.3
12.5	A-Type	Med	40994-6	12A19/END/800lm/2700/ 120V/DIMM	120	A19 Dimmable 800 Series✤	6	25,000	800	—	80	2700	4.2
ENDURALED REFLECTOR LAMPS													
6	R20	Med.	40826-0	6R20/END/F22 2700 DIM 6/1	120	R20 Flood 22° Dimmable✤	6	45,000	200	900	81	2700	3.9
			40820-3	6R20/END/F22 3000 DIM 6/1	120	R20 Flood 22° Dimmable✤	6	45,000	210	900	83	3000	3.9
ENDURALED PAR20 LAMPS													
7	PAR20	Med.	41008-4	7PAR20/END/2700/120V/DIMM	120	PAR20 Flood 22° Dimmable✤	6	45,000	250	1000	85	2700	3.8
			41009-2	7PAR20/END/3000/120V/DIMM	120	PAR20 Flood 22° Dimmable✤	6	45,000	250	1050	80	3000	3.8
			41010-0	7PAR20/END/4000/120V/DIMM	120	PAR20 Flood 22° Dimmable✤	6	45,000	280	1200	83	4000	3.8
ENDURALED CANDLE LAMPS													
2	BA9	Cand.	40796-4	2BA9/END/2700-70 120V 8/1	120	BA9 Clear Candle	8	20,000	70	—	90	2700	4.0
	B10½	Cand.	40797-2	2B10½/END/2700-70 120V 8/1	120	B10½ Clear Candle	8	20,000	70	—	90	2700	3.7
2.5	BA9	Cand.	40605-8	3BA9 END/CLWW 120V 8/1	120	BA9 Clear Candle	8	15,000	32	—	80	3000	4.1
			40606-6	3BA9 END/FRWW 120V 8/1	120	BA9 Frosted Candle	8	15,000	30	—	80	3000	4.1
	B10½	Cand.	40607-4	3B10½ END/CLWW 120V 8/1	120	B10½ Clear Candle	8	15,000	32	—	80	3000	4.0
			40608-2	3B10½ END/FRWW 120V 8/1	120	B10½ Frosted Candle	8	15,000	30	—	80	3000	4.0
3	BA11	Cand.	41020-9	3BA11/END/2700–130 DIM 8/1	120	BA11 Clear Candle Dimmable✤	8	20,000	136	—	90	2700	4.0
	B11	Cand.	41021-7	3B11/END/2700–130 DIM 8/1	120	B11 Clear Candle Dimmable✤	8	20,000	136	—	90	2700	3.8
3.5	BA9½	Cand.	41484-7	4BA9.5/END/2700–150 E12 DIM 10/1	120	BA9½ Candle Dimmable✤	8	20,000	150	—	90	2700	4.0
	B11	Cand.	41485-4	4B11/END/2700–150 E12 DIM10/1	120	B11 Candle Dimmable✤	8	20,000	150	—	90	2700	3.8
	B12	Med.	41487-0	4B12/END/2700–150 E26 DIM10/1	120	B12 Clear Candle Dimmable✤	8	20,000	150	—	90	2700	4.1
	BA12	Med.	41486-2	4BA12/END/2700–150 E26 DIM10/1	120	BA12 Clear Candle Dimmable✤	8	20,000	150	—	90	2700	4.5
	F15	Med.	41488-8	4F15/END/2700–150 E26 DIM10/1	120	F15 Clear Postlight Dimmable✤	8	20,000	150	—	90	2700	4.4

For the most current product information, go to the e-catalog on **www.philips.com**

A19 Med. | A19 Med. 800 Series | R20 Med. | PAR20 Med. | BA9 Cand. | B10½ Cand. | BA11 Cand. | B11 Cand. | BA9.5 Cand. | B12 Med. | BA12 Med. | F15 Med.

LED LAMPS

EnduraLED PAR16, MR16 Spot and Flood Lamps

Watts	Bulb Type	Base	Product Number	Ordering Code	Volts	Description	Case Qty.	Rated Avg. Life (Hrs.) (501,502)	Approx. Lumens (503)	Approx. MBCP♦	CRI	Color Temp. (Kelvin)	MOL (In.)
ENDURALED TWISTLINE AND MR16 LAMPS													
3	PAR16	GU10	41001-9	3GU10/END/2700–150 DIM 10/1	120	Twistline GU10 Flood 24° Dimmable✤	10	18,000	165	570	90	2700	2.2
4	PAR16	GU10	40673-6	4GU10/END/3000 120V 10/1	120	Twistline GU10 Flood 24°	10	16,000	100	530	80	3000	2.1
	MR16	GU5.3	40875-7	4MR16/END/2700 12V 10/1	12	MR16 Flood 24°	10	45,000	160	700	82	2700	1.8
			40827-8	4MR16/END/3000 12V 10/1	12	MR16 Flood 24°	10	45,000	160	720	82	3000	1.8
			40828-6	4MR16/END/4000 12V 10/1	12	MR16 Flood 24°	10	45,000	180	720	82	4000	1.8
7	MR16	GU5.3	40876-5	7MR16/END/2700 12V 10/1	12	MR16 Flood 24°	10	25,000	260	1100	83	2700	2.1
			40877-3	7MR16/END/3000 12V 10/1	12	MR16 Flood 24°	10	25,000	275	1150	85	3000	2.1
			40878-1	7MR16/END/4000 12V 10/1	12	MR16 Flood 24°	10	25,000	305	1300	83	4000	2.1
			41041-5	7MR16/END/S15 2700 12V DM10/1	12	MR16 Spot 15° Dimmable✤	10	25,000	280	3210	83	2700	2.1
			41002-7	7MR16/END/F24 2700 12V DM10/1	12	MR16 Flood 24° Dimmable✤	10	25,000	350	1540	83	2700	2.1
			41003-5	7MR16/END/F24 3000 12V DM10/1	12	MR16 Flood 24° Dimmable✤	10	25,000	370	1600	83	3000	2.1
			41004-3	7MR16/END/F24 4000 12V DM10/1	12	MR16 Flood 24° Dimmable✤	10	25,000	425	1860	77	4000	2.1
			41042-3	7MR16/END/F36 2700 12V DM10/1	12	MR16 Wide Flood 36° Dimmable✤	10	25,000	340	815	84	2700	2.1
10	MR16	GU5.3	41043-1	10MR16/END/S15 2700 12V DM10/1	12	MR16 Spot 15° Dimmable✤	10	25,000	360	4100	83	2700	2.1
			41005-0	10MR16/END/F24 2700 12V DM10/1	12	MR16 Flood 24° Dimmable✤	10	25,000	450	1880	83	2700	2.1
			41006-8	10MR16/END/F24 3000 12V DM10/1	12	MR16 Flood 24° Dimmable✤	10	25,000	480	2000	83	3000	2.1
			41007-6	10MR16/END/F24 4000 12V DM10/1	12	MR16 Flood 24° Dimmable✤	10	25,000	550	2300	77	4000	2.1
			41044-9	10MR16/END/F36 2700 12V DM10/1	12	MR16 Wide Flood 36° Dimmable✤	10	25,000	440	1050	84	2700	2.1

For the most current product information, go to the e-catalog on **www.philips.com**


Twistline GU10


MR16 Flood GU5.3


MR16 Spot GU5.3

LED LAMPS

EnduraLED PAR30 and PAR38 Non Dimmable Lamps

Watts	Bulb Type	Base	Product Number	Ordering Code	Volts	Description	Case Qty.	Rated Avg. Life (Hrs.) (501,502,503)	Approx. Lumens (504)	Approx. MBCP♦	CRI	Color Temp. (Kelvin)	MOL (In.)
ENDURALED PAR30 (600 SERIES)													
11	PAR30S	Med.	40676-9	11PAR30S/END/F25 2700 120V 6/1	120	PAR30S Flood 25°	6	45,000	400	1800	82	2700	3.6
			40677-7	11PAR30S/END/F25 3000 120V 6/1	120	PAR30S Flood 25°	6	45,000	410	1850	82	3000	3.6
			40678-5	11PAR30S/END/F25 4200 120V 6/1	120	PAR30S Flood 20°	6	45,000	560	2500	65	4200	3.6
	PAR30L	Med.	40697-4	11PAR30L/END/F25 2700 120V 6/1	120	PAR30L Flood 25°	6	45,000	400	1800	82	2700	4.6
			40682-7	11PAR30L/END/F25 3000 120V 6/1	120	PAR30L Flood 25°	6	45,000	410	1850	83	3000	4.6
			40681-9	11PAR30L/END/F25 4200 120V 6/1	120	PAR30L Flood 20°	6	45,000	560	2500	65	4200	4.6
ENDURALED PAR38 (600 SERIES)													
13	PAR38	Med.	40793-2	13PAR38/END/S10 3000 DIM 6/1	120	PAR38 Spot 10°	6	45,000	600	21,000	84	3000	5.1
			41091-0	13PAR38/END/S15 3000 120V 6/1	120	PAR38 Spot 15°	6	45,000	600	6900	84	3000	5.1
16	PAR38	Med.	40698-2	16PAR38/END/FL25 2700 120V 6/1	120	PAR38 Flood 25°	6	45,000	600	2800	80	2700	5.2
			40680-1	16PAR38/END/FL25 3000 120V 6/1	120	PAR38 Flood 25°	6	45,000	600	2800	80	3000	5.2
			40679-3	16PAR38/END/FL25 4200 120V 6/1	120	PAR38 Flood 20°	6	45,000	850	4000	68	4200	5.2

For the most current product information, go to the e-catalog on **www.philips.com**

PAR30S Med.

PAR30L Med.

PAR38 Med.

LED LAMPS

EnduraLED PAR30 and PAR38 Dimmable Lamps

Watts	Bulb Type	Base	Product Number	Ordering Code	Volts	Description	Case Qty.	Rated Avg. Life (Hrs.) (501,502,503)	Approx. Lumens (504)	Approx. MBCP♦	CRI	Color Temp. (Kelvin)	MOL (In.)
ENDURALED PAR30 DIMMABLE (600 SERIES)													
11	PAR30S	Med.	40809-6	11PAR30S/END/F22 2700 DIM 6/1	120	PAR30S Flood 22° Dimmable✤	6	40,000	440	2200	82	2700	3.5
			40810-4	11PAR30S/END/F22 3000 DIM 6/1	120	PAR30S Flood 22° Dimmable✤	6	40,000	440	2200	83	3000	3.5
			40811-2	11PAR30S/END/F20 4200 DIM 6/1	120	PAR30S Flood 20° Dimmable✤	6	40,000	610	3100	65	4200	3.5
	PAR30L	Med.	40812-0	11PAR30L/END/F22 2700 DIM 6/1	120	PAR30L Flood 22° Dimmable✤	6	40,000	440	2200	82	2700	4.6
			40813-8	11PAR30L/END/F22 3000 DIM 6/1	120	PAR30L Flood 22° Dimmable✤	6	40,000	440	2200	85	3000	4.6
			40814-6	11PAR30L/END/F20 4200 DIM 6/1	120	PAR30L Flood 20° Dimmable✤	6	40,000	610	3100	67	4200	4.6
ENDURALED PAR38 DIMMABLE (600 SERIES)													
16	PAR38	Med.	40815-3	16PAR38/END/F22 2700 DIM 6/1	120	PAR38 Flood 22° Dimmable✤	6	40,000	650	2900	82	2700	5.2
			40816-1	16PAR38/END/F22 3000 DIM 6/1	120	PAR38 Flood 22° Dimmable✤	6	40,000	650	2900	85	3000	5.2
			40817-9	16PAR38/END/F20 4200 DIM 6/1	120	PAR38 Flood 20° Dimmable✤	6	40,000	920	4800	67	4200	5.2

Watts	Bulb Type	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Description	Pkg. Qty.	Rated Avg. Life (Hrs.) (501,502)	Approx. Lumens (504)	CRI	Color Temp. (Kelvin)	Nom. Length (In.)
ENDURALED T8 TUBE GA SPECIFIER SERIES													
11	T8	G13	41868-1	☐	EnduraLED T8 Tube GA 11W/835 24" G13 Specifier	100–277	Linear LED T8 Tube, 3500K	10	40,000	825	85	3500	24
			41871-5	☐	EnduraLED T8 Tube GA 11W/840 24" G13 Specifier	100–277	Linear LED T8 Tube, 4000K	10	40,000	825	85	4000	24
22	T8	G13	41869-9	☐	EnduraLED T8 Tube GA 22W/835 48" G13 Specifier	100–277	Linear LED T8 Tube, 3500K	10	40,000	1650	85	3500	48
			41872-3	☐	EnduraLED T8 Tube GA 22W/840 48" G13 Specifier	100–277	Linear LED T8 Tube, 4000K	10	40,000	1650	85	4000	48

For the most current product information, go to the e-catalog on **www.philips.com**

PHILIPS ENDURALED T8 TUBE GA SPECIFIER SERIES
Warranty Period: 36 months*

* Certain limitations and conditions apply. See Philips for further warranty details.


PAR30S Med.


PAR30L Med.


PAR38 Med.


T8 G13

LED LAMPS

EnduraLED PAR30 and PAR38 800 Series Dimmable Lamps

Watts	Bulb Type	Base	Product Number	Ordering Code	Volts	Description	Case Qty.	Rated Avg. Life (Hrs.) (501,502)	Approx. Lumens (503)	Approx. MBCP♦	CRI	Color Temp. (Kelvin)	MOL (In.)
ENDURALED PAR30 DIMMABLE (800 SERIES)													
12	PAR30S	Med.	41011-8	12PAR30S/END/2700/120V/DIMM/22D	120	PAR30S Flood 22° Dimmable✤	6	45,000	660	2900	85	2700	3.5
			41012-6	12PAR30S/END/3000/120V/DIMM/22D	120	PAR30S Flood 22° Dimmable✤	6	45,000	700	3000	85	3000	3.5
			41013-4	12PAR30S/END/4000/120V/DIMM/22D	120	PAR30S Flood 22° Dimmable✤	6	45,000	800	3600	75	4000	3.5
	PAR30L	Med.	41014-2	12PAR30L/END/2700/120V/DIMM/22D	120	PAR30L Flood 22° Dimmable✤	6	45,000	660	2900	85	2700	4.4
			41015-9	12PAR30L/END/3000/120V/DIMM/22D	120	PAR30L Flood 22° Dimmable✤	6	45,000	700	3000	85	3000	4.4
			41016-7	12PAR30L/END/4000/120V/DIMM/22D	120	PAR30L Flood 22° Dimmable✤	6	45,000	800	3600	75	4000	4.4
			41448-2	12PAR30L/END/S15 2700 DIM 6/1	120	PAR30L Spot 15° Dimmable✤	6	45,000	660	5400	84	2700	4.4
			41449-0	12PAR30L/END/S15 3000 DIM 6/1	120	PAR30L Spot 15° Dimmable✤	6	45,000	700	5800	82	3000	4.4
			41457-3	12PAR30L/END/F36 2700 DIM 6/1	120	PAR30L Wide Flood 36° Dimmable✤	6	45,000	660	1200	85	2700	4.4
			41458-1	12PAR30L/END/F36 3000 DIM 6/1	120	PAR30L Wide Flood 36° Dimmable✤	6	45,000	700	1200	85	3000	4.4
13			41437-5	13PAR30S/END/S10 3000 DIM 6/1	120	PAR30S Spot 10° Dimmable✤	6	45,000	630	9000	82	3000	4.0
ENDURALED PAR38 DIMMABLE (800 SERIES)													
17	PAR38	Med.	41017-5	17PAR38/END/2700/120V/DIMM/22D	120	PAR38 Flood 22° Dimmable✤	6	45,000	880	3900	85	2700	5.2
			41018-3	17PAR38/END/3000/120V/DIMM/22D	120	PAR38 Flood 22° Dimmable✤	6	45,000	930	4100	85	3000	5.2
			41019-1	17PAR38/END/4000/120V/DIMM/22D	120	PAR38 Flood 22° Dimmable✤	6	45,000	1050	4800	75	4000	5.2
			41443-3	17PAR38/END/S10 3000 DIM 6/1	120	PAR38 Spot 10° Dimmable✤	6	45,000	930	14,000	82	3000	5.3
			41451-6	17PAR38/END/S15 2700 DIM 6/1	120	PAR38 Spot 15° Dimmable✤	6	45,000	880	7200	84	2700	5.3
			41453-2	17PAR38/END/S15 4000 DIM 6/1	120	PAR38 Spot 15° Dimmable✤	6	45,000	1080	9600	78	4000	5.3
			41460-7	17PAR38/END/F36 2700 DIM 6/1	120	PAR38 Wide Flood 36° Dimmable✤	6	45,000	880	1500	84	2700	5.3
			41461-5	17PAR38/END/F36 3000 DIM 6/1	120	PAR38 Wide Flood 36° Dimmable✤	6	45,000	930	1600	82	3000	5.3

For the most current product information, go to the e-catalog on **www.philips.com**

800 Series PAR30S Med.

800 Series PAR30L Med.

800 Series PAR38 Med.

LED LAMPS

LED Base Types and Bulb Shapes

LED Base Types (Not Actual Sizes)

Med.
Medium

Cand.
Candelabra

GU10

GU5.3

LED Bulb Shapes (Not Actual Sizes)

800 Series
A19

A55

A19

GU10

MR16
Flood

MR16
Spot

BA9

BA9½

B10½

BA11

B11

BA12

B12

F15

R20

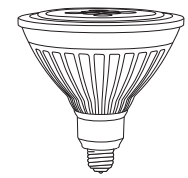
PAR20

PAR30S

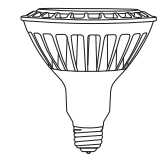
800 Series
PAR30S

PAR30L

800 Series
PAR30L



PAR38



800 Series
PAR38

LED LAMPS

For the most current product information, go to the e-catalog on www.philips.com

♦ Maximum Beam Candlepower

✤ Dimmable when using leading edge dimmers. Visit www.philips.com/beautifullight to find up to date compatibility information

▢ Exclusive to Philips Lighting Company

(501) Rated average life is the length of operation (in hours) at which point an average of 50% of the lamps will still be operational and 50% will not.

(502) Rated average life based on engineering testing and probability analysis.

(503) Lifetime testing consistent with IES LM-80, Lumen Maintenance Procedure.

(504) Photometric testing consistent with IES LM-79.

(505) Maximum power consumed at start-up. Steady state power consumption will be less.

(506) Minimum Lumen Maintenance is the minimum number of hours after which the LED light output depreciates to 70% of its initial output. This value, L_{70}, is tested @ 25˚C ambient temperature. (IES LM-80)

(507) The LED Fixture, Initial Lumens is determined as prescribed in IESNA LM-79, Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products, which specifies lumen measurements of the fixture be reported after the measurements have stabilized at 25˚C.

(508) Photometric testing consistent with IES LM-79. Maximum Beam Candlepower

c UL us
LISTED
LED LAMPS 3 PRR E317295

Fluorescent lighting

Reduce your energy and maintenance costs

The Philips Linear Fluorescent lamp portfolio offers some of the lowest mercury and longest life lamps in the industry.

ALTO lamp technology with green endcaps has become synonymous with environmental responsibility and low mercury.

Philips Energy Advantage T8 25W featuring ALTO II Technology offers high energy savings in an environmentally responsible lamp. Save 7 watts per lamp instantly when compared to a T8 32W lamp.

Philips Energy Advantage T8 XLL 25W featuring ALTO II Technology will last 67% longer than an industry standard 4' T8 32W lamp* (12hrs per start on an instant start ballast), and provide a cost saving solution that is better for the environment.

Philips Energy Advantage T5 HO 49W featuring ALTO Lamp Technology is the only energy saving T5 lamp that saves you 5W by just changing a lamp (compared to a T5 54W lamp) with no sacrifice to performance.

*When compared to an industry standard T8 32W lamp with 24,000 hrs RAL

UPGRADE TO ENERGY EFFICIENT LAMPS

CURRENT PRODUCT	PHILIPS UPGRADE PRODUCT	BENEFIT	PAGE
32W 4ft T8	Energy Advantage T8 4ft 25W featuring ALTO II Technology	> Saves 7W per lamp > 97% lumen maintenance > Up to 36,000 hours rated average life†; 36 month lamp warranty period	29
32W 4ft T8	Energy Advantage T8 XLL 4ft 25W featuring ALTO II Technology	> Saves 7W per lamp > 97% lumen maintenance > Up to 40,000 hours rated average life†; 48 month lamp warranty period	30
54W 4ft T5 HO	Energy Advantage T5 HO 49W featuring ALTO Lamp Technology	> Saves 5W per lamp > 40,000 hours rated average life for an extended relamping cycle†	25

† Average life under engineering data with lamps turned off and restarted once every 12 operating hours.

Philips T5 Fluorescent Lamps featuring ALTO Technology

Powerful, environmentally-responsible ultra-slim lamps

- ✓ Industry low 1.4mg of mercury in all Philips T5 and T5HO lamps
- ✓ No burn in required before dimming Philips T5 and T5HO lamps
- ✓ Operate on programmed start ballast only to maintain warranty
- ✓ Lumen output ratings at 35˚C, lumens at 25˚C, average 10% lower

T5 High Efficiency

- New 25W Energy Advantage version of 28W
- Up to 116 lumens per watt
- 5000 kelvin being added to all sizes
- Slim profile lamp and ballast
- Perfect for office, healthcare and government applications

T5 High Output

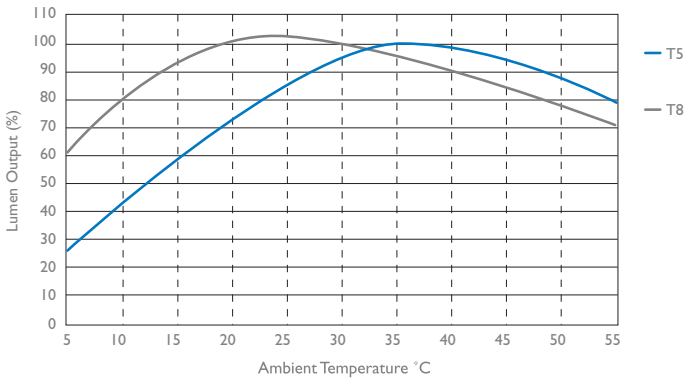
- New 49W HO Energy Advantage version of 54W HO
- 49W HO also available in extreme temperature version
- T5HO offers superb high bay options
- Increased energy saving options for many applications
- Perfect for retail, industrial and warehouse applications

PHILIPS T5 LAMP WARRANTY PERIODS

Philips Lamp	WARRANTY PERIOD*
T5 High Output Energy Advantage Lamps	42 Months
T5 High Output Energy Advantage Lamps "Extreme Temperature" with Amalgam Technology	42 Months
T5 High Output Lamps	36 Months
Energy Advantage T5 Lamps	42 Months
T5 Lamps	36 Months

* Certain limitations and conditions apply. See Philips for further warranty details.

T5/T8 LUMENS VS. TEMPERATURE



PHILIPS T5 LAMP FAMILY—LIFE RATINGS

Products	PROGRAMMED START[1] Rated Average Life (Hrs.)	
	3 hour start	12 hour start
T5 High Output Energy Advantage Lamps	35,000	40,000
T5 High Output Energy Advantage Lamps "Extreme Temperature" with Amalgam Technology	35,000	40,000
T5 High Output Lamps	25,000	35,000
T5 Energy Advantage Lamps	35,000	40,000
T5 Lamps	25,000	35,000

1) Average life under engineering data on programmed start ballast with lamps turned off and restarted once every 3 or 12 operating hours as noted.

FLUORESCENT LAMPS

T5 Lamps

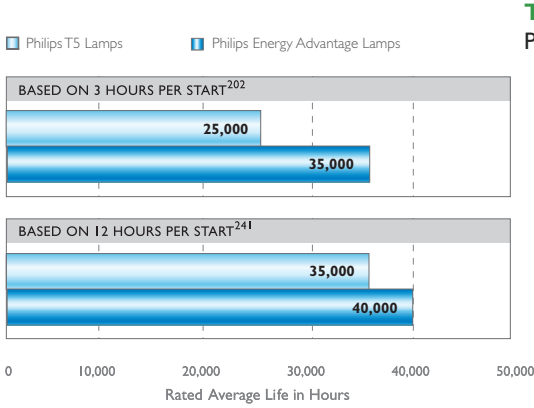
Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
T5 HIGH OUTPUT (HO) ENERGY ADVANTAGE LAMPS*											
T5 Miniature Bipin; Programmed Start											
44	41781-6	$ Ⓔ ● †	F54T5/835/HO/XEW/ALTO 44W	40	TL 835, 3500K	46	35,000	40,000	4520	4150	85
	41782-4	$ Ⓔ ● †	F54T5/841/HO/XEW/ALTO 44W	40	TL 841, 4100K	46	35,000	40,000	4520	4150	85
	41783-2	$ Ⓔ ● †	F54T5/850/HO/XEW/ALTO 44W	40	TL 850, 5000K	46	35,000	40,000	4300	3950	82
49	22049-1	$ Ⓔ ●	F54T5/830/HO/EA/ALTO 49W	40	TL 830, 3000K	46	35,000	40,000	5000	4750	85
	22050-9	$ Ⓔ ●	F54T5/835/HO/EA/ALTO 49W	40	TL 835, 3500K	46	35,000	40,000	5000	4750	85
	22052-5	$ Ⓔ ●	F54T5/841/HO/EA/ALTO 49W	40	TL 841, 4100K	46	35,000	40,000	5000	4750	85
	41249-4	$ Ⓔ ● †	F54T5/841/HO/EA/ALTO 49W Sleeved	20	TL 841, 4100K	46	35,000	40,000	5000	4750	85
	40649-6	$ Ⓔ ●	F54T5/850/HO/EA/ALTO 49W	40	TL 850, 5000K	46	35,000	40,000	4850	4625	82
	41248-6	$ Ⓔ ● †	F54T5/850/HO/EA/ALTO 49W Sleeved	20	TL 850, 5000K	46	35,000	40,000	4850	4625	82
T5 HIGH OUTPUT (HO) ENERGY ADVANTAGE LAMPS "EXTREME TEMPERATURE" WITH AMALGAM TECHNOLOGY											
T5 Miniature Bipin; Programmed Start											
49	40729-6	$ Ⓔ ●	F54T5/835/HO/A/EA/ALTO 49W	40	TL 835, 3500K	46	35,000	40,000	5000	4750	85
	40730-4	$ Ⓔ ●	F54T5/841/HO/A/EA/ALTO 49W	40	TL 841, 4100K	46	35,000	40,000	5000	4750	85
	40752-8	$ Ⓔ ● †	F54T5/850/HO/A/EA/ALTO 49W	40	TL 850, 5000K	46	35,000	40,000	4850	4625	82
T5 HIGH OUTPUT (HO) LAMPS—(2FT–5 FT)											
T5 Miniature Bipin; Programmed Start											
24	29019-7	$ ●	F24T5/830/HO/ALTO	40	TL 830, 3000K	22	25,000	35,000	2000	1900	85
	29020-5	$ ●	F24T5/835/HO/ALTO	40	TL 835, 3500K	22	25,000	35,000	2000	1900	85
	29021-3	$ ●	F24T5/841/HO/ALTO	40	TL 841, 4100K	22	25,000	35,000	2000	1900	85
	41277-5	$ ● †	F24T5/850/HO/ALTO	40	TL 850, 5000K	22	25,000	35,000	1900	1800	82
39	29022-1	$ ●	F39T5/830/HO/ALTO	40	TL 830, 3000K	34	25,000	35,000	3500	3325	85
	29023-9	$ ●	F39T5/835/HO/ALTO	40	TL 835, 3500K	34	25,000	35,000	3500	3325	85
	29025-4	$ ●	F39T5/841/HO/ALTO	40	TL 841, 4100K	34	25,000	35,000	3500	3325	85
	41435-9	$ ● †	F39T5/850/HO/ALTO	40	TL 850, 5000K	34	25,000	35,000	3400	3230	82
54	29026-2	$ ● Ⓔ	F54T5/830/HO/ALTO	40	TL 830, 3000K	46	25,000	35,000	5000	4750	85
	29028-8	$ ● Ⓔ	F54T5/835/HO/ALTO	40	TL 835, 3500K	46	25,000	35,000	5000	4750	85
	29083-3	$ ● Ⓔ	F54T5/841/HO/ALTO	40	TL 841, 4100K	46	25,000	35,000	5000	4750	85
	41181-9	$ ● Ⓔ †	F54T5/841/HO/ALTO Sleeved	20	TL 841, 4100K	46	25,000	35,000	5000	4750	85
	13510-3	$ ● Ⓔ	F54T5/850/HO/ALTO	40	TL 850, 5000K	46	25,000	35,000	4850	4625	82
	14745-4	$ ● Ⓔ	F54T5/865/HO/ALTO	40	TL 865, 6500K	46	25,000	35,000	4750	4500	82
80	29084-1	$ ●	F80T5/830/HO/ALTO	40	TL 830, 3000K	58	25,000	35,000	7000	6650	85
	14744-7	$ ●	F80T5/835/HO/ALTO	40	TL 835, 3000K	58	25,000	35,000	7000	6650	85
	29088-2	$ ●	F80T5/841/HO/ALTO	40	TL 841, 4100K	58	25,000	35,000	7000	6650	85

For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51

ENERGY ADVANTAGE T5 AND T5 HO
Warranty Period: 42 months*

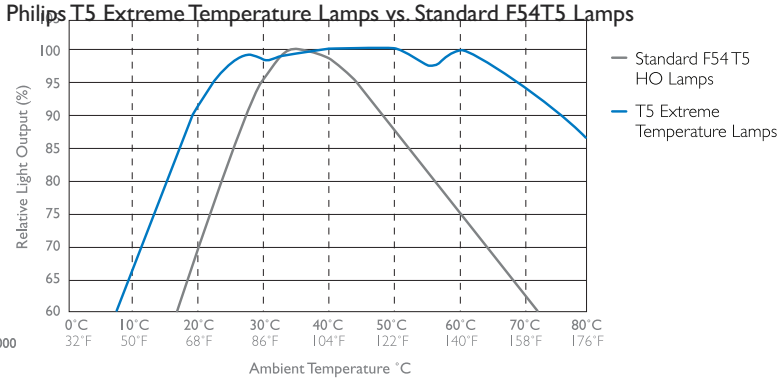
* Certain limitations and conditions apply. See Philips for further warranty details.

RATED AVERAGE LIFE



PERFORMANCE (RELATIVE LIGHT OUTPUT VS. TEMPERATURE)

Philips T5 Extreme Temperature Lamps vs. Standard F54T5 Lamps



FLUORESCENT LAMPS

T5, Colored Linear Fluorescent Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
ENERGY ADVANTAGE T5 LAMPS —(4FT)											
T5 Miniature Bipin; Programmed Start											
25	40630-6	●	F28T5/830/EA/ALTO 25W	40	TL 830, 3000K	46	35,000	40,000	2900	2750	85
	40631-4	●	F28T5/835/EA/ALTO 25W	40	TL 835, 3500K	46	35,000	40,000	2900	2750	85
	40632-2	●	F28T5/841/EA/ALTO 25W	40	TL 841, 4100K	46	35,000	40,000	2900	2750	85
	41420-1	● †	F28T5/850/EA/ALTO 25W	40	TL 850, 5000K	46	35,000	40,000	2800	2660	82
T5 HIGH EFFICIENCY LAMPS—(2FT–5 FT)											
T5 Miniature Bipin; Programmed Start											
14	23077-1	$ ●	F14T5/830/ALTO	40	TL 830, 3000K	22	25,000	35,000	1350	1275	85
	23079-7	$ ●	F14T5/835/ALTO	40	TL 835, 3500K	22	25,000	35,000	1350	1275	85
	23080-5	$ ●	F14T5/841/ALTO	40	TL 841, 4100K	22	25,000	35,000	1350	1275	85
	41275-9	$ ● †	F14T5/850/ALTO	40	TL 850, 5000K	22	25,000	35,000	1300	1225	82
21	23081-3	$ ●	F21T5/830/ALTO	40	TL 830, 3000K	34	25,000	35,000	2100	2000	85
	23082-1	$ ●	F21T5/835/ALTO	40	TL 835, 3500K	34	25,000	35,000	2100	2000	85
	23083-9	$ ●	F21T5/841/ALTO	40	TL 841, 4100K	34	25,000	35,000	2100	2000	85
	41434-2	$ ● †	F21T5/850/ALTO	40	TL 850, 5000K	34	25,000	35,000	2000	1900	82
28	23084-7	$ ● Ⓔ	F28T5/830/ALTO	40	TL 830, 3000K	46	25,000	35,000	2900	2750	85
	23085-4	$ ● Ⓔ	F28T5/835/ALTO	40	TL 835, 3500K	46	25,000	35,000	2900	2750	85
	41180-1	$ ● Ⓔ †	F28T5/835/ALTO Sleeved	20	TL 835, 3500K	46	25,000	35,000	2900	2750	85
	23086-2	$ ● Ⓔ	F28T5/841/ALTO	40	TL 841, 4100K	46	25,000	35,000	2900	2750	85
	41276-7	$ ● Ⓔ †	F28T5/850/ALTO	40	TL 850, 5000K	46	25,000	35,000	2800	2660	82
35	23088-8	$ ●	F35T5/830/ALTO	40	TL 830, 3000K	58	25,000	35,000	3650	3450	85
	23091-2	$ ●	F35T5/835/ALTO	40	TL 835, 3500K	58	25,000	35,000	3650	3450	85
	23095-3	$ ●	F35T5/841/ALTO	40	TL 841, 4100K	58	25,000	35,000	3650	3450	85

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
COLORED—LINEAR FLUORESCENT LAMPS—T5 HIGH OUTPUT										
24	27562-8	$	F24T5/RED/HO	15	TL5HO Colored Pro 24W/150 Red	22	12,000	1400	1330	N/A
	27548-7	$	F24T5/GREEN/HO	15	TL5HO Colored Pro 24W/170 Green	22	12,000	2750	2475	N/A
	27547-9	$	F24T5/BLUE/HO	15	TL5HO Colored Pro 24W/180 Blue	22	12,000	550	440	N/A
54	27565-1	$	F54T5/RED/HO	15	TL5HO Colored Pro 54W/150 Red	46	12,000	3450	3280	N/A
	27563-6	$	F54T5/GREEN/HO	15	TL5HO Colored Pro 54W/170 Green	46	12,000	6900	6210	N/A
	27562-8	$	F54T5/BLUE/HO	15	TL5HO Colored Pro 54W/180 Blue	46	12,000	1500	1200	N/A

For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51

T5 & T5 HO
Warranty Period: 36 months*

* Certain limitations and conditions apply.
See Philips for further warranty details.

T5 LUMENS AT 35°C AND 25°C

Lamp Type	Approx. Initial Lumens at 35°C (203, 204)	Approx. Initial Lumens at 25°C (203, 204)
F14T5	1350	1200
F21T5	2100	1900
F28T5	2900	2600
F35T5	3650	3300
F24T5/HO	2000	1800
F39T5/HO	3500	3150
F54T5/HO	5000	4500
F80T5/HO	7000	6300

T5 Miniature Bipin

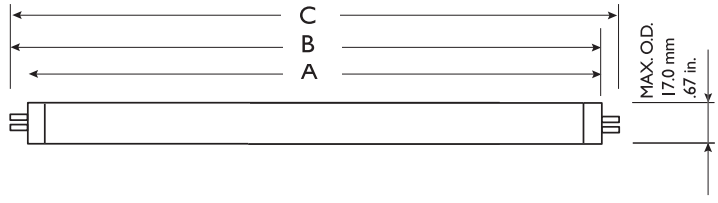
FLUORESCENT LAMPS

T5 Circular Lamps, Preheat Fluorescent Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
T5 CIRCULAR FLUORESCENT LAMPS										
2GX13 Base; Programmed Start										
22	16601-7	$	TL5C 22W/830	10	Formerly FC9T5/830	9 OD	16,000	1800	1530	85
	14856-9	$	TL5C 22W/835	10	Formerly FC9T5/835	9 OD	16,000	1800	1530	85
	16600-9	$	TL5C 22W/840	10	Formerly FC9T5/841	9 OD	16,000	1800	1530	85
40	16596-8	$	TL5C 40W/830	10	Formerly FC12T5/830	12 OD	16,000	3300	2805	85
	14859-3	$	TL5C 40W/835	10	Formerly FC12T5/835	12 OD	16,000	3300	2805	85
	16598-4	$	TL5C 40W/840	10	Formerly FC12T5/841	12 OD	16,000	3300	2805	85
55	16593-6	$	TL5C 55W/830	10	Formerly FC12T5/830/HO	12 OD	16,000	4200	3580	85
	14862-7	$	TL5C 55W/835	10	Formerly FC12T5/835/HO	12 OD	16,000	4200	3580	85
	16592-8	$	TL5C 55W/840	10	Formerly FC12T5/841/HO	12 OD	16,000	4200	3580	85
PREHEAT FLUORESCENT LAMPS										
T5 Miniature Bipin; Requires Use of Starters										
4	33236-1		F4T5/CW	25	Cool White, 4100K	6	6000	135	95	59
6	33241-1		F6T5/CW	25	Cool White, 4100K	9	7500	295	230	59
	33242-9		F6T5/D	25	Daylight, 6500K	9	7500	230	180	73
8	33247-8		F8T5/CW	25	Cool White, 4100K	12	7500	400	300	59
	20702-7		F8T5/30U	25	Ultralume, 3000K	12	7500	450	360	85
	33249-4		F8T5/D	25	Daylight, 6500K	12	7500	330	265	73
13	33253-6		F13T5/CW	25	Cool White, 4100K	21	7500	820	655	59
	20703-5		F13T5/30U	25	Ultralume, 3000K	21	7500	1000	800	85

For the most current product information, go to the e-catalog on **www.philips.com**

Fluorescent symbols and footnotes located on page 51



T5 Circular

T5 Miniature Bipin

T5 AND T5 HIGH OUTPUT DIMENSIONS (226)

Type	A Max. (Width)		B Min. (Width)		B Max. (Width)		C Max. (Width)	
	inches	mm	inches	mm	inches	mm	inches	mm
T5 14W/24W	21.61	549.0	21.80	553.7	21.89	556.1	22.17	563.2
T5 21W/39W	33.42	849.0	33.61	853.7	33.70	856.1	33.98	863.2
T5 28W/54W	45.24	1149.0	45.42	1153.7	45.52	1156.1	45.80	1163.2
T5 35W/80W	57.05	1449.0	57.23	1453.7	57.33	1456.1	57.61	1463.2

Philips ALTO II Technology

Philips T8 Fluorescent Lamps featuring ALTO II Technology
Better for your business, Better for the environment

ALTO lamps with green endcaps have become synonymous with environmental responsibility and low mercury. Since the launch of ALTO Lamp Technology in 1995, 2.0 billion Philips fluorescent lamps with ALTO Lamp Technology have been produced with over 20 tons less mercury than previous non-ALTO lamps[1].

Philips launched ALTO II Technology in 2007. ALTO II technology has 50% less mercury than prior T8 lamps featuring ALTO technology, making these lamps the most sustainable linear fluorescents available. Best of all, these lamps offer the same performance levels as ALTO lamps (life, energy, and light output).

PHILIPS T8 LAMP WARRANTY PERIODS

PHILIPS LAMP	WARRANTY PERIOD[2]
T8 17W, 25W and 32W, 700 and 800 Series	30 Months
Energy Advantage 25W and 28W	36 Months
PLUS T8 17W, 25W, and 32W	36 Months
Advantage T8 32W	36 Months
T8 32W Extra Long Life	48 Months
Energy Advantage T8 25W Extra Long Life	48 Months

DID YOU KNOW?

- ALTO II T8 lamps have warranty periods ranging from 2½–4 years[3]
- ALTO II T8 lamps require no burn in before dimming
- ALTO II T8 lamps can contribute to LEED-EB certification. For more information go to www.usgbc.org

PHILIPS T8 LAMP FAMILY—LIFE RATINGS

Products	INSTANT START[4]		PROGRAMMED START[5]	
	Rated Average Life (Hrs.)		Rated Average Life (Hrs.)	
	3 hour start	12 hour start	3 hour start	12 hour start
700 and 800 Series T8	24,000	30,000	30,000	36,000
PLUS T8	30,000	36,000	36,000	42,000
Advantage T8	24,000	30,000	30,000	36,000
Energy Advantage T8 25W and 28W	30,000	36,000	36,000	42,000
32W Extra Long Life	36,000	40,000	40,000	46,000
Energy Advantage T8 25W and 28W Extra Long Life	36,000	40,000	40,000	46,000

1) [1994 industry average (22.8mg)—PLC average (4.0mg)] x 2 billion lamps. Convert to pounds by dividing by 464. Convert to tons by dividing by 2000.
2) Certain limitations and conditions apply. See Philips for further warranty details.
3) Warranty Periods: 700 & 800 Series T8–30 months; Energy Advantage T8–36 months; PLUS T8–36 months; and Advantage T8–36 months; Extra Long Life T8–48 months; Energy Advantage Extra Long Life T8–48 months.
4) Average life under engineering data on instant start ballast with lamps turned off and restarted once every 3 or 12 operating hours as indicated.
5) Average life under engineering data on programmed start ballast with lamps turned off and restarted once every 3 or 12 operating hours as noted.

FLUORESCENT LAMPS

Energy Advantage T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
ENERGY ADVANTAGE T8 25 WATT FLUORESCENT LAMPS											
T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor											
25	13781-0	$ Ⓔ ●	F32T8/ADV830/XEW/ALTO 25 WATT	25	Advantage 830, 3000K	48	30,000	36,000	2500	2450	85
	13782-8	$ Ⓔ ●	F32T8/ADV835/XEW/ALTO 25 WATT	25	Advantage 835, 3500K	48	30,000	36,000	2500	2450	85
	13783-6	$ Ⓔ ●	F32T8/ADV841/XEW/ALTO 25 WATT	25	Advantage 841, 4100K	48	30,000	36,000	2500	2450	85
	15238-9	$ Ⓔ ● †	F32T8/ADV841/XEW/ALTO 25 WATT	10	Advantage 841, 4100K, 10PK	48	30,000	36,000	2500	2450	85
	13784-4	$ Ⓔ ●	F32T8/ADV850/XEW/ALTO 25 WATT	25	Advantage 850, 5000K	48	30,000	36,000	2400	2350	82
ENERGY ADVANTAGE T8 28 WATT FLUORESCENT LAMPS											
T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor											
28	14732-2	$ Ⓔ ●	F32T8/ADV830/EW/ALTO 28 WATT	25	Advantage 830, 3000K	48	30,000	36,000	2725	2645	85
	14733-0	$ Ⓔ ●	F32T8/ADV835/EW/ALTO 28 WATT	25	Advantage 835, 3500K	48	30,000	36,000	2725	2645	85
	14734-8	$ Ⓔ ●	F32T8/ADV841/EW/ALTO 28 WATT	25	Advantage 841, 4100K	48	30,000	36,000	2725	2645	85
	14735-5	$ Ⓔ ●	F32T8/ADV850/EW/ALTO 28 WATT	25	Advantage 850, 5000K	48	30,000	36,000	2675	2595	82

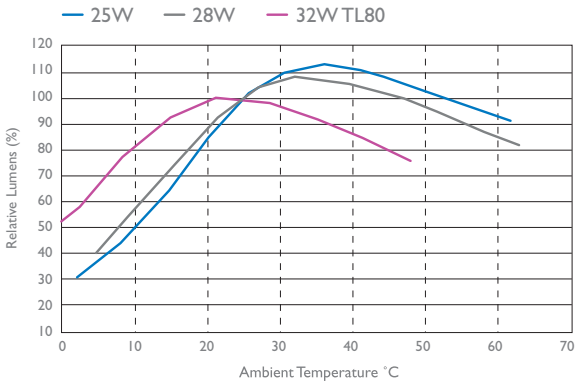
For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51

PHILIPS ENERGY ADVANTAGE T8
Warranty Period: 36 months*

* Certain limitations and conditions apply. See Philips for further warranty details.

RELATIVE LIGHT OUTPUT VS. AMBIENT TEMP.

4' T8 Lamps—0.88 BF Ballast



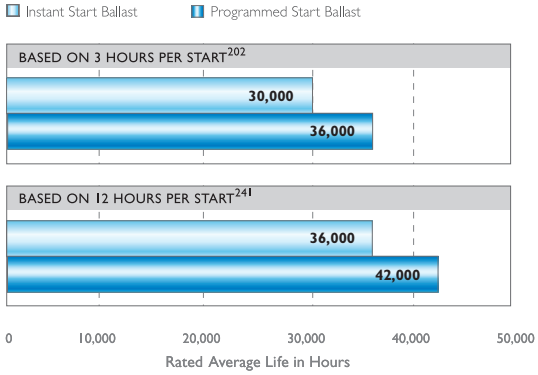
Relative light output with respect to 25°C rated temperature

ENERGY ADVANTAGE 25W T8 SAVINGS

Save 7 Watts Instantly			
7 watts per lamp saved	Energy Savings Calculator		
	Annual Operating Hours**		Savings Over Lamp Life
KWH Rate	4380	8760	36,000 hrs.
$0.06	$1.84	$3.68	$15.12
$0.08	$2.45	$4.90	$20.16
$0.10	$3.07	$6.13	$25.20
$0.12	$3.68	$7.36	$30.24
$0.20	$6.13	$12.26	$50.40

** 4380 hours are based on operating the lamps 12 hours per day/7 days per week.
8760 hours are based on operating the lamps 24 hours per day/7 days per week.

RATED AVERAGE LIFE



Cost of Ownership Savings
Energy Advantage T8 fluorescent lamps vs. standard T8 lamps.

General Overview
Energy Advantage 25W T8 fluorescent lamps provide energy savings of up to 25% versus standard 32W T8, so the benefits and financial impact can be significant.

Benefits
By using Energy Advantage 25W T8 lamps the energy savings of 7 watts per lamp can be achieved instantly by simply changing the lamp.

Financial Impact

Energy Savings per Lamp	7 Watts
Operating Hours per Year	8760 hours, continuous burn
Cost per kWh	$ .10

Cost of Ownership Savings = $6.13 per lamp per year

FLUORESCENT LAMPS

Extra Long Life (XLL) T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
EXTRA LONG LIFE ENERGY ADVANTAGE 25 WATT T8 FLUORESCENT LAMP											
T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor											
25	15206-6	$ ●	F32T8/ADV830/XLL/ALTO 25 WATT	25	Advantage 830, 3000K	48	36,000	40,000	2425	2375	85
	15207-4	$ ●	F32T8/ADV835/XLL/ALTO 25 WATT	25	Advantage 835, 3500K	48	36,000	40,000	2425	2375	85
	15208-2	$ ●	F32T8/ADV841/XLL/ALTO 25 WATT	25	Advantage 841, 4100K	48	36,000	40,000	2425	2375	85
	15209-0	$ ●	F32T8/ADV850/XLL/ALTO 25 WATT	25	Advantage 850, 5000K	48	36,000	40,000	2325	2275	82
EXTRA LONG LIFE ENERGY ADVANTAGE 28 WATT T8 FLUORESCENT LAMP											
T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor											
28	23454-2	●	F32T8/ADV830/XLL/ALTO 28 WATT	25	Advantage 830, 3000K	48	36,000	40,000	2675	2600	85
	23726-3	●	F32T8/ADV835/XLL/ALTO 28 WATT	25	Advantage 835, 3500K	48	36,000	40,000	2675	2600	85
	16933-4	●	F32T8/ADV841/XLL/ALTO 28 WATT	25	Advantage 841, 4100K	48	36,000	40,000	2675	2600	85
	16938-3	●	F32T8/ADV850/XLL/ALTO 28 WATT	25	Advantage 850, 5000K	48	36,000	40,000	2625	2550	82
EXTRA LONG LIFE 32 WATT T8 FLUORESCENT LAMPS											
T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor											
32	15202-5	$ Ⓔ ●	F32T8/TL830/XLL/ALTO	25	TL 830, 3000K	48	36,000	40,000	2950	2800	85
	15203-3	$ Ⓔ ●	F32T8/TL835/XLL/ALTO	25	TL 835, 3500K	48	36,000	40,000	2950	2800	85
	15204-1	$ Ⓔ ●	F32T8/TL841/XLL/ALTO	25	TL 841, 4100K	48	36,000	40,000	2950	2800	85
	15205-8	$ Ⓔ ●	F32T8/TL850/XLL/ALTO	25	TL 850, 5000K	48	36,000	40,000	2850	2700	82

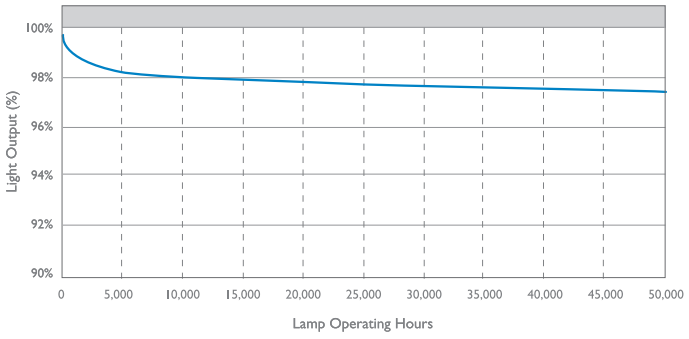
For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51

PHILIPS EXTRA LONG LIFE T8
Warranty Period: 48 months*

* Certain limitations and conditions apply. See Philips for further warranty details.

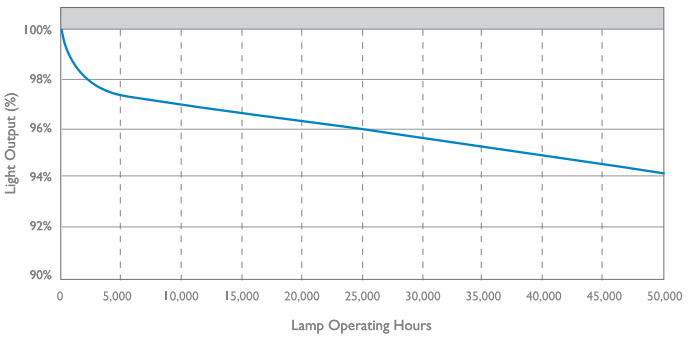
98% LUMEN MAINTENANCE

Philips Energy Advantage T8 25W XEW and XLL Lamps



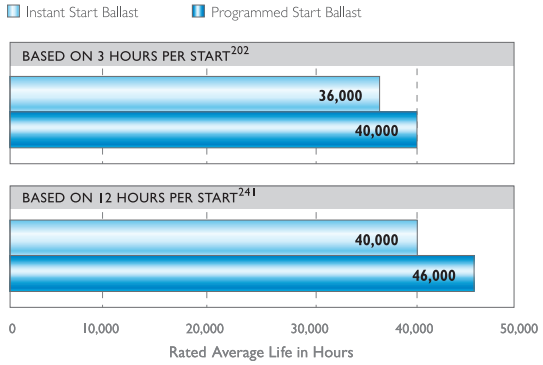
97% LUMEN MAINTENANCE

Philips Energy Advantage T8 28W XEW and XLL Lamps



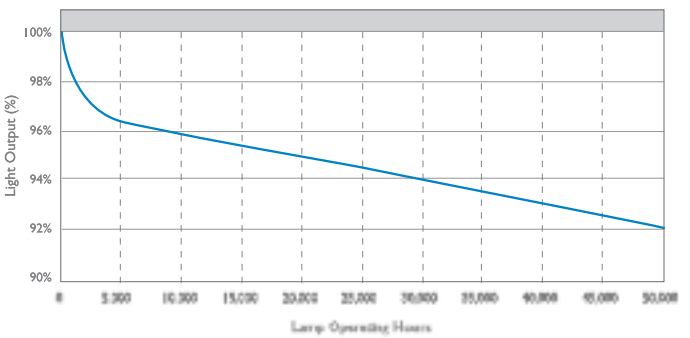

T8 Medium Bipin

RATED AVERAGE LIFE



95% LUMEN MAINTENANCE

Philips T8 32W XLL Lamps



FLUORESCENT LAMPS

Advantage T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208, 239)	CRI
ADVANTAGE T8 HIGH LUMEN FLUORESCENT LAMPS											
T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor											
17	20483-4	$ Ⓔ ●	F17T8/ADV830/ALTO	25	Advantage 830, 3000K	24	24,000	30,000	1500	1450	85
	20484-2	$ Ⓔ ●	F17T8/ADV835/ALTO	25	Advantage 835, 3500K	24	24,000	30,000	1500	1450	85
	20485-9	$ Ⓔ ●	F17T8/ADV841/ALTO	25	Advantage 841, 4100K	24	24,000	30,000	1500	1450	85
	20487-5	$ Ⓔ ●	F17T8/ADV850/ALTO	25	Advantage 850, 5000K	24	24,000	30,000	1425	1380	82
25	20488-3	$ Ⓔ ●	F25T8/ADV830/ALTO	25	Advantage 830, 3000K	36	24,000	30,000	2380	2300	85
	20490-9	$ Ⓔ ●	F25T8/ADV835/ALTO	25	Advantage 835, 3500K	36	24,000	30,000	2380	2300	85
	20495-8	$ Ⓔ ●	F25T8/ADV841/ALTO	25	Advantage 841, 4100K	36	24,000	30,000	2380	2300	85
	20498-2	$ Ⓔ ●	F25T8/ADV850/ALTO	25	Advantage 850, 5000K	36	24,000	30,000	2275	2210	82
32	13987-3	▢ $ Ⓔ ●	F32T8/ADV830/ALTO	25	Advantage 830, 3000K	48	24,000	30,000	3100	3000	85
	13988-1	▢ $ Ⓔ ●	F32T8/ADV835/ALTO	25	Advantage 835, 3500K	48	24,000	30,000	3100	3000	85
	13989-9	▢ $ Ⓔ ●	F32T8/ADV841/ALTO	25	Advantage 841, 4100K	48	24,000	30,000	3100	3000	85
	13990-7	▢ $ Ⓔ ●	F32T8/ADV850/ALTO	25	Advantage 850, 5000K	48	24,000	30,000	3000	2910	82

For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51

PHILIPS ADVANTAGE T8
Warranty Period: 36 months*

* Certain limitations and conditions apply.
See Philips for further warranty details.

ENERGY SAVINGS: TWO LAMP VS. TWO LAMP SYSTEM

Electronic Ballast	Ballast Factor	No. of Lamps	Lamp Watts	Standard T8 Lumens	Advantage T8 Lumens	System Watts	Savings
Standard T8	0.87	2	32	2850	—	58	—
Reduced Light Output T8	0.75	2	32	—	3100	51	$2.80/yr

Combine Advantage T8 lamps with reduced light output electronic ballasts, with these results:

- Saves 7 system watts vs. standard T8 system
- Saves $2.80 per fixture per year
- Energy savings based on 4000 hrs/yr @ $.10 kw/hr

ENERGY SAVINGS: TWO LAMP VS. THREE LAMP SYSTEM

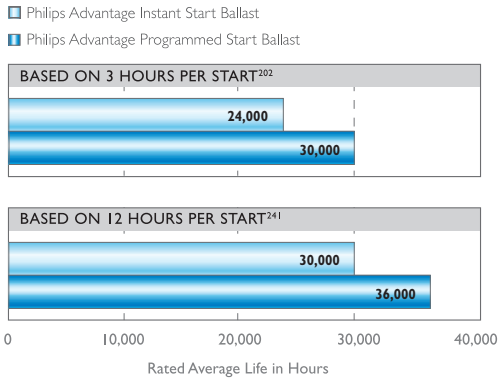
Electronic Ballast	Ballast Factor	No. of Lamps	Lamp Watts	Standard T8 Lumens	Advantage T8 Lumens	System Watts	Savings
Standard T8	0.87	3	32	2850	—	88	—
Increased Light Output T8	1.20	2	32	—	3100	78	$4.00/yr

Combine advantage T8 lamps with increased light output ballasts. A two lamp advantage T8 system vs. a three lamp standard T8 system will:

- Save 10 system watts
- Save $4.00 per fixture per year
- Save energy based on 4000 hrs/yr @ $.10 kw/hr
- Reduce lighting installation costs (lamps, ballasts, fixtures and labor)
- Operate on ballast with ballast factors up to 1.32 with warranty intact

T8 Medium Bipin

RATED AVERAGE LIFE



FLUORESCENT LAMPS

PLUS 800 Series T8 Lamps, PLUS 700 Series T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208, 239)	CRI
PLUS 800 SERIES LONG LIFE T8 FLUORESCENT LAMPS											
T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor											
17	14552-4	$ Ⓔ ●	F17T8/TL830/PLUS/ALTO	25	TL 830, 3000K	24	30,000	36,000	1400	1330	85
	14553-2	$ Ⓔ ●	F17T8/TL835/PLUS/ALTO	25	TL 835, 3500K	24	30,000	36,000	1400	1330	85
	14554-0	$ Ⓔ ●	F17T8/TL841/PLUS/ALTO	25	TL 841, 4100K	24	30,000	36,000	1400	1330	85
	14555-7	$ Ⓔ ●	F17T8/TL850/PLUS/ALTO	25	TL 850, 5000K	24	30,000	36,000	1325	1260	82
	38215-0	$ Ⓔ ●	F17T8/TL865/PLUS/ALTO	25	TL 865, 6500K	24	30,000	36,000	1275	1210	82
25	14556-5	$ Ⓔ ●	F25T8/TL830/PLUS/ALTO	25	TL 830, 3000K	36	30,000	36,000	2225	2115	85
	14557-3	$ Ⓔ ●	F25T8/TL835/PLUS/ALTO	25	TL 835, 3500K	36	30,000	36,000	2225	2115	85
	14558-1	$ Ⓔ ●	F25T8/TL841/PLUS/ALTO	25	TL 841, 4100K	36	30,000	36,000	2225	2115	85
	14559-9	$ Ⓔ ●	F25T8/TL850/PLUS/ALTO	25	TL 850, 5000K	36	30,000	36,000	2150	2040	82
	38258-0	$ Ⓔ ●	F25T8/TL865/PLUS/ALTO	25	TL 865, 6500K	36	30,000	36,000	2125	2000	82
32	36000-8	$ Ⓔ ●	F32T8/TL830/PLUS/ALTO	25	TL 830, 3000K	48	30,000	36,000	2950	2800	85
	36001-6	$ Ⓔ ●	F32T8/TL835/PLUS/ALTO	25	TL 835, 3500K	48	30,000	36,000	2950	2800	85
	36002-4	$ Ⓔ ●	F32T8/TL841/PLUS/ALTO	25	TL 841, 4100K	48	30,000	36,000	2950	2800	85
	20277-0	$ Ⓔ ● †	F32T8/TL841/PLUS/ALTO	10	TL 841, 4100K, 10 PK	48	30,000	36,000	2950	2800	85
	36003-2	$ Ⓔ ●	F32T8/TL850/PLUS/ALTO	25	TL 850, 5000K	48	30,000	36,000	2850	2710	82
	38261-4	$ Ⓔ ● ∅	F32T8/TL865/PLUS/ALTO	25	TL 865, 6500K	48	30,000	36,000	2750	2610	82
PLUS 700 SERIES LONG LIFE T8 FLUORESCENT LAMPS											
T8 Medium Bipin Featuring ALTO II Technology and HI-VISION Phosphor											
32	36004-0	$ Ⓔ ● ∅	F32T8/TL730/PLUS/ALTO	25	TL 730, 3000K	48	30,000	36,000	2800	2660	78
	36005-7	$ Ⓔ ● ∅	F32T8/TL735/PLUS/ALTO	25	TL 735, 3500K	48	30,000	36,000	2800	2660	78
	36013-1	$ Ⓔ ● ∅	F32T8/TL741/PLUS/ALTO	25	TL 741, 4100K	48	30,000	36,000	2800	2660	78
	36014-9	$ Ⓔ ● ∅	F32T8/TL750/PLUS/ALTO	25	TL 750, 5000K	48	30,000	36,000	2700	2550	78

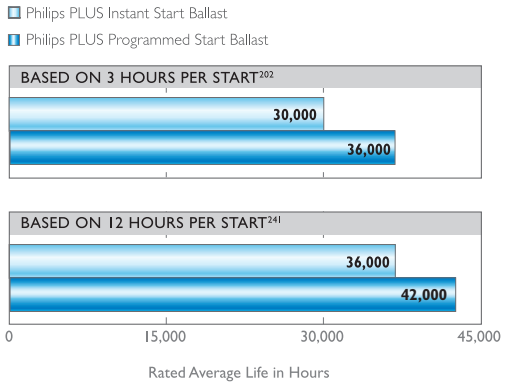
For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51
∅ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012

PHILIPS PLUS 700 SERIES AND 800 SERIES T8
Warranty Period: 36 months*

* Certain limitations and conditions apply. See Philips for further warranty details.


T8 Medium Bipin

RATED AVERAGE LIFE



FLUORESCENT LAMPS

800 Series T8 Lamps, 700 Series T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208, 239)	CRI
800 SERIES T8 FLUORESCENT LAMPS											
T8 Medium Bipin Featuring ALTO II Technology											
17	36791-2	$ ●	F17T8/TL835/ALTO	25	TL 835, 3500K	24	24,000	30,000	1350	1280	85
	36793-8	$ ●	F17T8/TL841/ALTO	25	TL 841, 4100K	24	24,000	30,000	1350	1280	85
	14123-4	$ ●	F17T8/TL850/ALTO	25	TL 850, 5000K	24	24,000	30,000	1300	1235	82
25	36814-2	$ ●	F25T8/TL835/ALTO	25	TL 835, 3500K	36	24,000	30,000	2150	2040	85
	36825-8	$ ●	F25T8/TL841/ALTO	25	TL 841, 4100K	36	24,000	30,000	2150	2040	85
	14124-2	$ ●	F25T8/TL850/ALTO	25	TL 850, 5000K	36	24,000	30,000	2150	2040	82
32	24667-8	$ Ⓔ ●	F32T8/TL830/ALTO	25	TL 830, 3000K	48	24,000	30,000	2850	2710	85
	24670-2	$ Ⓔ ●	F32T8/TL835/ALTO	25	TL 835, 3500K	48	24,000	30,000	2850	2710	85
	24671-0	$ Ⓔ ●	F32T8/TL841/ALTO	25	TL 841, 4100K	48	24,000	30,000	2850	2710	85
	27235-1	$ Ⓔ ●	F32T8/TL841/ALTO PLZ	1350	TL 841, 4100K	48	24,000	30,000	2850	2710	85
	27229-4	$ Ⓔ ●	F32T8/TL850/ALTO	25	TL 850, 5000K	48	24,000	30,000	2850	2710	82
40	36831-6	$ ●	F40T8/TL830/ALTO	25	TL 830, 3000K	60	24,000	30,000	3725	3500	85
	36834-0	$ ●	F40T8/TL835/ALTO	25	TL 835, 3500K	60	24,000	30,000	3725	3500	85
	36847-2	$ ●	F40T8/TL841/ALTO	25	TL 841, 4100K	60	24,000	30,000	3725	3500	85
	20698-7	$ ●	F40T8/TL850/ALTO	25	TL 850, 5000K	60	24,000	30,000	3600	3500	82
700 SERIES T8 FLUORESCENT LAMPS											
T8 Medium Bipin Featuring ALTO II Technology											
32	27252-6	$ Ⓔ ● ∅	F32T8/TL730 ALTO	25	TL 730, 3000K	48	24,000	30,000	2700	2565	78
	27249-2	$ Ⓔ ● ∅	F32T8/TL735/ALTO	25	TL 735, 3500K	48	24,000	30,000	2700	2565	78
	27259-1	$ Ⓔ ● ∅	F32T8/TL735/ALTO PLZ	1350	TL 735, 3500K	48	24,000	30,000	2700	2565	78
	27248-4	$ Ⓔ ● ∅	F32T8/TL741/ALTO	25	TL 741, 4100K	48	24,000	30,000	2700	2565	78
	38351-3	$ Ⓔ ● ∅	F32T8/TL741/ALTO	10	TL 741, 4100K, 10PK	48	24,000	30,000	2700	2565	78
	27255-9	$ Ⓔ ● ∅	F32T8/TL741/ALTO PLZ	1350	TL 741, 4100K	48	24,000	30,000	2700	2565	78
	27268-2	$ Ⓔ ● ∅	F32T8/TL750/ALTO	25	TL 750, 5000K	48	24,000	30,000	2600	2470	78

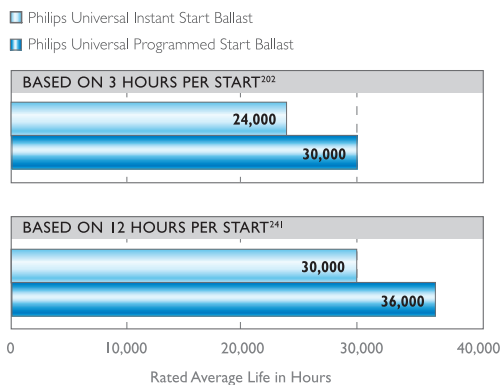
For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51
∅ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012

PHILIPS 700 SERIES AND 800 SERIES T8
Warranty Period: 30 months*

* Certain limitations and conditions apply.
See Philips for further warranty details.

T8 Medium Bipin

RATED AVERAGE LIFE



FLUORESCENT LAMPS

T8 U-Bent Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
ENERGY ADVANTAGE U-BENT 6" T8 FLUORESCENT LAMPS											
T8 Medium Bipin with 6" Wide Spacing (212)											
25	20420-6	$ ●	FB32T8/ADV830/6/XEW/ALTO 25 WATT	20	TL 830, 3000K	22⅞	24,000	30,000	2400	2330	85
	20421-4	$ ●	FB32T8/ADV835/6/XEW/ALTO 25 WATT	20	TL 835, 3500K	22⅞	24,000	30,000	2400	2330	85
	20423-0	$ ●	FB32T8/ADV841/6/XEW/ALTO 25 WATT	20	TL 841, 4100K	22⅞	24,000	30,000	2400	2330	85
	20424-8	$ ●	FB32T8/ADV850/6/XEW/ALTO 25 WATT	20	TL 850, 5000K	22⅞	24,000	30,000	2350	2280	82
800 SERIES U-BENT RAPID START T8 FLUORESCENT LAMPS											
T8 Medium Bipin with 6" Wide Spacing (212)											
32	37897-6	$ ●	FB32T8/TL830/6/ALTO	20	TL 830, 3000K	22⅞	24,000	30,000	2800	2535	85
	37900-8	$ ●	FB32T8/TL835/6/ALTO	20	TL 835, 3500K	22⅞	24,000	30,000	2800	2535	85
	37902-4	$ ●	FB32T8/TL841/6/ALTO	20	TL 841, 4100K	22⅞	24,000	30,000	2800	2535	85
	37880-2	$ ●	FB32T8/TL850/6/ALTO	20	TL 850, 5000K	22⅞	24,000	30,000	2700	2450	82
700 SERIES U-BENT RAPID START T8 FLUORESCENT LAMPS											
T8 Medium Bipin with 6" Wide Spacing (212)											
32	37892-7	$ ● ∅	FB32T8/TL730/6/ALTO	20	TL 730, 3000K	22⅞	20,000	24,000	2650	2370	78
	37893-5	$ ● ∅	FB32T8/TL735/6/ALTO	20	TL 735, 3500K	22⅞	20,000	24,000	2650	2370	78
	37894-3	$ ● ∅	FB32T8/TL741/6/ALTO	20	TL 741, 4100K	22⅞	20,000	24,000	2650	2370	78
	37882-8	$ ● ∅	FB32T8/TL750/6/ALTO	20	TL 750, 5000K	22⅞	20,000	24,000	2600	2325	78

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
ENERGY ADVANTAGE U-BENT 1⅝" T8 FLUORESCENT LAMPS										
T8 Medium Bipin with 1⅜" Wide Spacing (212)										
29	22675-3	●	FB29T8/TL830/EA/ALTO	15	TL 830, 3000K	22⅜	24,000	2600	2470	85
	22676-1	●	FB29T8/TL835/EA/ALTO	15	TL 835, 3500K	22⅜	24,000	2600	2470	85
	22677-9	●	FB29T8/TL841/EA/ALTO	15	TL 841, 4100K	22⅜	24,000	2600	2470	85
800 SERIES U-BENT 1⅝" T8 FLUORESCENT LAMPS										
T8 Medium Bipin with 1⅜" Wide Spacing (212)										
31	22671-2	●	FB31T8/TL830/ALTO	15	TL 830, 3000K	22⅜	24,000	2775	2636	85
	22672-0	●	FB31T8/TL835/ALTO	15	TL 835, 3500K	22⅜	24,000	2775	2636	85
	22674-6	●	FB31T8/TL841/ALTO	15	TL 841, 4100K	22⅜	24,000	2775	2636	85

For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51
∅ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012

T8 U-Bent Lamp
Medium Bipin

T8 U-Bent
1⅜" Lamp

PHILIPS STANDARD AND 1⅝" U-BENT T8
Warranty Period: 24 months*

PHILIPS ENERGY ADVANTAGE U-BENT T8
Warranty Period: 36 months*

* Certain limitations and conditions apply.
See Philips for further warranty details.

FLUORESCENT LAMPS

Rapid Start T8 Lamps, Preheat T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
RAPID START T8 FLUORESCENT LAMPS											
T8 Medium Bipin; High CRI											
17	22154-9	$	F17T8/TL950	25	TL 950, 5000K	24	20,000	20,000	910	850	98
25	22159-8	$	F25T8/TL950	25	TL 950, 5000K	36	20,000	20,000	1550	1450	98
32	20904-9	$	F32T8/TL930	25	TL 930, 3000K	48	20,000	20,000	2000	1860	95
	20905-6	$	F32T8/TL950	25	TL 950, 5000K	48	20,000	20,000	2000	1860	98
TL-D RAPID START T8 FLUORESCENT LAMPS—FOR OPERATION ON EUROPEAN BALLAST											
T8 Medium Bipin; High CRI											
36	29189-8		TLD36W/840NG	25	TL840, 4000K	48	20,000	—	3350	3100	82
58	29184-9		TLD58W/840NG	25	TL840, 4000K	60	20,000	—	5200	4300	82
70	29186-4		TLD70W/840NG	25	TL840, 4000K	72	20,000	—	6200	5100	82
PREHEAT T8 FLUORESCENT LAMPS											
T8 Medium Bipin Linear Fluorescent Lamps; Requires Use of Starters (202)											
15	40720-5	†	F15T8D	25	Daylight, 6500K	18	7500	—	750	660	73
	40719-7	†	F15T8/CW	25	Cool White, 4100K	18	7500	—	870	765	59
	36436-4		F15T8/CW BULK	96	Cool White, 4100K	18	7500	—	850	750	59
	39226-6		F15T8/PLANT	6	Plant Lite, Sleeved	18	7500	—	410	N/A	N/A
30	23545-7	● †	F30T8/CW/ALTO	25	Cool White, 4100K	36	7500	—	2200	2000	59

For the most current product information, go to the e-catalog on **www.philips.com**

Fluorescent symbols and footnotes located on page 51

T8 Medium Bipin

FLUORESCENT LAMPS

Slimline T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
ENERGY ADVANTAGE T8 SLIMLINE 8-FOOT FLUORESCENT LAMPS											
T8 Single Pin; Featuring ALTO Lamp Technology; Instant Start											
51	16321-2	▢ $ Ⓔ ●	F96T8/ADV835/XEW/ALTO 51W	25	TL 835, 3500K	96	24,000	30,000	5300	4940	85
	16331-1	▢ $ Ⓔ ●	F96T8/ADV841/XEW/ALTO 51W	25	TL 841, 4100K	96	24,000	30,000	5300	4940	85
	16457-4	▢ $ Ⓔ ●	F96T8/ADV850/XEW/ALTO 51W	25	TL 850, 5000K	96	24,000	30,000	5200	4840	82
PLUS SLIMLINE T8 8-FOOT FLUORESCENT LAMPS											
T8 Single Pin; Featuring ALTO Lamp Technology; Instant Start											
59	23684-4	▢ $ Ⓔ ●	F96T8/TL835/PLUS/ALTO	25	TL 835, 3500K	96	24,000	30,000	5900	5490	85
	23685-1	▢ $ Ⓔ ●	F96T8/TL841/PLUS/ALTO	25	TL 841, 4100K	96	24,000	30,000	5900	5490	85
	23686-9	▢ $ Ⓔ ●	F96T8/TL850/PLUS/ALTO	25	TL 850, 5000K	96	24,000	30,000	5780	5375	82
	23681-0	▢ $ Ⓔ ● ⌀	F96T8/TL735/PLUS/ALTO	25	TL 735, 3500K	96	24,000	30,000	5700	5190	78
	23682-8	▢ $ Ⓔ ● ⌀	F96T8/TL741/PLUS/ALTO	25	TL 741, 4100K	96	24,000	30,000	5700	5190	78

For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51

PHILIPS XEW SLIMLINE T8
Warranty Period: 30 months*

PHILIPS PLUS SLIMLINE T8
Warranty Period: 24 months*

* Certain limitations and conditions apply. See Philips for further warranty details.

PLUS SLIMLINE T8 8-FOOT COST OF OWNERSHIP SAVINGS

PLUS Slimline 8-foot T8 Fluorescent Lamps vs. Standard 8-foot T8 Lamps

General Overview

PLUS Slimline 8-foot T8 fluorescent lamps may provide up to 60% longer life than standard 8-foot T8 products. With an incremental cost as little as $1.00 per lamp, benefits and financial impact can be significant.

Benefits

By using PLUS Slimline 8-foot T8 lamps, the lamp replacement and labor costs are extended by an extra 2 years on a facility that operates an average of 4000 hours per year. For example, a standard 8-foot T8 product, with a rated average life expectancy of 15,000 hours, will last nearly 4 years (15,000 hours rated average life/4000 hours per year = 3¾ years).

Conversely, PLUS Slimline 8-foot T8 lamps will operate for 6 years due to their rated average life expectancy of 24,000 hours (24,000 hours rated average life/4000 hours per year = 6 years).

Financial Impact

With the extended life expectancy of 2 years and the benefits of Philips exclusive TCLP-compliant low mercury technology, the positive financial impact of installing PLUS Slimline 8-foot T8 lamps may provide cost of ownership savings per lamp as follows:

Incremental Cost	$ (1.00)
Material Cost Avoidance [A]	$ 4.00
Labor Cost Avoidance [B]	$ 3.72
Disposal Cost Avoidance [C]	$ 0.72
Cost of Ownership Savings	**$ 7.44**

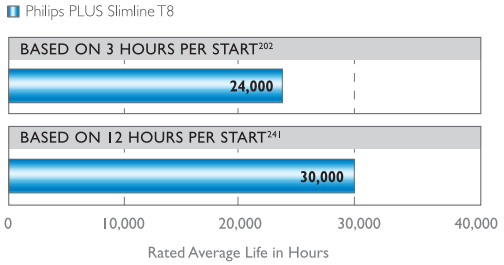
A Material Cost Avoidance is the annualized acquisition cost per lamp (average cost per lamp of $7.50 for standard 8-Foot T8 product / 3 3/4 years = $2.00 per year). By installing PLUS Slimline 8-Foot T8 lamps, a material cost per lamp of $4.00 is avoided due to the extra 2 years of life expectancy. Note that the average cost per lamp may vary.

B Labor Cost Avoidance is the annualized labor replacement cost per lamp (labor replacement cost per lamp of $7.00 / 3 years = $1.86 per year). By installing PLUS Slimline 8-Foot T8 lamps, a labor replacement cost per lamp of $3.72 is avoided due to the extra 2 years life expectancy. Note that the labor replacement cost per lamp may vary.

C Disposal Cost Avoidance is based on an average of $.09 per foot for lamp recycling or $.72 per 8-foot lamp. Philips Lighting Company encourages the recycling of all fluorescent lamps.

T8 Single Pin

RATED AVERAGE LIFE



FLUORESCENT LAMPS

High Output T8 Lamps, Very High Output T8 Lamps

PLUS HIGH OUTPUT (HO) T8 8-FOOT FLUORESCENT LAMPS

T8 Recessed D.C.; Featuring ALTO Lamp Technology

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
86	23687-7	▢ $ Ⓔ ●	F96T8/TL835/HO/PLUS/ALTO	25	TL 835, 3500K	96	24,000	30,000	8200	7625	85
	23688-5	▢ $ Ⓔ ●	F96T8/TL841/HO/PLUS/ALTO	25	TL 841, 4100K	96	24,000	30,000	8200	7625	85
	23689-3	▢ $ Ⓔ ●	F96T8/TL850/HO/PLUS/ALTO	25	TL 850 5000K	96	24,000	30,000	8100	7550	82

HIGH OUTPUT (HO) T8 FLUORESCENT LAMPS—4 FOOT, 5 FOOT & 6 FOOT

T8 Recessed D.C.; Featuring ALTO Lamp Technology

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
44	23679-4	▢ $ ●	F48T8/TL841/HO/ALTO	25	TL 841, 4100K	48	18,000	4000	3600	85
55	41168-6	▢ $ ● †	F60T8/TL841/HO/ALTO	25	TL 841, 4100K	60	18,000	5050	4545	85
65	23680-2	▢ $ ●	F72T8/TL841/HO/ALTO	25	TL 841, 4100K	72	18,000	6100	5490	85

VERY HIGH OUTPUT-OUTDOOR (VHO-O) T8 EXTREME TEMPERATURE FLUORESCENT LAMPS

T8 Medium Bipin; Featuring ALTO Lamp Technology

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
84	40888-0	● †	F48T8/TL835/VHO-O/ALTO	25	TL 835, 3500K	48	30,000	40,000	7200	6840	85
	40889-8	● †	F48T8/TL841/VHO-O/ALTO	25	TL 841, 4100K	48	30,000	40,000	7200	6840	85
	40887-2	● †	F48T8/TL850/VHO-O/ALTO	25	TL 850, 5000K	48	30,000	40,000	6900	6550	82

For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51

PHILIPS PLUS HIGH OUTPUT, HIGH OUTPUT AND VERY HIGH OUTPUT T8
Warranty Period: 24 months*

* Certain limitations and conditions apply.
See Philips for further warranty details.


T8 Recessed DC


T8 Medium Bipin

FLUORESCENT LAMPS

Rapid Start T12 Lamps, T12 U-Bent Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
ADVANTAGE RAPID START ULTIMATE PERFORMANCE T12 FLUORESCENT LAMPS											
T12 Medium Bipin											
34	14258-8	● X	F34T12/ADV35/EW/ALTO	30	Advantage 35, T12, 3500K	48	24,000	30,000	3100	2945	85
	14259-6	● X	F34T12/ADV41/EW/ALTO	30	Advantage 41, T12, 4100K	48	24,000	30,000	3100	2945	82
	14260-4	● X	F34T12/ADV50/EW/ALTO	30	Advantage 50, T12, 5000K	48	24,000	30,000	3000	2845	82
RAPID START "LONG LIFE" T12 FLUORESCENT LAMPS											
T12 Medium Bipin											
34	14251-3	● ∅	F34/CW/RS/EW/LL/ALTO	30	Cool White, 4100K	48	24,000	30,000	2650	2300	59
	14252-1	● ∅ X	F34/WW/RS/EW/LL/ALTO	30	Warm White, 3000K	48	24,000	30,000	2700	2350	49

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
RAPID START 800 SERIES T12 FLUORESCENT LAMPS										
T12 Medium Bipin										
34	14253-9	● ∅	F34T12/830/EW/ALTO	30	TL 830, 3000K	48	20,000	2800	2660	82
	14254-7	● ∅	F34T12/835/EW/ALTO	30	TL 835, 3500K	48	20,000	2800	2660	82
	14255-4	● ∅	F34T12/841/EW/ALTO	30	TL 841, 4100K	48	20,000	2800	2660	82
	14256-2	● ∅	F34T12/850/EW/ALTO	30	TL 850, 5000K	48	20,000	2800	2660	82
RAPID START T12 FLUORESCENT LAMPS										
T12 Medium Bipin										
34	26659-3	$ ●	F34/DX/RS/EW/ALTO	30	Daylight Deluxe, 6500K	48	20,000	2025	1775	90
	24470-7	$ ● ∅	F34/CW/RS/EW/ALTO	30	Cool White, 4100K	48	20,000	2650	2300	59
	22046-7	$ ● ∅	F34/CW/RS/EW/ALTO	10	Cool White, 4100K, 10PK	48	20,000	2650	2300	59
	25686-7	$ ● ∅	F34/WW/RS/EW/ALTO	30	Warm White, 3000K	48	20,000	2575	2200	49
U-BENT T12 FLUORESCENT LAMPS										
T12 Medium Bipin										
34	37872-9	$ ● ∅	FB34/SPEC35/6/EW/ALTO	12	SPEC35, 3500K	22 7/16	18,000	2760	2500	73
	37874-5	$ ● ∅	FB34/SPEC41/6/EW/ALTO	12	SPEC41, 4100K	22 7/16	18,000	2760	2500	70
	37863-8	● ∅	FB34/CW/6/EW/ALTO	12	Cool White, 4100K	22 7/16	18,000	2400	2050	59
	37862-0	● ∅	FB34/WW/6/EW/ALTO	12	Warm White, 3000K	22 7/16	18,000	2400	2050	49

For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51
∅ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012


T12 Medium Bipin


T12 U-Bent Medium Bipin

FLUORESCENT LAMPS

Rapid Start T12 Lamps, T12 U-Bent Lamps

ADVANTAGE RAPID START T12 ULTIMATE PERFORMANCE FLUORESCENT LAMPS

T12 Medium Bipin

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
40	26604-9	□ ● ∅	F40T12/ADV830/ALTO	30	Advantage 30, T12, 3000K	48	24,000	30,000	3450	3300	85
	26631-2	□ ● ∅	F40T12/ADV835/ALTO	30	Advantage 35, T12, 3500K	48	24,000	30,000	3450	3300	85
	26640-3	□ ● ∅	F40T12/ADV841/ALTO	30	Advantage 41, T12, 4100K	48	24,000	30,000	3450	3300	85
	26643-7	□ ● ∅	F40T12/ADV850/ALTO	30	Advantage 50, T12, 5000K	48	24,000	30,000	3300	3150	82

RAPID START T12 800 SERIES FLUORESCENT LAMPS

T12 Medium Bipin

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
40	14261-2	● ∅	F40T12/830/ALTO	30	TL 830, 3000K	48	20,000	3200	3040	82
	14262-0	● ∅	F40T12/835/ALTO	30	TL 835, 3500K	48	20,000	3200	3040	82
	14263-8	● ∅	F40T12/841/ALTO	30	TL 841, 4100K	48	20,000	3200	3040	82
	14264-6	● ∅	F40T12/850/ALTO	30	TL 850, 5000K	48	20,000	3150	3000	82

RAPID START T12 FLUORESCENT LAMPS

T12 Medium Bipin

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
40	30203-4		F40/C50	30	Colortone 50, 5000K	48	20,000	2200	1915	92
	27359-9	●	F40/DX/ALTO	30	Daylight Deluxe, 6500K	48	20,000	2325	2025	90
	36765-6	●	F40/CWX ALTO	30	Cool White Deluxe, 4200K	48	20,000	2550	2100	89
	39228-2		F40/PLANT	6	Plant Light, Sleeved	48	20,000	1600	1360	—

U-BENT T12 FLUORESCENT LAMPS

T12 Medium Bipin

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
40	37866-1	● ∅	FB40/SPEC30/6/ALTO	12	SPEC30, 3000K	22⅞	18,000	2950	2700	70
	37854-7	● ∅	FB40/SPEC35/6/ALTO	12	SPEC35, 3500K	22⅞	18,000	2950	2700	73
	37868-7	● ∅	FB40/SPEC41/6/ALTO	12	SPEC41, 4100K	22⅞	18,000	2950	2700	70
	21993-1		FB40/DX/6	12	Daylight Deluxe, 6500K	22⅞	18,000	2250	1950	90

For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51
∅ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012

T12 Medium Bipin

T12 U-Bent
Medium Bipin

FLUORESCENT LAMPS

Rapid Start T12 Lamps, Preheat T12 Lamps, Slimline T12 Fluorescent Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
RAPID START T12 FLUORESCENT LAMPS										
T12 Medium Bipin										
25	27247-6	$ ● X	F25T12/CW/RS/EW/ALTO	30	Cool White, 4100K	36	18,000	1950	1650	59
30	37649-1	●	F30T12/D/RS/ALTO	30	Daylight, 6500K	36	18,000	1950	1700	73
	27242-7	●	F30T12/CW/RS/ALTO	30	Cool White, 4100K	36	18,000	2250	1900	59
	13221-7	●	F30T12/WW/RS/ALTO	30	Warm White, 3000K	36	18,000	2300	1950	49
PREHEAT T12 FLUORESCENT LAMPS										
T12 Medium Bipin Linear Fluorescent Lamps										
14	14151-5		F14T12/CW	30	Cool White, 4100K	15	9000	710	590	59
20	27328-4	●	F20T12/D/ALTO	30	Daylight, 6500K	24	9000	960	960	73
	27332-6	●	F20T12/CW/ALTO	30	Cool White, 4100K	24	9000	1200	1050	59
	27349-0	●	F20T12/WW/ALTO	30	Warm White, 3000K	24	9000	1250	1100	49
	39227-4		F20T12/PLANT	6	Plant Lite, Sleeved	24	9000	600	500	—
SLIMLINE T12 800 SERIES FLUORESCENT LAMPS										
T12 Single Pin Linear Fluorescent Lamps; Instant Start										
60	14270-3	●	F96T12/835/EW/ALTO	15	TL835, 3500K	96	12,000	5800	5550	84
	14271-1	●	F96T12/841/EW/ALTO	15	TL841, 4100K	96	12,000	5800	5550	82
	14272-9	●	F96T12/850/EW/ALTO	15	TL850, 5000K	96	12,000	5700	5450	82
75	14274-5	● ∅	F96T12/835/ALTO	15	TL835, 3500K	96	12,000	6600	6225	85
	14275-2	● ∅	F96T12/841/ALTO	15	TL841, 4100K	96	12,000	6600	6225	85
	14276-0	● ∅	F96T12/850/ALTO	15	TL850, 5000K	96	12,000	6500	6125	82
SLIMLINE T12 FLUORESCENT LAMPS										
T12 Single Pin Linear Fluorescent Lamps; Instant Start										
30	14140-8	$	F36T12/CW	30	Cool White, 4100K	36	7500	1850	1630	59
39	36219-4	●	F48T12/D/ALTO	15	Daylight, 6500K	48	9000	2500	2220	73
56	36985-0	●	F72T12/D/ALTO	15	Daylight, 6500K	72	12,000	3800	3350	73
	36989-2	●	F72T12/CW/ALTO	15	Cool White, 4100K	72	12,000	4450	3900	59
60	36654-2	●	F96T12/DX/EW/ALTO	15	Daylight Deluxe, 6500K	96	12,000	4050	3550	90
	25840-0	● ∅	F96T12/CW/EW/ALTO	15	Cool White, 4100K	96	12,000	5400	4750	59
75	34170-1		F96T12/C50	15	Colortone 50, 5000K	96	12,000	4650	4200	92
	37282-1	●	F96T12/DX/ALTO	15	Daylight Deluxe, 6500K	96	12,000	4500	3950	90

For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51
∅ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012

T12 Medium Bipin T12 Single Pin

FLUORESCENT LAMPS

High Output T12 Lamps, Very High Output T12 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
HIGH OUTPUT T12 FLUORESCENT LAMPS (800MA)										
T12 Recessed D.C. Linear Fluorescent Lamps (207, 214)										
35	14144-0	●	F24T12/D/HO	30	Daylight, 6500K	24	9000	1400	1180	73
	14145-7		F24T12/CW/HO	30	Cool White, 4100K	24	9000	1650	1390	59
40	14141-6		F30T12/D/HO	30	Daylight, 6500K	30	9000	1920	1590	73
	14142-4		F30T12/CW/HO	30	Cool White, 4100K	30	9000	2290	1900	59
50	14138-2		F36T12/D/HO	30	Daylight, 6500K	36	9000	2500	2150	73
	14139-0		F36T12/CW/HO	30	Cool White, 4100K	36	9000	2800	2450	59
55	14136-6		F42T12/D/HO	30	Daylight, 6500K	42	9000	3000	2610	73
	14137-4		F42T12/CW/HO	30	Cool White, 4100K	42	9000	3400	2950	59
60	36984-3	●	F48T12/D/HO/ALTO	15	Daylight, 6500K	48	12,000	3400	3000	73
	36978-5	●	F48T12/CW/HO/ALTO	15	Cool White, 4100K	48	12,000	4050	3500	59
85	36653-4	●	F72T12/D/HO/ALTO	15	Daylight, 6500K	72	12,000	5600	4850	73
	36651-8	●	F72T12/CW/HO/ALTO	15	Cool White, 4100K	72	12,000	6350	5500	59
HIGH OUTPUT T12 800 SERIES FLUORESCENT LAMPS (800MA)										
T12 Recessed D.C. Linear Fluorescent Lamps (207, 214)										
110	14283-6	● ∅	F96T12/841/HO/ALTO	15	TL841, 4100K	96	12,000	9500	8550	85
HIGH OUTPUT T12 FLUORESCENT LAMPS (800MA)										
T12 Recessed D.C. Linear Fluorescent Lamps (207, 214)										
95	21471-8	$	F96T12/DX/HO/EW	15	Daylight Deluxe, 6500K	96	12,000	5850	5000	90
	26660-1	$ ● ∅	F96T12/CW/HO/EW/ALTO	15	Cool White, 4100K	96	12,000	8000	6950	59
110	21489-0	●	F96T12/DX/HO	15	Daylight Deluxe, 6500K	96	12,000	6750	5800	90
HIGH OUTPUT T12 800 SERIES FLUORESCENT LAMPS (800MA)										
T12 Recessed D.C. Linear Fluorescent Lamps; For Low Temperature Applications (223)										
110	38177-4	●	F96T12/D/HO-O/ALTO	15	Daylight, 6500K	96	12,000	7800	6800	73
	38176-4	●	F96T12/CW/HO-O/ALTO	15	Cool White, 4100K	96	12,000	8800	7650	59

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Average Life 3 Hr. Start (202)	Rated Average Life 12 Hr. Start (241)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
VERY HIGH OUTPUT T12 FLUORESCENT LAMPS (1500MA)											
T12 Recessed D.C. Linear Fluorescent Lamps (214)											
110	21819-8		F48T12/CW/VHO	15	Cool White, 4100K	48	12,000	12,000	7050	4950	59
185	34232-9	$	F96T12/CW/VHO/EW	15	Cool White, 4100K	96	12,000	12,000	13,000	9000	59
215	34234-5		F96T12/CW/VHO	15	Cool White, 4100K	96	12,000	12,000	15,200	10,700	59

For the most current product information, go to the e-catalog on **www.philips.com**

Fluorescent symbols and footnotes located on page 51

∅ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012

T12 Recessed DC

FLUORESCENT LAMPS

Gold Fluorescent Lamps, Appliance Lamps, T9 Circline Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
GOLD FLUORESCENT LAMPS										
Blocks UV Emissions										
32	14746-2		F32T8/GOLD PLUS	25	Gold Sleeved	48	24,000	1750	1480	—
40	14750-4		F40T12/GOLD	30	Gold Sleeved	48	20,000	1700	1465	—
APPLIANCE FLUORESCENT LAMPS										
T8 and T12 Medium Bipin Linear Fluorescent Lamps; For Use With Starters										
14	25914-3		F14T8/CW/15	24	Cool White, 4100K	15	7500	700	595	59
16	51172-5	†	F16T8/CW/26	24	Cool White, 4100K	26	7500	1275	1020	59
18	23691-9	● †	F18T8/CW/30/ALTO	24	Cool White, 4100K	30	7500	1350	1070	59
	23690-1	†	F18T8/CW/24	24	Cool White, 4100K	24	7500	1175	940	59
25	14135-8	**X**	F25T12/CW/28	30	Cool White, 4100K	28	7500	1600	1280	59
CIRCLINE FLUORESCENT LAMPS										
T9 4-Pin Circular Fluorescent Lamps										
20	24982-1		FC6T9/COOL WHITE PLUS	12	Cool White, 4100K	6½ OD	12,000	800	590	59
22	39222-5		FC8T9/SOFT WHITE	12	3000K	8 OD	12,000	1150	875	85
	39235-7		FC8T9/DAYDLX	12	6500K	8 OD	12,000	910	675	73
	39116-9		FC8T9/COOL WHITE PLUS	12	Cool White, 4100K	8 OD	12,000	1050	775	59
32	39122-7		FC12T9/SOFT WHITE	12	3000K	12 OD	12,000	1900	1600	85
	26260-0		FC12T9/D	12	Daylight, 6500K	12 OD	12,000	1570	1300	73
	39117-7		FC12T9/COOL WHITE PLUS	12	Cool White, 4100K	12 OD	12,000	1800	1500	59
40	39118-5		FC16T9/COOL WHITE PLUS	12	Cool White, 4100K	16 OD	12,000	2500	1975	59

For the most current product information, go to the e-catalog on **www.philips.com**

Fluorescent symbols and footnotes located on page 51

GOLD Lamp

T8 Medium Bipin

T12 Medium Bipin

T9 4-Pin Circular

FLUORESCENT LAMPS

TuffGuard Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Color Temp. (K)	Nom. Length (In.)	Rated Avg. Life (Hrs.)(241)	Approx. Initial Lumens (203,204)	CRI	Availability
TUFFGUARD T5 FLUORESCENT COATED LAMPS										
T5 Miniature Bipin Linear Fluorescent Lamps										
8	16691-8		F8T5/CW PH TG	25	4100	12	10,000	400	59	Made to Order
13	16757-7		F13T5/CW PH TG	25	4100	21	10,000	820	59	Made to Order
14	16690-0	●	F14T5/830/ALTO TG	40	3000	22	35,000	1350	85	Made to Order
	16726-2	●	F14T5/841/ALTO TG	40	4100	22	35,000	1350	85	Made to Order
21	16455-8	●	F21T5/830/ALTO TG	40	3000	34	35,000	2100	85	Stocked
	16856-7	●	F21T5/835/ALTO TG	40	3500	34	35,000	2100	85	Made to Order
	16669-4	●	F21T5/841/ALTO TG	40	4100	34	35,000	2100	85	Made to Order
24	16913-6	●	F24T5/835/HO/ALTO TG	40	3500	22	35,000	2000	85	Made to Order
25	41377-3	● †	F28T5/835/EA/ALTO 25W TG	40	3500	46	25,000	2900	85	Made to Order
	41378-1	● †	F28T5/841/EA/ALTO 25W TG	40	4100	46	25,000	2900	85	Made to Order
28	16775-9	●	F28T5/830/ALTO TG	40	3000	46	35,000	2900	85	Made to Order
	16417-8	●	F28T5/835/ALTO TG	40	3500	46	35,000	2900	85	Stocked
	16674-4	●	F28T5/841/ALTO TG	40	4100	46	35,000	2900	85	Stocked
35	16733-8	●	F35T5/841/ALTO TG	40	4100	58	35,000	3650	85	Made to Order
49	16960-7	● †	F54T5/835/HO/EA/ALTO 49W TG	40	3500	46	35,000	5000	85	Stocked
	16961-5	● †	F54T5/841/HO/EA/ALTO 49W TG	40	4100	46	35,000	5000	85	Stocked
	16967-2	● †	F54T5/830/HO/EA/ALTO 49W TG	40	3000	46	35,000	5000	85	Stocked
	40900-3	● †	F54T5/850/HO/EA/ALTO 49W TG	40	5000	46	35,000	4850	82	Stocked
	41055-5	● †	F54T5/835/A/EA/ALTO 49W TG	40	3500	46	35,000	5000	85	Stocked
	41056-3	● †	F54T5/841/A/EA/ALTO 49W TG	40	4100	46	35,000	5000	82	Stocked
	41057-1	● †	F54T5/850/A/EA/ALTO 49W TG	40	5000	46	35,000	4850	82	Stocked
54	16861-7	●	F54T5/830/HO/ALTO TG	40	3000	46	35,000	5000	85	Made to Order
	16672-8	●	F54T5/835/HO/ALTO TG	40	3500	46	35,000	5000	85	Stocked
	16298-2	●	F54T5/841/HO/ALTO TG	40	4100	46	35,000	5000	85	Stocked
	16686-8	●	F54T5/850/HO/ALTO TG	40	5000	46	35,000	5000	82	Stocked
TUFFGUARD T8 FLUORESCENT COATED LAMPS										
T8 Medium Bipin Linear Fluorescent Lamps										
15	41312-0	†	F15T8/CW TG	25	4100	18	10,000	870	59	Stocked
17	41316-1	● †	F17T8/TL830/PLUS/ALTO TG	25	3000	24	36,000	1400	85	Stocked
	16731-2	●	F17T8/TL835/ALTO TG	25	3500	24	30,000	1350	85	Made to Order
	16898-9	●	F17T8/TL841/ALTO TG	25	4100	24	30,000	1350	85	Made to Order
25	16316-2	●	F25T8/TL830/PLUS/ALTO TG	25	3000	36	36,000	2225	85	Stocked
	16306-3	●	F25T8/TL835/PLUS/ALTO TG	25	3500	36	36,000	2225	85	Stocked
	16305-5	●	F25T8/TL841/PLUS/ALTO TG	25	4100	36	36,000	2225	85	Stocked
	16670-2	●	F25T8/TL835/ALTO TG	25	3500	36	30,000	2150	85	Made to Order
	16787-4	●	F25T8/TL841/ALTO TG	25	4100	36	30,000	2150	85	Made to Order
	16975-5	●	F32T8/ADV841/XLL/ALTO TG 25W	25	4100	48	40,000	2425	85	Stocked
	16294-1	●	F32T8/ADV835/XEW/ALTO TG 25W	25	3500	48	36,000	2500	85	Stocked
	16293-3	●	F32T8/ADV841/XEW/ALTO TG 25W	25	4100	48	36,000	2500	85	Stocked

Note: Made to order products require a 3 week lead time.
For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51

T5 Miniature Bipin

T8 Medium Bipin

FLUORESCENT LAMPS

TuffGuard Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Color Temp. (K)	Nom. Length (In.)	Rated Avg. Life (Hrs.)(241)	Approx. Initial Lumens (203,204)	CRI	Availability
TUFFGUARD T8 FLUORESCENT COATED LAMPS CONTINUED										
T8 Medium Bipin Linear Fluorescent Lamps										
28	16966-4	● †	F32T8/ADV830/EW/ALTO 28W TG	25	3000	48	36,000	2725	85	Stocked
	16958-1	● †	F32T8/ADV835/EW/ALTO 28W TG	25	3500	48	36,000	2725	85	Stocked
	16959-9	● †	F32T8/ADV841/EW/ALTO 28W TG	25	4100	48	36,000	2725	85	Stocked
	16965-6	● †	F32T8/ADV850/EW/ALTO 28W TG	25	5000	48	36,000	2675	82	Stocked
32	16863-3	●	F32T8/ADV830/ALTO TG	25	3000	48	30,000	3100	85	Made to Order
	16502-7	●	F32T8/ADV850/ALTO TG	25	5000	48	30,000	3000	82	Made to Order
	16682-7	●	F32T8/ADV850/XEW/ALTO TG	25	5000	48	30,000	2400	82	Made to Order
	16894-8		F32T8/TL950 TG	25	5000	48	20,000	2000	98	Made to Order
	16508-4	● ⌀	F32T8/TL730/ALTO TG	25	3000	48	30,000	2700	78	Made to Order
	20428-9	● ⌀	F32T8/TL735/ALTO TG	25	3500	48	30,000	2700	78	Stocked
	16484-8	● ⌀	F32T8/TL741/ALTO TG	25	4100	48	30,000	2700	78	Stocked
	16619-9	● ⌀	F32T8/TL750/ALTO TG	25	5000	48	30,000	2600	78	Made to Order
	16541-5	●	F32T8/TL830/ALTO TG	25	3000	48	30,000	2850	85	Stocked
	16488-9	●	F32T8/TL835/ALTO TG	25	3500	48	30,000	2850	85	Stocked
	16487-1	●	F32T8/TL841/ALTO TG	25	4100	48	30,000	2850	85	Made to Order
	16503-5	●	F32T8/TL850/ALTO TG	25	5000	48	30,000	2850	82	Made to Order
	16791-6	●	F32T8/TL865/PLUS/ALTO TG	25	6500	48	36,000	2750	82	Made to Order
	16308-9	●	F32T8/ADV841/ALTO TG	25	4100	48	30,000	3150	85	Stocked
	16246-1	● ⌀	F32T8/TL730/PLUS/ALTO TG	25	3000	48	36,000	2800	78	Stocked
	16239-6	● ⌀	F32T8/TL735/PLUS/ALTO TG	25	3500	48	36,000	2800	78	Stocked
	16078-8	● ⌀	F32T8/TL741/PLUS/ALTO TG	25	4100	48	36,000	2800	78	Stocked
	16318-8	● ⌀	F32T8/TL750/PLUS/ALTO TG	25	5000	48	36,000	2700	78	Stocked
	16275-0	●	F32T8/TL830/PLUS/ALTO TG	25	3000	48	36,000	2950	85	Stocked
	16238-8	●	F32T8/TL835/PLUS/ALTO TG	25	3500	48	36,000	2950	85	Stocked
	16295-8	●	F32T8/TL841/XLL/ALTO TG	25	4100	48	40,000	2950	85	Stocked
	16274-3	●	F32T8/TL841/PLUS/ALTO TG	25	4100	48	36,000	2950	85	Stocked
	16292-5	●	F32T8/TL850/PLUS/ALTO TG	25	5000	48	36,000	2850	82	Stocked
40	16323-8	●	F40T8/TL835/ALTO TG	25	3500	60	36,000	3725	85	Stocked
	16439-2	●	F40T8/TL841/ALTO TG	25	4100	60	36,000	3725	85	Stocked
44	40905-2	● †	F48T8/TL841/HO/ALTO TG	25	4100	48	18,000	4000	85	Made to Order
51	41315-3	● †	F96T8/ADV835/XEW/ALTO 51W TG	25	3500	96	30,000	5300	85	Stocked
	41314-6	● †	F96T8/ADV841/XEW/ALTO 51W TG	25	4100	96	30,000	5300	85	Stocked
	41313-8	● †	F96T8/ADV850/XEW/ALTO 51W TG	25	5000	96	30,000	5200	82	Stocked
59	40906-0	● † ⌀	F96T8/TL735/PLUS/ALTO TG	25	3500	96	30,000	5700	78	Stocked
	40907-8	● † ⌀	F96T8/TL741/PLUS/ALTO TG	25	4100	96	30,000	5700	78	Made to Order
	40908-6	● †	F96T8/TL835/PLUS/ALTO TG	25	3500	96	30,000	5900	85	Made to Order
	40909-4	● †	F96T8/TL841/PLUS/ALTO TG	25	4100	96	30,000	5900	85	Made to Order
	40910-2	● †	F96T8/TL850/PLUS/ALTO TG	25	5000	96	30,000	5780	82	Stocked
86	40911-0	● †	F96T8/TL835/HO/PLUS/ALTO TG	25	3500	96	30,000	8200	85	Made to Order
	40912-8	● †	F96T8/TL841/HO/PLUS/ALTO TG	25	4100	96	30,000	8200	85	Stocked
	40913-6	● †	F96T8/TL850/HO/PLUS/ALTO	25	5000	96	30,000	8100	82	Stocked

Note: Made to order products require a 3 week lead time.
For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51

T8 Medium Bipin

FLUORESCENT LAMPS

TuffGuard Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Color Temp. (K)	Nom. Length (In.)	Rated Avg. Life (Hrs.)(202)	Approx. Initial Lumens (203,204)	CRI	Availability
TUFFGUARD T12 FLUORESCENT COATED LAMPS										
T12 Medium Bipin Linear Fluorescent Lamps										
14	16792-4		F14T12/CW TG	30	4100	15	9000	710	59	Made to Order
15	16687-6		F15T12/CW TG	30	4100	18	9000	800	59	Made to Order
20	16919-3	●	F20T12/D/ALTO TG	30	6500	24	9000	1075	73	Made to Order
	16300-6	●	F20T12/CW/ALTO TG	30	4100	24	9000	1200	59	Stocked
25	16729-6		F25T12/CW TG	30	4100	36	7500	1900	59	Made to Order
30	16893-0	●	F30T12/D/RS/ALTO TG	30	6500	36	24,000	1950	73	Made to Order
	16310-5	●	F30T12/CW/RS/ALTO TG	30	4100	36	24,000	2250	59	Stocked
	16742-9	●	F48T12/CW/EW/ALTO TG	15	4100	48	9000	2400	59	Made to Order
34	16032-5	● ⌀	F34/CW/RS/EW/LL/ALTO TG	30	4100	48	24,000	2650	59	Stocked
	16060-6	● ⌀	F34T12/CW/RS/EW/ALTO TG	30	4100	48	20,000	2650	59	Stocked
	16315-4	● ⌀	F34T12/WW/RS/EW/ALTO TG	30	3000	48	20,000	2575	49	Stocked
	16759-3	● ⌀	F34T12/835/EW/ALTO TG	30	3500	48	20,000	2800	82	Made to Order
	16764-3	● ⌀	F34T12/841/EW/ALTO TG	30	4100	48	20,000	2800	82	Made to Order
	16743-7	● X	F34T12/ADV850/EW/ALTO TG	30	5000	48	24,000	3000	82	Made to Order
	16693-4	●	F34T12/DX/RS/EW/ALTO TG	30	6500	48	20,000	2025	90	Made to Order
39	16309-7	●	F48T12/CW/ALTO TG	30	4100	48	9000	2950	59	Stocked
	16307-1	●	F48T12/D/ALTO TG	15	6500	48	9000	2500	73	Stocked
40	16736-1	● ⌀	F40T12/830/ALTO TG	30	3000	48	20,000	3200	82	Made to Order
	16314-7		F40C50 TG	30	5000	48	20,000	2200	92	Stocked
	16299-0	●	F40DX/ALTO TG	30	6500	48	20,000	2325	90	Stocked
	16311-3	● ⌀	F40T12/835/ALTO TG	30	3500	48	20,000	3200	82	Stocked
	16322-0	● ⌀	F40T12/841/ALTO TG	30	4100	48	20,000	3200	82	Stocked
	16744-5	● ⌀	F40T12/ADV835/ALTO TG	30	3500	48	24,000	3450	85	Made to Order
	16918-5	● ⌀	F40T12/ADV841/ALTO TG	30	4100	48	24,000	3450	85	Made to Order
	16886-4	● ⌀	F40T12/ADV850/ALTO TG	30	5000	48	24,000	3300	82	Made to Order
	16890-6		F40T12/C75 TG	30	7500	48	20,000	2000	95	Made to Order
	20427-1	● ⌀	F40T12/CW/ALTO TG	30	4100	48	20,000	2650	59	Stocked
	16677-7	●	F40T12/CWX/ALTO TG	30	4200	48	20,000	2550	89	Made to Order
56	16689-2	●	F72T12/CW/ALTO TG	15	4100	72	12,000	4450	59	Made to Order
	16924-3	●	F72T12/D/ALTO TG	15	6500	72	12,000	3800	73	Made to Order

Note: Made to order products require a 3 week lead time.
For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51

T12 Medium Bipin

FLUORESCENT LAMPS

TuffGuard Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Color Temp. (K)	Nom. Length (In.)	Rated Avg. Life (Hrs.)(202)	Approx. Initial Lumens (203,204)	CRI	Availability
TUFFGUARD T12 FLUORESCENT COATED LAMPS CONTINUED										
T12 Medium Bipin Linear Fluorescent Lamps										
60	16296-6	●	F48T12/CW/HO/ALTO TG	15	4100	48	12,000	4050	59	Stocked
	16762-7	●	F48T12/D/HO/ALTO TG	15	6500	48	12,000	3400	73	Made to Order
	16124-0	● ⌀	F96T12/CW/EW/ALTO TG	15	4100	96	12,000	5400	59	Stocked
	16324-6	●	F96T12/DX/EW/ALTO TG	15	6500	96	12,000	4050	90	Stocked
	16836-9	● X	F96T12/830/EW/ALTO TG	15	3000	96	12,000	5800	84	Made to Order
	16883-1	●	F96T12/841/EW/ALTO TG	15	4100	96	12,000	5800	82	Made to Order
	16855-9	● ⌀	F96T12/WW/EW/ALTO TG	15	3000	96	12,000	5500	49	Made to Order
	16974-8	● ⌀	F96T12/CW/EW/LL/ALTO TG	15	4100	96	18,000	5400	59	Made to Order
75	16728-8		F60T12/CW/HO TG	15	4100	60	12,000	5150	59	Made to Order
	16319-6	● ⌀	F96T12/835/ALTO TG	15	3500	96	12,000	6600	85	Stocked
	16123-2	● ⌀	F96T12/CW/ALTO TG	15	4100	96	12,000	6100	59	Stocked
	16777-5	● ⌀	F96T12/841/ALTO TG	15	4100	96	12,000	6600	85	Made to Order
	16297-4	● ⌀	F96T12/D/ALTO TG	15	6500	96	12,000	4500	73	Stocked
	16783-3	● ⌀	F96T12/850/ALTO TG	15	5000	96	12,000	6500	82	Made to Order
85	16312-1	●	F72T12/CW/HO/ALTO TG	15	4100	72	12,000	6350	59	Stocked
95	16216-4	● ⌀	F96T12/CW/HO/EW/ALTO TG	15	4100	96	12,000	8000	59	Stocked
	16725-4	●	F96T12/841/HO/EW/ALTO TG	15	4100	96	12,000	8500	85	Made to Order
	16694-2		F96T12/DX/HO/EW TG	15	6500	96	12,000	5850	90	Stocked
100	16817-9		F84T12/CW/HO TG	15	4100	84	12,000	7800	59	Made to Order
110	16320-4		F96T12/C50/HO TG	15	5000	96	12,000	6300	92	Stocked
	16301-4	●	F96T12/CW/HO-O/ALTO TG	15	4100	96	12,000	8800	59	Stocked
	16302-2	●	F96T12/D/HO-O/ALTO TG	15	6500	96	12,000	7800	73	Stocked
	16730-4	● ⌀	F96T12/841/HO/ALTO TG	15	4100	96	12,000	9500	85	Made to Order
	16582-9		F96T12/CWX/HO TG	15	4200	96	12,000	6600	89	Stocked

Note: Made to order products require a 3 week lead time.
For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51

T12
Single Pin

T12
Recessed DC Bay

FLUORESCENT LAMPS

Consumer Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
T5 FLUORESCENT LAMPS										
Blister-Carded Linear Fluorescent Lamps; Miniature Bipin										
4	39218-3		F4T5/SOFT WHITE	12/1	3000K	6	6000	150	120	85
6	39219-1		F6T5/SOFT WHITE	12/1	3000K	9	7500	325	260	85
8	39220-9		F8T5/SOFT WHITE	12/1	3000K	12	7500	450	360	85
	39114-4		F8T5/COOL WHITE PLUS	12/1	4100K	12	7500	400	300	59
	15756-0	†	F8T5/BLB UPC	25/1	—	12	7500	—	—	—
13	39221-7		F13T5/SOFT WHITE	12/1	3000K	21	7500	1000	800	85
	40974-8	†	F13T5/Cool White	12/1	4100K	21	7500	820	660	59
T5 FLUORESCENT LAMPS										
28	20613-6	●	F28T5/TL835 ALTO UPC 15/1	15	TL835, 3500K	46	20,000	2900	2750	85
	40963-1	● †	F28T5/TL841 ALTO UPC 15/1	15	TL841, 4100K	46	25,000	2900	2750	85
T8 FLUORESCENT LAMPS										
T8 Medium Bipin Linear Fluorescent Lamps										
15	39212-6	●	F15T8/Soft White	1	3000K Individually Sleeved	18	7500	1000	900	85
	39207-6	●	F15T8/Cool White Plus	1	4100K Individually Sleeved	18	7500	870	765	59
	39108-6	●	F15T8/Cool White Plus	1	4100K Individually Sleeved	24	7500	1175	1035	59
	39226-6		F15T8/Plant	1	Individually Sleeved	18	7500	410	—	—
	15760-2	†	F15T8/Blacklight	6/1	Individually Sleeved	18	7500	—	—	—
17	16069-0	●	F17T8/Soft White UPC	25	3000K 25 Pk Case	24	20,000	1400	1300	85
30	39216-7	●	F30T8/Soft White	6/1	3000K Individually Sleeved	36	7500	2500	2250	85
	23442-7	● †	F30T8/CW ALTO UPC	25	4100K Individually Sleeved	36	7500	2200	1760	59
32	40943-3	● †	F32T8/SOFT WHITE ALTO	10	3000K 10 Pk Case	48	24,000	2950	2800	85
	20545-0	● ⌀	F32T8/TL735 ALTO 10PK	10	3500K 10 Pk Case	48	24,000	2700	2565	78
	40944-1	● † ⌀	F32T8/TL741/ALTO TG	10	Safety Coated 4100K 10 Pk	48	24,000	2700	2565	78
	38351-3	● ⌀	F32T8/TL741 ALTO 10PK	10	4100K 10 Pk Case	48	24,000	2700	2565	78
	15238-9	● †	F32T8/ADV841/XEW/ALTO 25W	10	4100K 10 Pk Case	48	30,000	2500	2425	85
	20278-8	●	F32T8/TL841/XLL/ALTO 10PK	10	4100K 10 Pk Case	48	36,000	2950	2800	85
	20504-7	●	F32T8/TL850 ALTO 10PK	10	5000K 10 Pk Case	48	24,000	2850	2710	82
	15235-5	● ⌀	F32T8/TL865/PLUS/ALTO 10PK	10	6500K 10 Pk Case	48	24,000	2750	2610	82
	40927-6	● † ⌀	F32T8/TL735/ALTO	25	3500K 25 Pk Case	48	24,000	2700	2565	78
	40925-0	● † ⌀	F32T8/TL741/ALTO	25	4100K 25 Pk Case	48	24,000	2700	2565	78
	40926-8	● †	F32T8/TL850/ALTO	25	5000K 25 Pk Case	48	24,000	2850	2710	82
	40940-9	● † ⌀	F32T8/DAYLIGHT DELUXE/ALTO	25	6500K 25 Pk Case	48	24,000	2750	2610	82
	40966-4	● †	F32T8/TL850/ALTO	15/2	5000K 2 Pk	48	24,000	2850	2710	82
	22682-9	●	F32T8/SOFT WHITE /ALTO 36/2	36/2	3000K 2 Pk	48	24,000	2950	2800	84
	22679-5	⌀	F32T8/COOL WHITE PLUS 36/2	36/2	4100K 2 Pk	48	24,000	2800	2660	78
	22681-1	● ⌀	F32T8/DAYLIGHT DELX/ALTO 36/2	36/2	6500K 2 Pk	48	24,000	2750	2610	82

For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51
⌀ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012


T5 Medium Bipin


T8 Medium Bipin

FLUORESCENT LAMPS

Consumer Lamps

T12 FLUORESCENT LAMPS

Medium Bipin, Single Pin and High Output

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
14	14150-7		F14T12/SOFT WHITE	6/1	3000K Individually Sleeved	15	9000	700	560	85
15	14146-5		F15T12/SOFT WHITE	6/1	3000K Individually Sleeved	18	9000	800	720	85
20	39120-1	●	F20T12/SOFT WHITE	6/1	3000K Individually Sleeved	24	9000	1350	1215	85
	39230-8		F20T12/NATURAL SUNSHINE	6/1	5000K Individually Sleeved	24	9000	850	755	92
	39227-4		F20T12/PLANT	6/1	Individually Sleeved	24	9000	600	—	—
	15761-0	†	F20T12/BLACKLIGHT	6/1	Individually Sleeved	24	9000	—	—	—
	40945-8	●†	F20T12/CW/ALTO	10	4100K 10 Pk Case	24	9000	1200	1050	59
	38693-8	●†	F20T12/SPEC 35 UPC	30	3500K 30 Pk Case	24	9000	1200	1050	75
	20550-0	●	F20T12/CW/ALTO 15/2	15/2	4100K 2 Pk	24	9000	1200	1050	59
	20554-2	●	F20T12/D/ALTO 15/2	15/2	6500K 2 Pk	24	9000	1075	960	73
30	39215-9	●	F30T12/SOFT WHITE	6/1	3000K Individually Sleeved	36	18,000	2400	2160	85
	40937-5	●†	F30T12/DAYLIGHT DELUXE/ALTO	6/1	6500K Individually Sleeved	36	18,000	1950	1700	90
	38694-6	●†	F30T12/SPEC 35 UPC	30	3500K 30 Pk Case	36	18,000	2350	2080	73
34	40939-1	●†∅	F34T12/835/EW/ALTO	10	3500K 10 Pk	48	20,000	2800	2660	82
	22046-7	●†∅	F34T12/CW/EW/ALTO	10	4100K 10 Pk	48	20,000	2650	2300	59
	20562-5	●∅	F34T12CW/RS/EW/ALTO 15/2	15/2	Cool White, 4100K 2 Pk	48	20,000	2650	2300	59
	40928-4	●†∅	F34T12/835/ALTO	30	3500K 30 Pk Case	48	20,000	2800	2660	82
	40929-2	●†∅	F34T12/CW/EW/ALTO	30	4100K 30 Pk Case	48	20,000	2650	2300	59
40	39228-2		F40T12/PLANT	6/1	Individually Sleeved	48	20,000	1600	—	—
	15762-8	●†	F40T12/BLACKLIGHT	6/1	Individually Sleeved	48	20,000	—	—	—
	40942-5	●†∅	F40T12/SOFT WHITE/ALTO	10	3000K 10 Pk Case	48	20,000	3300	2970	82
	40946-6	●†	F40T12/CW/PLUS/ALTO TG	10	Safety Coated 4100K	48	20,000	3100	2880	70
	40941-7	●†∅	F40T12/NATURAL LIGHT/ALTO	10	5000K 10 Pk Case	48	20,000	3050	2900	82
	22606-8	●∅	F40T12/COOL WHITE PLUS	10	4100K 10 Pk	48	20,000	3200	2880	70
	38752-2	●	F40T12/DAYDLX	10	6500K 10 Pk	48	20,000	2325	2025	90
	39240-7	●∅	F40T12/SOFT WHITE/15/2PK	15/2	3000K 2 Pk	48	20,000	3100	2970	85
	41089-4	●†∅	F40T12/CW PREMIUM/ALTO	15/2	4100K 2 Pk	48	20,000	3200	3040	82
	40967-2	●†	F40T12/C50	15/2	5000K 2 Pk	48	20,000	2200	1915	92
	40995-2	●∅	F40T12/SOFT WHITE ALTO 36/2	36/2	3000K 2 Pk	48	20,000	3300	2970	85
	22684-5	●∅	F40T12/COOL WHITE PLUS/ALTO	36/2	4100K 2 Pk	48	20,000	3200	2880	70
	22683-7	●	F40T12/DAYDELUX ALTO 36/2PK	36/2	6500K 2 Pk	48	20,000	2325	2025	90
	40930-0	●†∅	F40T12/COOL WHITE PLUS/ALTO	30	4100K 30 Pk Case	48	20,000	3200	2880	70
	40931-8	●†	F40T12/C50	30	5000K 30 Pk Case	48	20,000	2200	1915	92
	40938-3	●†	F40T12/DAYLIGHT DELUXE/ALTO	30	6500K 30 Pk Case	48	20,000	2325	2025	90
56	36999-1	●†	F72T12/CW/ALTO UPC	15	4100K 15 Pk Case	72	12,000	4450	3900	59
60	13349-6	● **X** ∅	F96T12/CW/EW/36/2PK	36/2	4100K 2 Pk	96	12,000	5400	4750	59
	20523-7	●∅	F96T12/CW/EW/ALTO 8/2PK	8/2	4100K 2 Pk	96	12,000	5400	4750	59
	20505-4	● **X**	F96T12/835/EW ALTO 8/2	8/2	3500K 2 Pk	96	12,000	5900	5550	85
	40964-9	●†∅	F96T12/CW/EW/ALTO	15	4100K 15 Pk Case	96	12,000	5400	4750	59
	36982-7	●†	F48T12/CW/HO/UPC	15	4100K 15 Pk Case	48	12,000	4050	3500	59
75	37663-2	● **X**	F96T12/DAYDLX/ ALTO 8/2PK	8/2	6500K 2 Pk	96	12,000	4500	3950	90
95	37528-7	●†∅	F96T12/CW/HO/EW/ALTO UPC	15	Cool White, 4100K 15 Pk	96	12,000	8000	6950	59
110	38176-4	●†	F96T12/CW/HO-O/ALTO	15	Cool White, 4100K 15 Pk	96	12,000	8800	7650	59
	20544-3	●†	F96T12/CW/HO-O/ALTO	8/2	4100K 2 Pk	96	12,000	8800	7650	59
	20507-0	●†	F96T12/C50	8/2	5000K 2 Pk	96	12,000	6300	5400	92

For the most current product information, go to the e-catalog on **www.philips.com**

Fluorescent symbols and footnotes located on page 51

∅ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012

T12 Medium Bipin

T12 Single Pin

T12 Recessed DC

FLUORESCENT LAMPS

Consumer Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
CIRCLINE FLUORESCENT LAMPS										
T9 Circular 4-Pin Fluorescent Lamps										
22	39222-5		FC8T9/SOFT WHITE	6/1	3000K Individually Sleeved	8 OD	12,000	1150	875	85
	39116-9		FC8T9/COOL WHITE PLUS	6/1	4100K Individually Sleeved	8 OD	12,000	1050	775	59
	39235-7		FC8T9/DAYDLX	6/1	6500K Individually Sleeved	8 OD	12,000	910	675	79
32	39122-7		FC12T9/SOFT WHITE	6/1	3000K Individually Sleeved	12 OD	12,000	1900	1600	85
	39117-7		FC12T9/COOL WHITE PLUS	6/1	4100K Individually Sleeved	12 OD	12,000	1800	1500	59
	26260-0	†	FC12T9/DAYLIGHT DELUXE	6/2	6500K Individually Sleeved	13 OD	12,000	1570	1300	79
40	39118-5		FC16T9/COOL WHITE PLUS	6/1	4100K Individually Sleeved	16 OD	12,000	2500	1975	59
U-BENT T8										
T8 Medium Bipin										
32	20549-2	● ∅	FB32T8/TL735/6/ALTO UPC 10/1	1	TL70, 3500K Individually Sleeved	22⅞	20,000	2650	2370	78
	20548-4	● ∅	FB32T8/TL741/6/ALTO UPC 10/1	1	TL70, 4100K Individually Sleeved	22⅞	20,000	2650	2370	78
RAPID START U-BENT T12										
T12 Medium Bipin										
34	37839-8	● ∅	FB34/CW/6/EW UPC	12	Cool White, 4100K	22⅞	18,000	2400	2050	59
40	37875-8	● ∅	FB40/SPEC35/6 UPC	12	SPEC, 3500K	22⅞	18,000	2950	2700	73
	21993-1	†	FB40DX/6	12	Daylight Deluxe, 6500K	22⅞	18,000	2250	1950	90

For the most current product information, go to the e-catalog on **www.philips.com**
Fluorescent symbols and footnotes located on page 51
∅ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012


T9 4-Pin Circular

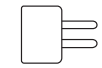

T8 U-Bent


T12 U-Bent Medium Bipin

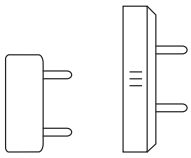
FLUORESCENT LAMPS

Base Types and Bulb Shapes

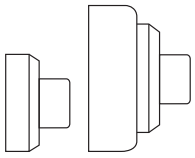
Base Types (Not Actual Sizes)



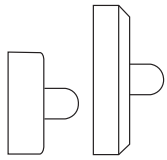
Miniature
Bipin T5
Min. Bipin



Medium
Bipin T8/T12
Med. Bipin

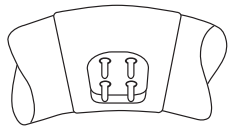


Recessed Double
Contact T8/T12
Recessed D.C.

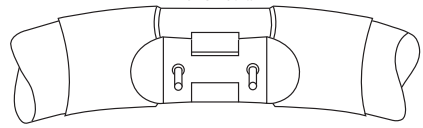


Slimline
Single Pin
T8/T12

T9 Circline 4-Pin

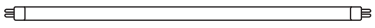


T5 Circular



Bulb Shapes (Not Actual Sizes)

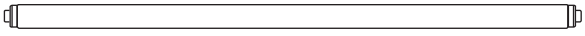
The size and shape of a bulb is designated by a letter or letters followed by a number. The letter indicates the shape of the bulb, while the number indicates the diameter of the bulb in eighths of an inch. For example, "T12" indicates a tubular shaped bulb having a diameter of 12⁄8 or 1½ inches. The following illustrations show some of the more popular bulb shapes and sizes.



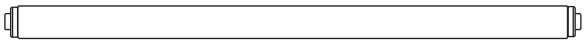
T5 Miniature Bipin

T8 Medium Bipin

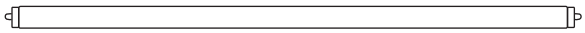
T12 Medium Bipin



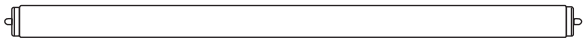
T8 Recessed Double Contact



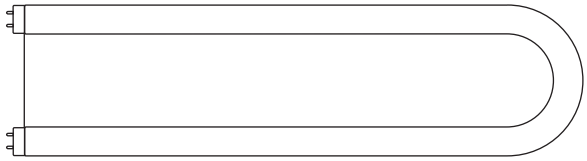
T12 Recessed Double Contact



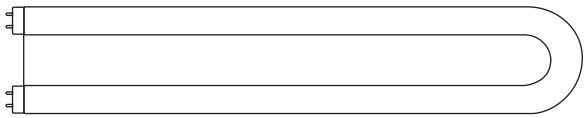
T8 Single Pin Slimline



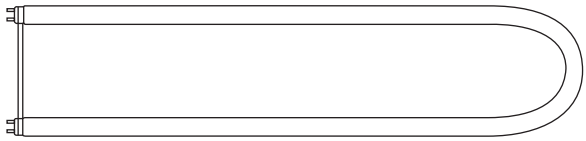
T12 Single Pin Slimline



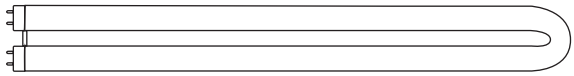
T12 Medium Bipin U-Bent Lamp (6")



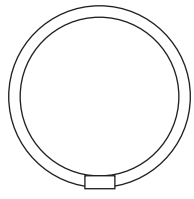
T12 Medium Bipin U-Bent Lamp (3")



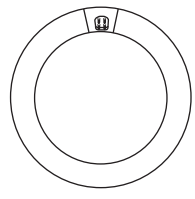
T8 Medium Bipin U-Bent Lamp



T8 Medium Bipin 1⅝" U-Bent Lamp



T5 Circular



T9 Circline 4-Pin

FLUORESCENT LAMPS

For the most current product information, go to the e-catalog on www.philips.com

□ Exclusive to Philips Lighting Company

$ Energy Saving Product

● This lamp is better for the environment because of its reduced mercury content. All Philips ALTO lamps give you end-of-life options, which can simplify and reduce your lamp disposal costs, depending on your state and local regulations. ALTO II Lamps have only 1.7mg of mercury.

▲ Aluminum base

X Orders will be shipped until inventory is depleted; no longer manufactured

Ⓔ This Bulb Meets US Federal Minimum Efficiency Standard. Philips designs and manufactures fluorescent lamps to the following lighting industry standard: NEMA Standard LSD 26—Measurement Methods and Performance Tolerances for Verification Testing of General Purpose Incandescent and Fluorescent Lamps

† New since last printing

◇ Designed for instant start operation

⌀ Due to DOE regulations, these lamps will no longer be manufactured as of July, 2012

(202) Average life under specified test conditions with lamps turned off and restarted no more frequently than once every 3 operating hours. Lamp life is appreciably longer if lamps are started less frequently.

(203) Approximate initial lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life, when the output is measured during operation on a reference ballast under standard laboratory conditions.

(204) For expected lamp lumen output, commercial ballast manufacturers can advise the appropriate ballast factor for each of their ballasts when they are informed of the designated lamp. The ballast factor is a multiplier applied to the designated lamp lumen output.

(205) Approximate hours of life for F40 lamps operated by standard rapid start ballasts at 3 hours per start. When these lamps are operated on modified rapid start or preheat circuits, the operating life will be reduced by approximately 25 percent. When employing dimming systems or energy-saving device systems, the device manufacturer can advise of the effect of their system upon lamp life.

(207) Approximate initial lumens are for 800 ma. operation. For 1000 ma. operation, lumens are approximately 10% higher and watts approximately 15% higher.

(208) Design lumens are the approximate lamp lumen output at 40% of the lamp's rated average life. This output is based upon measurements obtained during lamp operation on a reference ballast under standard laboratory conditions.

(212) Nominal length measured from face of base to maximum distant outside point of U. Measurement does not include base pins. Leg spacing center to center approximately 6", for /6 and 3⅜" for /3 lamps.

(214) Econ-o-watt lamps are only recommended for use on high power factor lead, indoor ballasts that meet ANSI standards. The lamps are not recommended for use in drafty areas, or locations where the ambient temperature is less than 60°F, except as noted. Also they should not be operated on low power factor ballasts, reduced light or reduced current ballasts, dimming ballasts or emergency system inverter ballasts.

(223) Meets the National Energy Policy Act of 1992 exemption for outdoor or cold temperature applications only.

(226) T5 nominal lamp lengths are shorter than standard sizes. See chart on page 27 for details.

(239) Design lumens rated at 3 hours per start on Instant Start ballast.

(240) Life is based upon household usage of 6 hours average usage per day, 7 days per week. See individual product packaging for details.

(241) Average life under engineering data with lamps turned off and restarted once every 12 operating hours.

Compact Fluorescent light

ing

Better for your business, better for the environment.

Philips compact fluorescent lamps combine the economies of fluorescent lighting with quality light output and the versatility of standard incandescent lamps.

A simple act like switching to an energy saving lamp can have a powerful impact on our efforts to stem global warming.

Philips Energy Saver integrated compact fluorescent lamps provide light that people are accustomed to along with the added benefit of long life and lower total operating cost. They are a direct replacement for incandescent lamps, delivering an incandescent-like light and fitting into standard fixtures.

Switching to Philips Energy Saver compact fluorescents from standard incandescents not only improves your bottom line, but it can also reduce greenhouse emissions and your environmental footprint.

UPGRADE TO ENERGY EFFICIENT LAMPS

CURRENT PRODUCT	PHILIPS UPGRADE PRODUCT	BENEFIT	PAGE
60W BR30 Incandescent	Energy Saver R30 16W Fast Run-up	> Reaches approximately 65% of light output in 30 seconds > Glass coating process enables excellent lumen maintenance > Better CRI and color consistency than standard quartz metal halide	56
60W A19 Incandescent	Energy Saver T2 Twister 13W	> New small size mini twister fits more fixtures > 12,000 hours rated average life	54
90W PAR38 Incandescent	Energy Saver PAR38 23W	> 74% energy savings when compared to a 90W PAR38 Incandescent* > Features solid hard glass, heavy duty construction > Design provides excellent beam control	56

* 90W - 32W = 67W / 90W = 74%.
Actual lumen values may vary

COMPACT FLUORESCENT LAMPS

Energy Saver Twisters

Watts	Inc. Equiv. Watts	Bulb	Color Temp. (K)	Base	Product Number	Symbols, Footnotes	Description	Ordering Code	Pkg. Type	Case Qty.	MOL (In.)	Diam. (In.)	Rated Avg. Life (Hrs.) (230)	Approx. Initial Lumens (231)	CRI
ENERGY SAVER T2 MINI TWISTER															
9	40	T2 Twister	2700	Med.	40854-2	$ † ■	Mini Twister Soft White	BC-EL/mdT2 9W	Clam	6	3⅜	2	12,000	500	82
					40831-0	$ † ■	Mini Twister Soft White	EL/mdT2 9W 4pk	Box	6	3⅜	2	12,000	500	82
					41398-8	$ † ■ +	Mini Twister Soft White	EL/mdT2 9W	Box	6	3⅜	2	12,000	500	82
13	60	T2 Twister	2700	Med.	40855-9	$ † ■	Mini Twister Soft White	BC-EL/mdT2 13W	Clam	6	3¾	2	12,000	840	82
					40832-8	$ † ■	Mini Twister Soft White	EL/mdT2 13W 4pk	Box	6	3¾	2	12,000	840	82
					41399-6	$ † ■ +	Mini Twister Soft White	EL/mdT2 13W	Box	6	3¾	2	12,000	840	82
18	75	T2 Twister	2700	Med.	40856-7	$ † ■	Mini Twister Soft White	BC-EL/mdT2 18W	Clam	6	4⅛	2¼	12,000	1250	82
					40833-6	$ † ■	Mini Twister Soft White	EL/mdT2 18W 4pk	Box	6	4⅛	2¼	12,000	1250	82
					41400-3	$ † ■ +	Mini Twister Soft White	EL/mdT2 18W	Box	6	4⅛	2¼	12,000	1250	82
23	100	T2 Twister	2700	Med.	40857-5	$ † ■	Mini Twister Soft White	BC-EL/mdT2 23W	Clam	6	4½	2¼	12,000	1600	82
					40834-4	$ † ■	Mini Twister Soft White	EL/mdT2 23W 4pk	Box	6	4½	2¼	12,000	1600	82
					41401-1	$ † ■ +	Mini Twister Soft White	EL/mdT2 23W	Box	6	4⅛	2¼	12,000	1600	82
ENERGY SAVER TWISTER															
5	25	Twister	2700	Med.	14792-6	$ ■	Twister Soft White	EL/mdT 5W	Box	6	3⅜	1½	12,000	315	82
9	40	Twister	2700	Med.	14793-4	$ ■	Twister Soft White	EL/mdT 9W	Box	6	4	1½	12,000	550	82
					40618-1	$ † X ■	Twister Soft White	BC-EL/mdT 9W	Box	6	4	1½	12,000	550	82
					40619-9	$ † X ■	Twister Soft White	EL/mdT 9W 4pk	Box	6	4	1½	12,000	550	82
11	40	Twister	2700	Med.	13804-0	$ X ■	Twister Soft White	EL/mdT 11W	Box	6	4⅜	1⅝	10,000	700	82
					13991-5	$ ■	Twister Soft White	BC-EL/mdT 11W	Clam	6	4⅜	1⅝	10,000	700	82
13	60	Twister	2700	Med.	15638-0	$ ■	Twister Soft White	EL/mdT 13W	Box	6	4⅜	1½	10,000	900	82
					40985-4	$ †	Twister Soft White	Spiral 13W 12pk	Contr.	1	4⅜	2	10,000	900	82
					20907-2	$ ■	Twister Soft White	BC-EL/mdT 13W	Clam	6	4⅜	1½	10,000	900	82
					21929-5	$ ■	Twister Soft White	BC-EL/mdT 13W 3PK	Clam	6	4⅜	1½	10,000	900	82
					22782-7	$ † X ■	Twister Soft White	EL/mdT 13W LL 4pk	Box	6	4⅜	1½	12,000	900	82
			3500	Med.	22492-3	$ †	Twister Warm White	EL/mdT 13W 3.5K	Box	6	4⅜	1½	10,000	900	82
			4100	Med.	21758-8	$ ■	Twister Cool White	EL/mdT 13W 4K	Box	6	4⅜	1½	12,000	900	82
			5000	Med.	21759-6	$ ■	Twister Bright White	EL/mdT 13W 5K	Box	6	4⅜	1½	12,000	900	82
			6500	Med.	22496-4	$ † ■	Twister Daylight Deluxe	EL/mdT 13W 6.5K	Box	6	4⅜	1½	10,000	900	82
			6500	Med.	23537-4	$ † ■	Twister Daylight Deluxe	BC-EL/mdT 13W 6.5K	Clam	6	4⅜	1½	10,000	900	82
14	60	Twister	Natural	Med.	21046-8	$ †	Twister Soft White	BC-EL/mdT 14W Nat	Clam	6	4⅜	1½	10,000	650	82
18	75	Twister	2700	Med.	20286-1	$ ■	Twister Soft White	EL/mdT 18W	Box	6	5⅛	2⅛	12,000	1250	82
					22767-8	$ † X ■	Twister Soft White	BC-EL/mdT 18W LL	Clam	6	4⅜	2⅛	12,000	1200	82
					22785-0	$ † X ■	Twister Soft White	EL/mdT 18W LL	Box	6	4⅜	2⅛	12,000	1200	82
19	75	Twister	2700	Med.	20909-8	$ ■	Twister Soft White	BC-EL/mdT 19W	Clam	6	4⅜	2⅛	10,000	1200	82
23	100	Twister	2700	Med.	15697-5	$ ■	Twister Soft White	EL/mdT 23W	Box	6	4⅞	2⅛	12,000	1600	82
					20910-6	$ ■	Twister Soft White	BC-EL/mdT 23W	Clam	6	4⅞	2⅛	10,000	1600	82
					20587-2	$ ■	Twister Soft White	BC-EL/mdT 23W 3PK	Clam	6	4⅞	2⅛	10,000	1600	82
					22769-4	$ † X ■	Twister Soft White	BC-EL/mdT 23W LL	Clam	6	4⅞	2⅛	12,000	1600	82
					22786-8	$ † X ■	Twister Soft White	EL/mdT 23W 4PK LL	Box	6	4⅞	2⅛	12,000	1600	82
					22789-2	$ †	Twister Soft White	EL/mdT 23W 12pk	Contr.	1	4⅞	2⅛	10,000	1600	82
			3500	Med.	22497-2	$ † §	Twister Warm White	EL/mdT 23W 3.5K	Box	6	4⅞	2⅛	10,000	1600	82
			4100	Med.	22498-8	$ † §	Twister Cool White	EL/mdT 23W 4.1K	Box	6	4⅞	2⅛	10,000	1500	82
			5000	Med.	22501-1	$ † §	Twister Bright White	EL/mdT 23W 5K	Box	6	4⅞	2⅛	10,000	1500	82
			6500	Med.	22404-5	$ † §	Twister Daylight Deluxe	EL/mdT 23W 6.5K	Box	6	4⅞	2⅛	10,000	1500	82

For the most current product information, go to the e-catalog on **www.philips.com**
Compact fluorescent symbols and footnotes located on page 69
+ Product will not be released until Spring 2011

9W T2 Mini Twister Med. | 13W T2 Mini Twister Med. | 18W T2 Mini Twister Med. | 23W T2 Mini Twister Med. | 5W Twister Med. | 9W Twister Med. | 11W Twister Med. | 13W Twister Med. | 14W Natural Light Twister Med. | 18W Twister Med. | 19W Twister Med. | 23W Twister Med.

COMPACT FLUORESCENT LAMPS

Energy Saver Twisters, A-Shape Lamps

Watts	Inc. Equiv. Watts	Bulb	Color Temp. (K)	Base	Product Number	Symbols, Footnotes	Description	Ordering Code	Pkg. Type	Case Qty.	MOL (In.)	Diam. (In.)	Rated Avg. Life (Hrs.) (230)	Approx. Initial Lumens (231)	CRI
ENERGY SAVER TWISTER CONTINUED															
27	100	Twister	2700	Med.	13715-8	$ ■	Twister Soft White	EL/mdT 27W	Box	6	5⅞	2⅝	10,000	1750	82
			4100	Med.	14788-4	$ ■	Twister Cool White	EL/mdT 27W 4.1K	Box	6	5⅞	2⅝	12,000	1930	82
			5000	Med.	14789-2	$ ■	Twister Bright White	EL/mdT 27W 5K	Box	6	5⅞	2⅝	12,000	1850	82
32	125	Twister	2700	Med.	15639-8	$ ■	Twister Soft White	EL/mdT 32W	Box	6	5⅞	2⅝	12,000	2400	82
42	150	Twister	2700	Med.	13948-5	$ ■	Twister Soft White	EL/dT42W	Box	6	6⅛	2⅝	12,000	2800	82
					13947-7	$ ■	Twister Soft White	BC-EL/dT 42W	Clam	6	6⅛	2⅝	12,000	2800	82
ENERGY SAVER TWISTER DIMMABLE															
15	60	Twist. Dim	2700	Med.	40737-9	$ † **T**	Twister Dim Soft White	EL/mdT DIM 15W	Box	6	4⅔	2⅛	10,000	850	82
					40692-6	$ † **T**	Twister Dim Soft White	BC-EL/mdT DIM 15W	Clam	6	4⅔	2⅛	10,000	850	82
20	75	Twist. Dim	2700	Med.	40583-7	$ † ■	Twister Dim Soft White	EL/mdT DIM 20W	Box	6	5	2⅛	10,000	1150	82
					40584-5	$ † ■	Twister Dim Soft White	BC-EL/mdT DIM 20W	Clam	6	5	2⅛	10,000	1150	82
32	125	Twist. Dim	2700	Med.	40715-5	$ † **T**	Twister Dim Soft White	EL/dT DIM 32W	Box	6	6⅛	2¾	10,000	2100	82
ENERGY SAVER TWISTER GU24 BASE															
13	60	Twist. GU24	2700	GU24	22285-1	$ ■	Twister GU24 Soft White	EL/mdT 13W GU24	Box	6	3¾	1⅝	10,000	900	82
			4100	GU24	41138-9	$ ■ +	Twister GU24 Cool White	EL/mdT 13W GU24 4.1K	Box	6	3¾	1⅝	10,000	900	82
18	75	Twist. GU24	2700	GU24	22286-9	$ ■	Twister GU24 Soft White	EL/mdT 18W GU24	Box	6	3¾	2⅜	10,000	1200	82
			4100	GU24	41177-7	$ ■ +	Twister GU24 Cool White	EL/mdT 18W GU24 4.1K	Box	6	3¾	2⅜	10,000	1250	82
23	100	Twist. GU24	2700	GU24	22287-7	$ ■	Twister GU24 Soft White	EL/mdT 23W GU24	Box	6	4⅜	2⅜	10,000	1600	82
			4100	GU24	41139-7	$ ■ +	Twister GU24 Cool White	EL/mdT 23W GU24 4.1K	Box	6	4⅜	2⅜	10,000	1600	82
ENERGY SAVER TWISTER 3-WAY															
11-23-34	50-100-150	Twister	2700	Med.	21486-6	$ ■	Twist. 3-Way Double Helix	BC-EL/3W 11-23-34	Clam	6	6⅛	2⅜	10,000	700-1500-2200	82
					21193-8	$ ■	Twist. 3-Way Double Helix	EL/3W 11-23-34	Box	6	6⅛	2⅜	10,000	700-1500-2200	82
ENERGY SAVER A-SHAPE															
9	40	A19	2700	Med.	15699-1	$ ■	A19 Soft White	EL/A SWP 9W	Box	6	4⅔	2⅛	8000	450	82
					21207-6	$ ■	A19 Soft White	BC-EL/A SWP 9W	Clam	4	4⅔	2⅛	8000	450	82
14	60	A19	2700	Med.	15700-8	$ ■	A19 Soft White	EL/A SWP 14W	Box	6	4⅜	2⅜	8000	800	82
					21208-4	$ ■	A19 Soft White	BC-EL/A SWP 14W	Clam	4	4⅜	2⅜	8000	800	82
					21209-2	$ ■	A19 Soft White	BC-EL/A SWP 14W 3PK	Clam	4	4⅜	2⅜	8000	800	82
			3500	Med.	22523-5	$ †	A19 Warm White	EL/A SWP 14W 3.5K	Box	6	4⅜	2⅜	8000	800	82
			4100	Med.	22562-8	$ † §	A19 Cool White	EL/A SWP 14W 4.1K	Box	6	4⅜	2⅜	8000	800	82
			5000	Med.	22530-0	$ † §	A19 Bright White	EL/A SWP 14W 5K	Box	6	4⅜	2⅜	8000	760	82
			6500	Med.	22531-8	$ † §	A19 Daylight Deluxe	EL/A SWP 14W 6.5K	Box	6	4⅜	2⅜	8000	800	82
20	75	A21	2700	Med.	20080-8	$ ■	A21 Soft White	EL/A SWP 20W	Box	6	5⅜	2⅛	8000	1100	82

For the most current product information, go to the e-catalog on **www.philips.com**
Compact fluorescent symbols and footnotes located on page 69
+ Product will not be released until Spring 2011

27W Twister Med. | 32W Twister Med. | 42W Twister Med. | 15W Twister Dimmable Med. | 20W Twister Dimmable Med. | 32W Twister Dimmable Med. | GU24 Twister GU24 | 3-Way Twister Med. | A-Shape Med.

COMPACT FLUORESCENT LAMPS

Energy Saver Reflectors

Watts	Inc. Equiv. Watts	Bulb	Color Temp. (K)	Base	Product Number	Symbols, Footnotes	Description	Ordering Code	Pkg. Type	Case Qty.	MOL (In.)	Diam. (In.)	Rated Avg. Life (Hrs.) (230)	Approx. Initial Lumens (231)	CRI
ENERGY SAVER REFLECTOR															
14	75	R20	2700	Med.	15701-6	$ ■	R20 Soft White	EL/A R20 14W	Box	6	4⅞	2½	8000	500	82
					21215-9	$ ■	R20 Soft White	BC-EL/A R20 14W	Clam	3	4⅞	2½	8000	500	82
					21219-1	$ ■	R20 Soft White	BC-EL/A R20 14W 2PK	Clam	3	4⅞	2½	8000	500	82
15	75	R30	2700	Med.	15703-2	$ ■	R30 Soft White	EL/A R30 15W	Box	6	5⅜	3⅜	10,000	750	82
					40620-7	$ † ■	R30 Soft White	EL/A R30 15W	Box	4	5⅜	3⅜	10,000	750	82
					40621-5	$ † ■	R30 Soft White	EL/A R30 15W 2PK	Box	4	5⅜	3⅜	10,000	750	82
					40970-6	$ †	R30 Soft White	R30 15W 6pk	Contr.	6	5⅜	3⅜	8000	750	82
16	75	R30	2700	Med.	21220-9	$ ■	R30 Soft White	BC-EL/A R30 16W	Clam	2	5⅜	3⅜	8000	750	82
					15279-3	$ ■	R30 Soft White	BC-EL/A R30 16W 2PK	Clam	2	5⅜	3⅜	8000	750	82
			3500	Med.	22513-6	$ †	R30 Warm White	EL/A R30 16W 3.5K	Box	6	5⅜	3⅜	8000	750	82
			4100	Med.	22515-1	$ †	R30 Cool White	EL/A R30 16W 4.1K	Box	6	5⅜	3⅜	8000	700	82
			5000	Med.	22516-9	$ †	R30 Bright White	EL/A R30 16W 5K	Box	6	5⅜	3⅜	8000	700	82
			6500	Med.	22521-9	$ † §	R30 Daylight Deluxe	EL/A R30 16W 6.5K	Box	6	5⅜	3⅜	8000	750	82
	60	Hard PAR30	2700	Med.	40581-1	$ † ■	PAR30 2pc Soft White	EL/A PAR30 16W 2pc	Box	6	5	3¼	10,000	750	82
					40582-9	$ † ■	PAR30 2pc Soft White	EL/A PAR30 16W 2pc	Box	4	5	3¼	10,000	750	82
23	120	R40	2700	Med.	15702-4	$ ■	R40 Soft White	EL/A R40 23W	Box	6	6½	4⅜	8000	1150	82
					21223-3	$ ■	R40 Soft White	BC-EL/A R40 23W	Clam	2	6½	4⅜	8000	1150	82
	90	PAR38	2700	Med.	22983-1	$ ■	PAR38 Soft White	EL/A PAR38 23W	Box	6	6½	4⅜	8000	1250	82
					21240-7	$ ■	PAR38 Soft White	BC-EL/A PAR38 23W	Clam	2	6½	4⅜	8000	1250	82
	90	Hard PAR38	2700	Med.	15716-4	$ ■	PAR38 2pc Soft White	EL/A PAR38 23W 2pc	Box	6	5⅜	4⅜	10,000	1300	82
					22791-8	$ † ■	PAR38 2pc Soft White	EL/A PAR38 23W 2pc	Box	4	5⅜	4⅜	10,000	1300	82
					40892-2	$ † ■	PAR38 2pc Soft White	EL/A PAR38 23W 2pc 2pk	Box	4	5⅜	4⅜	10,000	1300	82
	90	Hard PAR38 Red		Med.	40576-1	$ †	PAR38 2pc Red	EL/A PAR38 23W 2pc RED	Box	4	5⅜	4⅜	10,000	N/A	82
	90	Hard PAR38 Green		Med.	40578-7	$ †	PAR38 2pc Green	EL/A PAR38 23W 2pc GN	Box	4	5⅜	4⅜	10,000	N/A	82
ENERGY SAVER FAST RUN UP REFLECTOR															
16	65	R30	2700	Med.	40904-5	$ †	R30 Fast Soft White	EL/A BR30 16W	Box	6	5⅜	3⅜	8000	650	82
ENERGY SAVER DIMMABLE REFLECTOR															
16	65	R30 DIM	2700	Med.	13707-5	$ ● ■	R30 Dimm. Soft White	EL/A R30 DIM 16W	Box	6	5⅜	3⅜	8000	630	82
					15041-7	$ ● ■	R30 Dimm. Soft White	BC-EL/A R30 DIM 16W	Clam	6	5⅜	3⅜	8000	630	82
20	75	R40 DIM	2700	Med.	13708-3	$ ● ■	R40 Dimm. Soft White	EL/A R40 DIM 20W	Box	6	6	4⅜	8000	900	82
					15042-5	$ ● ■	R40 Dimm. Soft White	BC-EL/A R40 DIM 20W	Clam	6	6	4⅜	8000	900	82
	75	PAR38 DIM	2700	Med.	14644-9	$ ● ■	PAR38 Dimm. Soft White	EL/A PAR38 DIM 20W	Box	6	6	4⅜	8000	900	82

For the most current product information, go to the e-catalog on **www.philips.com**

Compact fluorescent symbols and footnotes located on page 69

R20 Med. | R30 Med. | Hard PAR30 Med. | R40 Med. | PAR38 Med. | Hard PAR38 Med. | Fast Run Up R30 Med.

COMPACT FLUORESCENT LAMPS

Energy Saver Decoratives

Watts	Inc. Equiv. Watts	Bulb	Color Temp. (K)	Base	Product Number	Symbols, Footnotes	Description	Ordering Code	Pkg. Type	Case Qty.	MOL (In.)	Diam. (In.)	Rated Avg. Life (Hrs.) (230)	Approx. Initial Lumens (231)	CRI
ENERGY SAVER FAN															
5	25	Fan	2700	Med.	15698-3	$ ■	Fan Soft White	EL/A FAN 5W	Box	6	3½	1⅔	8000	250	82
					21251-4	$ ■	Fan Soft White	BC-EL/A FAN 5W	Clam	4	3½	1⅔	8000	250	82
					21252-2	$ ■	Fan Soft White	BC-EL/A FAN 5W 3PK	Clam	4	3½	1⅔	8000	250	82
9	40	Fan	2700	Med.	21248-0	$ ■	Fan Soft White	BC-EL/A FAN 9W	Clam	4	4⅞	2⅛	8000	450	82
					21250-6	$ ■	Fan Soft White	BC-EL/A FAN 9W 3PK	Clam	4	4⅞	2⅛	8000	450	82
ENERGY SAVER CANDLE															
5	25	mCan	2700	Cand.	14791-8	$ ■	Candle Soft White	EL/A mCan 5W	Box	6	4½	1⅜	8000	200	82
					22113-5	$ **T**	Candle Soft White	BC-EL/A mCan 5W	Clam	4	4½	1⅜	8000	200	82
					22112-7	$ **T**	Candle Soft White	BC-EL/A mCan 5W 3pk	Clam	4	4½	1⅜	8000	200	82
		Can	2700	Med.	14790-0	$ ■	Candle Soft White	EL/A Can 5W	Box	6	4⅞	1⅜	8000	200	82
9	40	mCan	2700	Cand.	20284-6	$ **T**	Candle Soft White	EL/mCan 9W	Box	6	4⅜	1⅔	8000	420	82
					21243-1	$ **T**	Candle Soft White	BC-EL/mCan 9W	Clam	4	4⅜	1⅔	8000	420	82
					21783-6	$ **T**	Candle Soft White	BC-EL/mCan 9W 3PK	Clam	4	4⅜	1⅔	8000	420	82
		Can	2700	Med.	20280-4	$ ■	Candle Soft White	EL/Can 9W	Box	6	4¾	1⅔	8000	420	82
					21244-9	$ ■	Candle Soft White	BC-EL/Can 9W	Clam	4	4¾	1⅔	8000	420	82
					21245-6	$ ■	Candle Soft White	BC-EL/Can 9W 3PK	Clam	4	4¾	1⅔	8000	420	82
ENERGY SAVER GLOBE															
9	40	G16½	2700	Med.	15717-2	$ ■	G16.5 Globe Soft White	EL/A G18 9W	Box	6	3½	2⅛	8000	380	82
					21237-3	$ ■	G16.5 Globe Soft White	BC-EL/A G18 9W	Clam	4	3½	2⅛	8000	380	82
					21238-1	$ ■	G16.5 Globe Soft White	BC-EL/A G18 9W 3PK	Clam	4	3½	2⅛	8000	380	82
		G25	2700	Med.	15718-0	$ ■	G25 Globe Soft White	EL/A G25 9W	Box	6	4⅝	3⅛	8000	500	82
					21232-4	$ ■	G25 Globe Soft White	BC-EL/A G25 9W 3PK	Clam	4	4⅝	3⅛	8000	500	82
					21224-1	$ ■	G25 Globe Soft White	BC-EL/A G25 9W	Clam	4	4⅝	3⅛	8000	500	82
14	60	G25	2700	Med.	22115-0	$ † **X** ■	G25 Globe Soft White	BC-EL/A G25 14W	Clam	4	4⅝	3⅛	8000	800	82
					22114-3	$ † **X** ■	G25 Globe Soft White	BC-EL/A G25 14W 3pk	Clam	4	4⅝	3⅛	8000	800	82
16	60	G30	2700	Med.	21106-0	$ ■	G30 Globe Soft White	EL/A G30 16W	Box	6	5½	5½	10,000	980	82
23	75	G40	2700	Med.	21107-8	$ ■	G40 Globe Soft White	EL/A G40 23W	Box	6	6½	6	8000	1560	82

For the most current product information, go to the e-catalog on **www.philips.com**

Compact fluorescent symbols and footnotes located on page 69

COMPACT FLUORESCENT LAMPS

Energy Saver Outdoor, Universal, TuffGuard Lamps

Watts	Inc. Equiv. Watts	Bulb	Color Temp. (K)	Base	Product Number	Symbols, Footnotes	Description	Ordering Code	Pkg. Type	Case Qty.	MOL (In.)	Diam. (In.)	Rated Avg. Life (Hrs.) (230)	Approx. Initial Lumens (231)	CRI
ENERGY SAVER OUTDOOR															
14	60	Twister	2700	Med.	40585-2	$ † ■	Twister Photosensor	BC-EL/mdT D2D 14W	Clam	6	4⅔	2⅓	8000	820	82
		A19	Yellow	Med.	21214-2	$	A19 Bug-A-Way	BC-EL/A SWP 14W BAW	Clam	4	4⅔	2⅓	8000	600	72
					20371-1	$	A19 Bug-A-Way	EL/A SWP 14W BAW	Box	6	4⅔	2⅓	8000	600	72
		T20	2700	Med.	21246-4	$ ■	Postlight	BC-EL/O 14W	Clam	4	5⅔	2½	8000	800	82
		T16	2700	Med.	40778-3	$ † **T**	Prismatic Postlight	EL/O 14W Prisma	Box	6	5⅞	2	8000	800	82
18	75	T16	2700	Med.	40580-3	$ † ■	Prismatic Postlight	EL/O 18W Prisma	Box	6	6⅛	2	8000	1100	82
ENERGY SAVER UNIVERSAL															
14	60	SLS	2700	Med.	14691-0	$ ● ■	SLS Universal Triple Tube	SLS 14W	Box	6	5	2⅔	12,000	860	82
20	75	SLS	2700	Med.	13077-3	$ **T** ●	SLS Universal Triple Tube	SLS 20W	Box	6	5⅜	2⅔	15,000	1200	82
25	100	SLS	2700	Med.	13574-9	$ **T** ●	SLS Universal Triple Tube	SLS 25W	Box	6	6⅛	2⅔	15,000	1750	82
ENERGY SAVER TUFFGUARD															
18	75	T20	2700	Med.	13578-0	$ † ■	Tuff-Guard	EL/O 18W	Box	6	6	2⅔	10,000	1100	82

For the most current product information, go to the e-catalog on **www.philips.com**
Compact fluorescent symbols and footnotes located on page 69


Twister Photosensor Med.


Bug-A-Way Med.


T20 Postlight Med.


T16 Prismatic Postlight Med.


14W SLS Universal Med.


20W SLS Universal Med.


25W SLS Universal Med.


18W Tuffguard T20 Med.

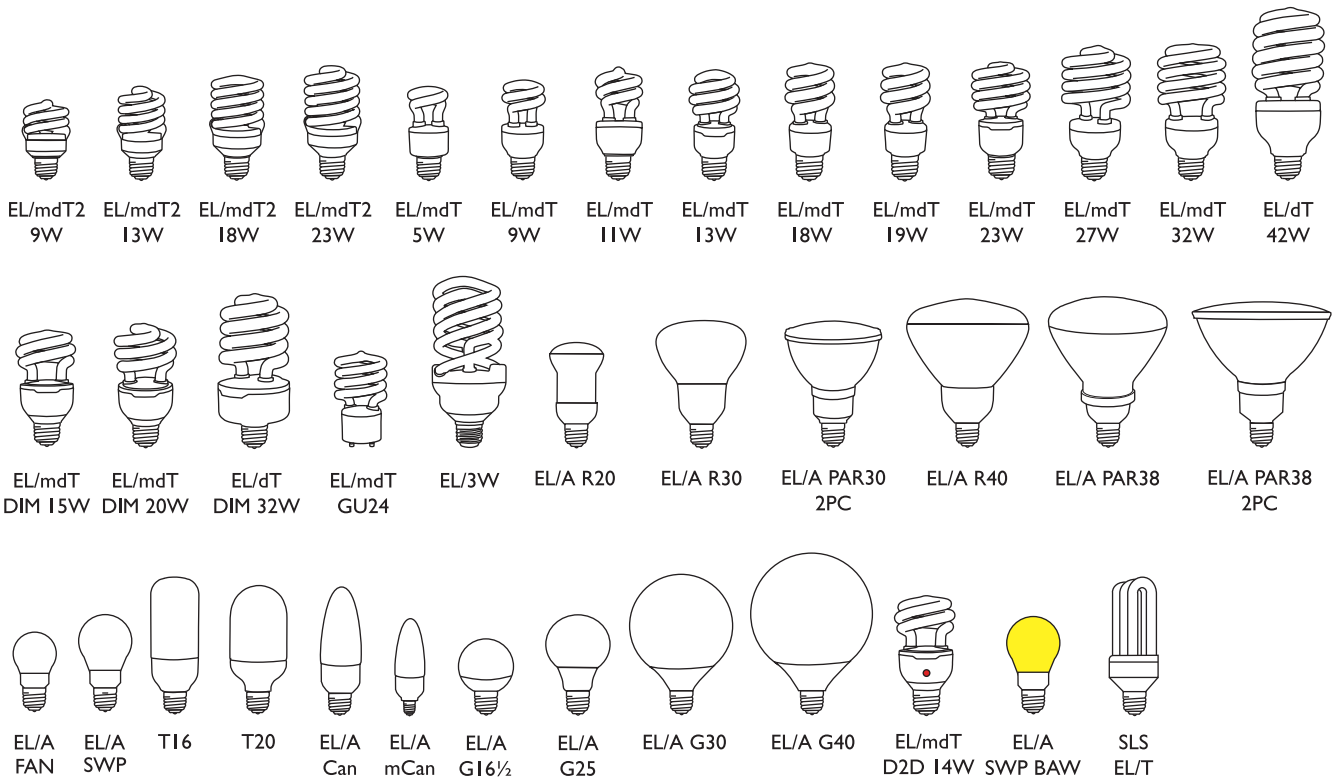
COMPACT FLUORESCENT LAMPS

Energy Saver Base Types and Bulb Shapes

Energy Saver Compact Fluorescent Base Types (Not Actual Sizes)

Med. Medium | Cand. Candelabra | GU24

Energy Saver Compact Fluorescent Bulb Shapes (Not Actual Sizes)



EL/mdT2 9W | EL/mdT2 13W | EL/mdT2 18W | EL/mdT2 23W | EL/mdT 5W | EL/mdT 9W | EL/mdT 11W | EL/mdT 13W | EL/mdT 18W | EL/mdT 19W | EL/mdT 23W | EL/mdT 27W | EL/mdT 32W | EL/dT 42W

EL/mdT DIM 15W | EL/mdT DIM 20W | EL/dT DIM 32W | EL/mdT GU24 | EL/3W | EL/A R20 | EL/A R30 | EL/A PAR30 2PC | EL/A R40 | EL/A PAR38 | EL/A PAR38 2PC

EL/A FAN | EL/A SWP | T16 | T20 | EL/A Can | EL/A mCan | EL/A G16½ | EL/A G25 | EL/A G30 | EL/A G40 | EL/mdT D2D 14W | EL/A SWP BAW | SLS EL/T

Compact Fluorescent light

ing (ni)

Energy savings made simple

Philips CFLni lamps offer designers, specifiers and end-users new levels of efficiencies and versatility in sizes, configurations and application possibilities. Philips Energy Advantage lamps are fast becoming the preferred choice for maximum energy efficiency, high light output and sleek design solutions.

Philips Compact Fluorescent Non-Integrated lamps offer significant energy savings, high light output and a broad portfolio of design solutions for your everyday needs.

Philips Energy Advantage PL-L 25W offers significant savings in a small profile. The PL-L is available in a broad range of color temperatures and the light output is comparable to a 25W 4 foot linear fluorescent.

Philips Energy Advantage PL-T Lamps are a simple way to save energy without changing a ballast or sacrificing light output. The new bridged design also allows for better efficiency and an even more compact size.

Philips Energy Advantage PL-C Lamps offer significant energy savings in a compact size, perfect for downlights and recessed cans.

UPGRADE TO ENERGY EFFICIENT LAMPS

CURRENT PRODUCT	PHILIPS UPGRADE PRODUCT	BENEFIT	PAGE
40W PL-L	Energy Advantage PL-L 25W	> 95% lumen maintenance > 20% energy savings (when compared to a PL-L 40W)* > Only 1.4mg of mercury	65
32W PL-T	Energy Advantage PL-T 27W	> 88% lumen maintenance > 15% energy savings when replacing a 32W lamp† > Only 1.4 mg of mercury per lamp	64
26W PL-C	Energy Advantage PL-C 21W	> 88% lumen maintenance > 19% energy savings when replacing a 26W lamp◊ > Save energy without changing a ballast	63

* On Instant Start Ballast, a standard PL-L 40W only draws 32 Watts, so the actual savings is 7 Watts (32W - 25W = 7W). 40W - 32W = 8W / 40 = 20%
† 32W - 27W = 5W / 32W = 15%
◊ 26W - 21W = 5W / 26W = 19%

COMPACT FLUORESCENT LAMPS

PL-S and PL-C Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Generic Designation	Pkg. Qty.	Desc.	MOL (In.)	Rated Avg. Life (Hrs.) (230)	Approx. Initial Lumens (231)	Design Lumens (208)	CRI
PL-S (SHORT) FLUORESCENT LAMPS													
5	PL-S	G23	14671-2	$ ●	PL-S 5W/827/2P/ALTO	CFT5W/G23/827	10	2700K	4⅝	10,000	250	210	82
			14868-4	$ ●	PL-S 5W/841/2P/ALTO	CFT5W/G23/841	10	4100K	4⅝	10,000	250	210	82
7	PL-S	G23	14871-8	$ ●	PL-S 7W/827/2P/ALTO	CFT7W/G23/827	10	2700K	5 11/32	10,000	400	360	82
			14872-6	$ ●	PL-S 7W/835/2P/ALTO	CFT7W/G23/835	10	3500K	5 11/32	10,000	400	360	82
			14873-4	$ ●	PL-S 7W/841/2P/ALTO	CFT7W/G23/841	10	4100K	5 11/32	10,000	400	360	82
9	PL-S	G23	14867-6	$ ●	PL-S 9W/827/2P/ALTO	CFT9W/G23/827	10	2700K	6 19/32	10,000	600	540	82
			14869-2	$ ●	PL-S 9W/835/2P/ALTO	CFT9W/G23/835	10	3500K	6 19/32	10,000	600	540	82
			14870-0	$ ●	PL-S 9W/841/2P/ALTO	CFT9W/G23/841	10	4100K	6 19/32	10,000	600	540	82
13	PL-S	GX23	14681-1	$ ●	PL-S 13W/827/2P/ALTO	CFT13W/GX23/827	10	2700K	7¼	10,000	825	740	82
			14683-7	$ ●	PL-S 13W/830/2P/ALTO	CFT13W/GX23/830	10	3000K	7¼	10,000	825	740	82
			14684-5	$ ●	PL-S 13W/835/2P/ALTO	CFT13W/GX23/835	10	3500K	7¼	10,000	825	740	82
			14685-2	$ ●	PL-S 13W/841/2P/ALTO	CFT13W/GX23/841	10	4100K	7¼	10,000	825	740	82
			14686-0	$ ●	PL-S 13W/841/2P/ALTO/BULK	CFT13W/GX23/841	50	4100K	7¼	10,000	825	740	82
			14687-8	$ ●	PL-S 13W/850/2P/ALTO	CFT13W/GX23/850	10	5000K	7¼	10,000	800	720	82
			14688-6	$ ●	PL-S 13W/850/2P/ALTO/BULK	CFT13W/GX23/850	50	5000K	7¼	10,000	800	720	82
PL-C (CLUSTER) 2-PIN FLUORESCENT LAMPS—ENERGY ADVANTAGE													
21	PL-C	G24d-3	24168-7	$	PL-C 26W/830/XEW/ALTO 21W	CFQ26W/G24d/830	10	3000K	6 3/16	10,000	1600	1375	82
			24169-5	$	PL-C 26W/835/XEW/ALTO 21W	CFQ26W/G24d/835	10	3500K	6 3/16	10,000	1600	1375	82
PL-C (CLUSTER) 2-PIN FLUORESCENT LAMPS													
13	PL-C	GX23-2	38310-9	$ ●	PL-C 13W/827/USA/ALTO	CFQ13W/GX23/827	10	2700K	4⅝	10,000	860	735	82
			38311-7	$ ●	PL-C 13W/830/USA/ALTO	CFQ13W/GX23/830	10	3000K	4⅝	10,000	860	735	82
			38312-5	$ ●	PL-C 13W/835/USA/ALTO	CFQ13W/GX23/835	10	3500K	4⅝	10,000	860	735	82
			38313-3	$ ●	PL-C 13W/841/USA/ALTO	CFQ13W/GX23/841	10	4100K	4⅝	10,000	860	735	82
	PL-C	G24d-1	38314-1	$ ●	PL-C 13W/827/ALTO	CFQ13W/G24d/827	10	2700K	5½	10,000	900	770	82
18	PL-C	G24d-2	38316-6	$ ●	PL-C 18W/827/ALTO	CFQ18W/G24d/827	10	2700K	6	10,000	1250	1070	82
			38317-4	$ ●	PL-C 18W/830/ALTO	CFQ18W/G24d/830	10	3000K	6	10,000	1250	1070	82
			38318-2	$ ●	PL-C 18W/835/ALTO	CFQ18W/G24d/835	10	3500K	6	10,000	1250	1070	82
			38319-0	$ ●	PL-C 18W/841/ALTO	CFQ18W/G24d/841	10	4100K	6	10,000	1250	1070	82
26	PL-C	G24d-3	38321-6	$ ●	PL-C 26W/827/ALTO	CFQ26W/G24d/827	10	2700K	6 3/16	10,000	1800	1545	82
			38322-4	$ ●	PL-C 26W/830/ALTO	CFQ26W/G24d/830	10	3000K	6 3/16	10,000	1800	1545	82
			38323-2	$ ●	PL-C 26W/835/ALTO	CFQ26W/G24d/835	10	3500K	6 3/16	10,000	1800	1545	82
			38324-0	$ ●	PL-C 26W/841/ALTO	CFQ26W/G24d/841	10	4100K	6 3/16	10,000	1800	1545	82
PL-C (CLUSTER) 2-PIN FLUORESCENT LAMPS, 15MM TUBE DIAMETER (222)													
20	PL-C	GX32d-2	24168-7	$	PL-C 15mm/22W/827	CFQ20W/GX32d/827	40	2700K	6	10,000	1200	995	82
27	PL-C	GX32d-3	24169-5	$	PL-C 15mm/28W/827	CFQ27W/GX32d/827	40	2700K	6 3/16	10,000	1600	1325	82

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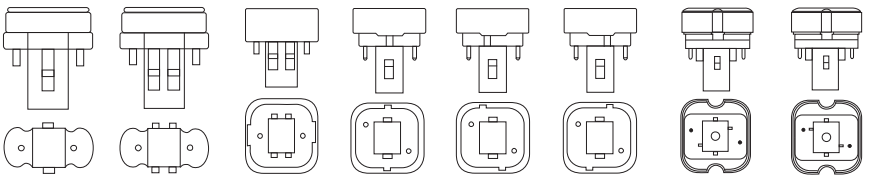
Compact fluorescent symbols and footnotes located on page 69

PHILIPS PL-S
Warranty Period: 12 months*

* Certain limitations and conditions apply.
See Philips for further warranty details.

PL-S G23 | PL-S GX23 | PL-C 2-Pin Energy Advantage | PL-C 2-Pin 15mm



PL-S G23 Base | PL-S GX23 Base | PL-C 2-Pin GX23-2 Base | PL-C 2-Pin G24d-1 Base | PL-C 2-Pin G24d-2 Base | PL-C 2-Pin G24d-3 Base | PL-C 2-Pin GX32d-2 Base | PL-C 2-Pin GX32d-3 Base

COMPACT FLUORESCENT LAMPS

PL-C Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Generic Designation	Pkg. Qty.	Desc.	MOL (In.)	Rated Avg. Life (Hrs.) (230)	Approx. Initial Lumens (231)	Design Lumens (208)	CRI
PL-C (CLUSTER) 4-PIN FLUORESCENT LAMPS, ELECTRONIC OPERATION—ENERGY ADVANTAGE													
14	PL-C	G24q-2	22034-3	$ ●	PL-C 18W/827/XEW/4P/ALTO 14W	CFQ18W/G24q/827	10	2700K	5 11/16	12,000	1100	1010	82
			22040-0	$ ●	PL-C 18W/835/XEW/4P/ALTO 14W	CFQ18W/G24q/835	10	3500K	5 11/16	12,000	1100	1010	82
			22041-8	$ ●	PL-C 18W/841/XEW/4P/ALTO 14W	CFQ18W/G24q/841	10	4100K	5 11/16	12,000	1100	1010	82
21	PL-C	G24q-3	22042-6	$ ●	PL-C 26W/827/XEW/4P/ALTO 21W	CFQ26W/G24q/827	10	2700K	6½	12,000	1525	1400	82
			22047-5	$ ●	PL-C 26W/835/XEW/4P/ALTO 21W	CFQ26W/G24q/835	10	3500K	6½	12,000	1525	1400	82
			22048-3	$ ●	PL-C 26W/841/XEW/4P/ALTO 21W	CFQ26W/G24q/841	10	4100K	6½	12,000	1525	1400	82
PL-C (CLUSTER) 4-PIN FLUORESCENT LAMPS, ELECTRONIC OPERATION													
13	PL-C	G24q-1	38325-7	$ ●	PL-C 13W/827/4P/ALTO	CFQ13W/G24q/827	10	2700K	5 3/16	12,000	900	775	82
			38326-5	$ ●	PL-C 13W/830/4P/ALTO	CFQ13W/G24q/830	10	3000K	5 3/16	12,000	900	775	82
			38327-3	$ ●	PL-C 13W/835/4P/ALTO	CFQ13W/G24q/835	10	3500K	5 3/16	12,000	900	775	82
			38328-1	$ ●	PL-C 13W/841/4P/ALTO	CFQ13W/G24q/841	10	4100K	5 3/16	12,000	900	775	82
18	PL-C	G24q-2	38329-9	$ ●	PL-C 18W/827/4P/ALTO	CFQ18W/G24q/827	10	2700K	5 11/16	12,000	1250	1075	82
			38330-7	$ ●	PL-C 18W/830/4P/ALTO	CFQ18W/G24q/830	10	3000K	5 11/16	12,000	1250	1075	82
			38332-3	$ ●	PL-C 18W/835/4P/ALTO	CFQ18W/G24q/835	10	3500K	5 11/16	12,000	1250	1075	82
			38333-1	$ ●	PL-C 18W/841/4P/ALTO	CFQ18W/G24q/841	10	4100K	5 11/16	12,000	1250	1075	82
26	PL-C	G24q-3	38334-9	$ ●	PL-C 26W/827/4P/ALTO	CFQ26W/G24q/827	10	2700K	6½	12,000	1800	1550	82
			38335-6	$ ●	PL-C 26W/830/4P/ALTO	CFQ26W/G24q/830	10	3000K	6½	12,000	1800	1550	82
			38336-4	$ ●	PL-C 26W/835/4P/ALTO	CFQ26W/G24q/835	10	3500K	6½	12,000	1800	1550	82
			38337-2	$ ●	PL-C 26W/841/4P/ALTO	CFQ26W/G24q/841	10	4100K	6½	12,000	1800	1550	82

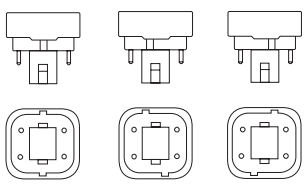
For the most current product information, go to the e-catalog on **www.philips.com**
Compact fluorescent symbols and footnotes located on page 69

PHILIPS PL-C
Warranty Period: 18 months*

PHILIPS PL-C ENERGY ADVANTAGE
Warranty Period: 24 months*

* Certain limitations and conditions apply. See Philips for further warranty details.

PL-C 4-Pin



PL-C 4-Pin G24q-1 Base | PL-C 4-Pin G24q-2 Base | PL-C 4-Pin G24q-3 Base

COMPACT FLUORESCENT LAMPS

PL-T Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Generic Designation	Pkg. Qty.	Desc.	MOL (In.)	Rated Avg. Life (Hrs.) (230)	Approx. Initial Lumens (231)	Design Lumens (208)	CRI
PL-T (TRIPLE) 4-PIN FLUORESCENT ENERGY ADVANTAGE LAMPS													
21	PL-T	GX24q-3	40779-1	$ ● †	PL-T 26W/830/XEW/4P/ALTO 21W	CFTR26W/GX24q/830	10	3000K	5	16,000	1400	1235	82
			40780-9	$ ● †	PL-T 26W/835/XEW/4P/ALTO 21W	CFTR26W/GX24q/835	10	3500K	5	16,000	1400	1235	82
27	PL-T	GX24q-3	22021-0	$ ●	PL-T 32W/830/XEW/4P/ALTO 27W	CFTR32W/GX24q/830	10	3000K	5½	16,000	1875	1725	82
			22022-8	$ ●	PL-T 32W/835/XEW/4P/ALTO 27W	CFTR32W/GX24q/835	10	3500K	5½	16,000	1875	1725	82
			22024-4	$ ●	PL-T 32W/841/XEW/4P/ALTO 27W	CFTR32W/GX24q/841	10	4100K	5½	16,000	1875	1725	82
33	PL-T	GX24q-4	22026-9	$ ●	PL-T 42W/830/XEW/4P/ALTO 33W	CFTR42W/GX24q/830	10	3000K	6⅓	16,000	2615	2400	82
			22028-5	$ ●	PL-T 42W/835/XEW/4P/ALTO 33W	CFTR42W/GX24q/835	10	3500K	6⅓	16,000	2615	2400	82
			22029-3	$ ●	PL-T 42W/841/XEW/4P/ALTO 33W	CFTR42W/GX24q/841	10	4100K	6⅓	16,000	2615	2400	82
PL-T (TRIPLE) 4-PIN FLUORESCENT LAMPS—INSTANT ON TECHNOLOGY													
13	PL-T	GX24q-1	14992-2	$ ● ◇	PL-T 13W/827/X/4P/ALTO	CFTR13W/GX240/827	10	2700K	4⅜	16,000	900	825	82
			14995-4	$ ● ◇	PL-T 13W/841/X/4P/ALTO	CFTR13W/GX240/841	10	4100K	4⅜	16,000	900	825	82
18	PL-T	GX24q-2	14923-7	$ ● ◇	PL-T 18W/827/X/4P/ALTO	CFTR18W/GX240/827	10	2700K	4⅜	16,000	1200	1020	82
			14926-0	$ ● ◇	PL-T 18W/841/X/4P/ALTO	CFTR18W/GX240/841	10	4100K	4⅜	16,000	1200	1020	82
26	PL-T	GX24q-3	14928-6	$ ● ◇	PL-T 26W/827/X/4P/ALTO	CFTR26W/GX240/827	10	2700K	5	16,000	1800	1530	82
			14931-0	$ ● ◇	PL-T 26W/841/X/4P/ALTO	CFTR26W/GX240/841	10	4100K	5	16,000	1800	1530	82
PL-T (TRIPLE) 4-PIN FLUORESCENT LAMPS													
18	PL-T	GX24q-2	38437-0	$ ●	PL-T 18W/827/4P/ALTO	CFTR18W/GX24q/827	12	2700K	4⅝	16,000	1200	1020	82
			26802-9	$ ●	PL-T 18W/830/4P/ALTO	CFTR18W/GX24q/830	12	3000K	4⅝	16,000	1200	1020	82
			26820-1	$ ●	PL-T 18W/835/4P/ALTO	CFTR18W/GX24q/835	12	3500K	4⅝	16,000	1200	1020	82
			26822-7	$ ●	PL-T 18W/841/4P/ALTO	CFTR18W/GX24q/841	12	4100K	4⅝	16,000	1200	1020	82
26	PL-T	GX24q-3	38440-4	$ ●	PL-T 26W/827/4P/ALTO	CFTR26W/GX24q/827	12	2700K	5	16,000	1800	1530	82
			26823-5	$ ●	PL-T 26W/830/4P/ALTO	CFTR26W/GX24q/830	12	3000K	5	16,000	1800	1530	82
			26824-3	$ ●	PL-T 26W/835/4P/ALTO	CFTR26W/GX24q/835	12	3500K	5	16,000	1800	1530	82
			26825-0	$ ●	PL-T 26W/841/4P/ALTO	CFTR26W/GX24q/841	12	4100K	5	16,000	1800	1530	82
32	PL-T	GX24q-3	38443-8	$ ●	PL-T 32W/827/4P/ALTO	CFTR32W/GX24q/827	12	2700K	5⅝	16,000	2400	2040	82
			26832-6	$ ●	PL-T 32W/830/4P/ALTO	CFTR32W/GX24q/830	12	3000K	5⅝	16,000	2400	2040	82
			26833-4	$ ●	PL-T 32W/835/4P/ALTO	CFTR32W/GX24q/835	12	3500K	5⅝	16,000	2400	2040	82
			26872-2	$ ●	PL-T 32W/841/4P/ALTO	CFTR32W/GX24q/841	12	4100K	5⅝	16,000	2400	2040	82
42	PL-T	GX24q-4	38450-3	$ ●	PL-T 42W/827/4P/ALTO	CFTR42W/GX24q/827	12	2700K	6⅜	16,000	3200	2720	82
			26873-0	$ ●	PL-T 42W/830/4P/ALTO	CFTR42W/GX24q/830	12	3000K	6⅜	16,000	3200	2720	82
			26875-5	$ ●	PL-T 42W/835/4P/ALTO	CFTR42W/GX24q/835	12	3500K	6⅜	16,000	3200	2720	82
			26876-3	$ ●	PL-T 42W/841/4P/ALTO	CFTR42W/GX24q/841	12	4100K	6⅜	16,000	3200	2720	82
			13488-2	$ ● (242)	PL-T 42W/835/4P/HTA ALTO	CFTR42W/GX24q/835	12	3500K	6⅜	16,000	3200	2720	82
			13659-8	$ ● (242)	PL-T 42W/841/4P/HTA ALTO	CFTR42W/GX24q/841	12	4100K	6⅜	16,000	3200	2720	82
57	PL-T	GX24q-5	14631-6	$	PL-T 57W/830/4P/A	CFTR57W/GX24q/830	10	3000K	7¾	16,000	4300	3741	82
			14632-4	$	PL-T 57W/835/4P/A	CFTR57W/GX24q/835	10	3500K	7¾	16,000	4300	3741	82
			14633-2	$	PL-T 57W/841/4P/A	CFTR57W/GX24q/841	10	4100K	7¾	16,000	4300	3741	82

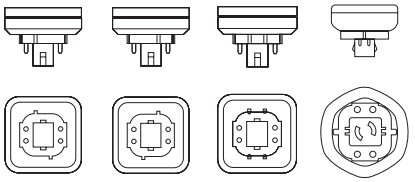
For the most current product information, go to the e-catalog on **www.philips.com**
Compact fluorescent symbols and footnotes located on page 69

PHILIPS PL-T
Warranty Period: 18 months*

PHILIPS PL-T ENERGY ADVANTAGE
Warranty Period: 24 months*

* Certain limitations and conditions apply. See Philips for further warranty details.

PL-T 4-Pin Energy Advantage | PL-T 4-Pin Instant-On | PL-T 4-Pin



PL-T 4-Pin GX24q-2 Base | PL-T 4-Pin GX24q-3 Base | PL-T 4-Pin GX24q-4 Base | PL-T 4-Pin GX24q-5 Base

COMPACT FLUORESCENT LAMPS

PL-L Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Generic Designation	Pkg. Qty.	Desc.	MOL (In.)	Rated Avg. Life (Hrs.) (230)	Approx. Initial Lumens (231)	Design Lumens (208)	CRI
PL-L (LONG) FLUORESCENT LAMPS—ENERGY ADVANTAGE													
25	PL-L	2G11	20913-0	$	PL-L 40W/830/XEW/4P/IS 25W	FT40W/2G11/RS/830	25	3000K	22½	24,000	2600	2470	82
			20914-8	$	PL-L 40W/835/XEW/4P/IS 25W	FT40W/2G11/RS/835	25	3500K	22½	24,000	2600	2470	82
			15698-3	$ †	PL-L 40W/835/XEW/4P/IS 25W	FT40W/2G11/RS/835	10	3500K	22½	24,000	2600	2470	82
			20915-5	$	PL-L 40W/841/XEW/4P/IS 25W	FT40W/2G11/RS/841	25	4100K	22½	24,000	2600	2470	82
PL-L (LONG) FLUORESCENT LAMPS													
18	PL-L	2G11	34500-9	$	PL-L 18W/830/4P	FT18W/2G11/830	25	3000K	8 5/16	15,000	1250	1125	82
			35932-3	$	PL-L 18W/835/4P	FT18W/2G11/835	25	3500K	8 5/16	15,000	1250	1125	82
			34501-7	$	PL-L 18W/841/4P	FT18W/2G11/841	25	4100K	8 5/16	15,000	1250	1125	82
24	PL-L	2G11	34505-8	$	PL-L 24W/830/4P	FT24W/2G11/830	25	3000K	12 1/16	15,000	1800	1620	82
			35933-1	$	PL-L 24W/835/4P	FT24W/2G11/835	25	3500K	12 1/16	15,000	1800	1620	82
			34508-2	$	PL-L 24W/841/4P	FT24W/2G11/841	25	4100K	12 1/16	15,000	1800	1620	82
36	PL-L	2G11	34511-6	$	PL-L 36W/830/4P	FT36W/2G11/830	25	3000K	16 7/16	15,000	2900	2610	82
			34942-3	$	PL-L 36W/835/4P	FT36W/2G11/835	25	3500K	16 7/16	15,000	2900	2610	82
			34513-2	$	PL-L 36W/841/4P	FT36W/2G11/841	25	4100K	16 7/16	15,000	2900	2610	82
40	PL-L	2G11	30042-6	$	PL-L 40W/830/4P/RS/IS	FT40W/2G11/RS/830	25	3000K	22½	20,000	3300	2970	82
			30043-4	$	PL-L 40W/835/4P/RS/IS	FT40W/2G11/RS/835	25	3500K	22½	20,000	3300	2970	82
			30044-2	$	PL-L 40W/841/4P/RS/IS	FT40W/2G11/RS/841	25	4100K	22½	20,000	3300	2970	82
50	PL-L	2G11	34747-6	$	PL-L 50W/830/4P/RS	FT50W/2G11/RS/830	25	3000K	22½	20,000	4300	3870	82
			34753-4	$	PL-L 50W/835/4P/RS	FT50W/2G11/RS/835	25	3500K	22½	20,000	4300	3870	82
			34770-8	$	PL-L 50W/841/4P/RS	FT50W/2G11/RS/841	25	4100K	22½	20,000	4300	3870	82
55	PL-L	2G11	13844-6	$	PL-L 55W/950/4P/RS	FT55W/2G11/RS/950	25	5000K	21⅜	20,000	3650	3358	91
80	PL-L	2G11	38698-7	$	PL-L 80W/835/4P	FT80W/2G11/835	25	3500K	22½	20,000	6000	5400	82
			38699-5	$	PL-L 80W/841/4P	FT80W/2G11/841	25	4100K	22½	20,000	6000	5400	82

For the most current product information, go to the e-catalog on **www.philips.com**

Compact fluorescent symbols and footnotes located on page 69

PHILIPS PL-L STANDARD
Warranty Period: 24 months*

PHILIPS PL-L ENERGY ADVANTAGE
Warranty Period: 30 months*

* Certain limitations and conditions apply. See Philips for further warranty details.

PL-L 2G11

PL-L 2G11 Base

COMPACT FLUORESCENT LAMPS

PL-H, PL-Q Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Generic Designation	Pkg. Qty.	Desc.	MOL (In.)	Rated Avg. Life (Hrs.) (230)	Approx. Initial Lumens (231)	Design Lumens (208)	CRI
PL-H (HIGH) FLUORESCENT LAMPS													
60	PL-H	2G8-1	13368-6	$ ● X	PL-H 60W/830/4P/ALTO	To be phased out Q3 2010	10	3000K	7 1/64	20,000	4000	3440	82
85	PL-H	2G8-1	13370-2	$ ● X	PL-H 85W/830/4P/ALTO	To be phased out Q3 2010	10	3000K	8 25/32	20,000	6000	5160	82
			13371-0	$ ● XX	PL-H 85W/841/4P/ALTO	To be phased out Q4 2011	10	4100K	8 25/32	20,000	6000	5160	82
120	PL-H	2G8-1	13372-8	$ ● X	PL-H 120W/830/4P/ALTO	To be phased out Q3 2010	10	3000K	11 3/16	20,000	9000	7740	82
			13373-6	$ ● XX	PL-H 120W/841/4P/ALTO	To be phased out Q4 2011	10	4100K	11 3/16	20,000	9000	7740	82
PL-Q SQUARE SHAPE FLUORESCENT LAMPS—4 PIN													
38	PL-Q		15941-8		PL-Q 38W/827/4P	CFS38W/GR10q/827	10	2700K	8 1/2	10,000	2850	2395	82

For the most current product information, go to the e-catalog on **www.philips.com**
Compact fluorescent symbols and footnotes located on page 69

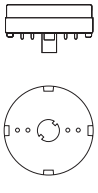
PHILIPS PL-H
Warranty Period: 24 months*

PHILIPS PL-Q
Warranty Period: 12 months*

* Certain limitations and conditions apply.
See Philips for further warranty details.

PL-H
2G8-1

PL-Q



PL-H
2G8-1 Base

COMPACT FLUORESCENT LAMPS

Consumer Lamps

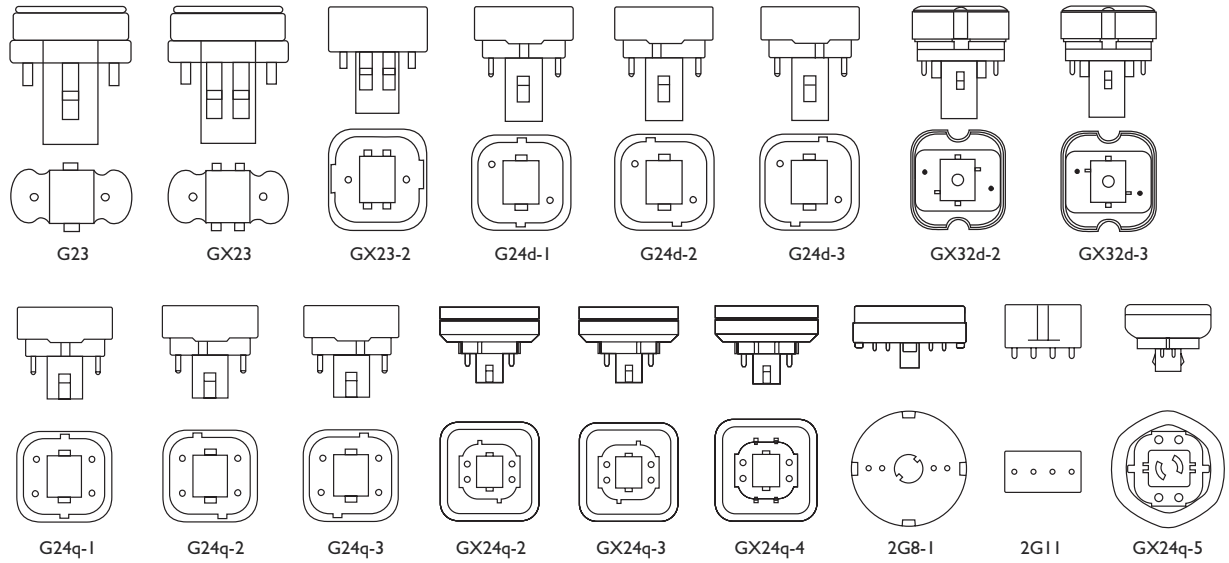
Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Generic Designation	Pkg. Qty.	Desc.	MOL (In.)	Rated Avg. Life (Hrs.) (230)	Approx. Initial Lumens (231)	Design Lumens (208)	CRI
CONSUMER LAMPS													
5	PL-S	G23	23021-9	●	PL-S 5W/827/2P/ALTO		6	2700K	4 5/32	10,000	250	215	80
7	PL-S	G23	23022-7	●	PL-S 7W/827/2P/ALTO		6	2700K	5 11/32	10,000	400	340	80
9	PL-S	G23	23032-6	●	PL-S 9W/827/2P/ALTO		6	2700K	6 13/32	10,000	600	510	80
13	PL-S	GX23	23010-2	●	PL-S 13W/827/2P/ALTO		6	2700K	7 1/64	10,000	800	675	80
			23012-8	●	PL-S 13W/841/2P/ALTO		6	4100K	7 1/64	10,000	800	675	80
	PL-C	GX23-2	23039-1		PL-C 13W/827/2P USA		6	2700K	4 5/8	10,000	860	730	80
			23040-9		PL-C 13W/841/2P USA		6	4100K	4 5/8	10,000	860	730	80
		G24q-1	23035-9		PL-C 13W/827/4P		6	2700K	5 3/16	10,000	780	665	80
			23036-7		PL-C 13W/841/4P		6	4100K	5 3/16	10,000	780	665	80
18	PL-C	G24q-2	23041-7		PL-C 18W/827/4P		6	2700K	6	10,000	1150	990	80
	PL-T	GX24q-2	40981-3	●	PL-T 18W/827/4P/ALTO		6	2700K	4 5/8	12,000	1200	1020	80
26	PL-C	G24q-3	23042-5		PL-C 26W/827/4P		6	2700K	6 13/16	10,000	1710	1470	80
			23044-1		PL-C 26W/835/4P		6	3500K	6 13/16	10,000	1710	1470	80
	PL-T	GX24q-3	23045-8	●	PL-T 26W/827/4P/ALTO		6	2700K	5	12,000	1800	1530	80

For the most current product information, go to the e-catalog on **www.philips.com**
Compact fluorescent symbols and footnotes located on page 69

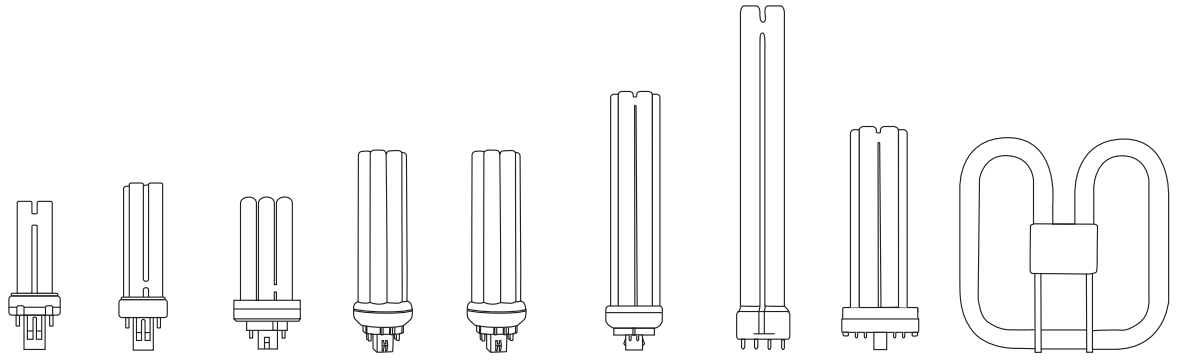
COMPACT FLUORESCENT LAMPS

PL Base Types and Bulb Shapes

PL Base Types (Not Actual Sizes)



PL Bulb Shapes (Not Actual Sizes)



COMPACT FLUORESCENT LAMPS

For the most current product information, go to the e-catalog on www.philips.com

☐ Exclusive to Philips Lighting Company

$ Energy Saving Product

● This lamp is better for the environment because of its reduced mercury content. All Philips ALTO lamps give you end-of-life options, which can simplify and reduce your lamp disposal costs, depending on your state and local regulations

■ ENERGY STAR Bulb: As an ENERGY STAR Partner, Philips has determined that this product meets the ENERGY STAR guidelines for energy efficiency

X Orders will be shipped until inventory is depleted; no longer manufactured

XX Lamps will be phased out by end of 2011

© This Bulb Meets US Federal Minimum Efficiency Standard

† New since last printing

◇ Designed for instant start operation

T– ENERGY STAR testing in progress

§ "Made-To-Order". Product is not kept in inventory. Minimum quantities will apply

+ Product will not be released until Spring 2011

(208) Design lumens are the approximate lamp lumen output at 40% of the lamp's rated average life. This output is based upon measurements obtained during lamp operation on a reference ballast under standard laboratory conditions.

(222) Low temperature starting down to -20°F at nominal line voltage.

(230) Average life under specified test conditions with lamps turned off and restarted no more frequently than once every 3 operating hours.

(231) Approximate initial lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life under standard laboratory conditions.

(242) HTA (High Temperature Application) HTA lamps are designed to achieve optimum light output in higher temperature applications (approx. 140–150°F). HTA lamps are not recommended for dimming.

High Intensity Discharge li

ghting

A new age in outdoor city lighting

Lighting plays an important role in transforming the look of an outdoor space. Whether you are looking to create a unique identity for your city, add a sense of safety and security to an outdoor space, or light a local sports stadium, Philips has a solution for you.

Upgrade to a better white light—Philips high intensity discharge lighting solutions.

Philips MasterColor CDM Elite MW lamps combine high efficacy with excellent quality white light and long, stable lifetime performance. This lamp is designed with a new socket allowing for more flexible use and enhanced optical efficiency.

Philips Energy Advantage CDM with AllStart Technology is a high-efficiency CDM lighting retrofit solution for existing quartz metal halide systems that provides energy savings without compromising light quality.

MasterColor Elite Ceramic Metal Halide Tubular T6 100W Lamp gives a unique combination of unbeatable light quality and consistent performance over lifetime. This is a compact, energy efficient lamp that provides crisp, sparkling white light.

UPGRADE TO ENERGY EFFICIENT LAMPS

CURRENT PRODUCT	PHILIPS UPGRADE PRODUCT	BENEFIT	PAGE
400W Metal Halide (Quartz Probe Start) (450W System)	MasterColor CDM Elite MW 210W (225W System)	> Approximately 50% in total system energy savings* > 20% longer rated average life (24K hours versus 20K hours) > Better CRI and color consistency than standard quartz metal halide	73
175W/250W/440W Metal Halide (Quartz Probe or Pulse Start) Lamp	145W/205W/330W Energy Advantage CDM with AllStart Technology Lamp	> Up to 18% energy savings with a simple lamp change** > Longer rated average life◊ > Excellent CRI and color consistency	78
150W MasterColor Ceramic Metal Halide Tubular T6 Lamp	MasterColor Elite Ceramic Metal Halide Tubular T6 Lamp 100W	> Approximately 33% in total system energy savings† > 25% longer rated average life (15K hours versus 12K hours) > Excellent lumen maintenance with 90 CRI	72

* 450W - 225W = 225W / 450W = 50%

** 145W CDM lamp with AllStart Technology compared to 175W QMH, 205W CDM with AllStart Technology compared to 250W QMH, 330W CDM with AllStart Technology compared to 400W QMH

◊ 10,000 hours longer in vertical position and 12,500 hours longer in horizontal position for 145W and 205W lamps compared to 175W and 250W standard Probe Start QMH lamps, 4000 hours more for the 330W compared to 400W standard Probe Start QMH lamps.

† 100W vs. 150W

HIGH INTENSITY DISCHARGE LAMPS

MasterColor Ceramic Metal Halide Lamps

MINI MASTERCOLOR ELITE CERAMIC METAL HALIDE TUBULAR SINGLE-ENDED GU6.5 LAMPS (391, 392, 396, 397)

Enclosed luminaires only; lifetime color stability within ±200K

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
20	T4	GU6.5	40850-0	★†	CDM20/TM/830 GU6.5 ELITE	C156/E	12	G, Clear, FadeBlock	1⅛	2¼	15,000	1800	1550	85	3000

MINI MASTERCOLOR CERAMIC METAL HALIDE TUBULAR SINGLE-ENDED T3.5 LAMPS (391, 392, 396, 397)

Enclosed luminaires only; lifetime color stability within ±200K

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
22	T3.5	PGJ5	14040-0	★	CDM20/TM/830	C175/E	12	G, Clear, FadeBlock	⅞	1¾	12,000	1650	1155	85	3000
39	T3.5	PGJ5	21139-1	★	CDM35/TM/930	C179/E	12	G, Clear, FadeBlock	⅞	1¾	12,000	3000	2400	90	3000

MASTERCOLOR ELITE CERAMIC METAL HALIDE TUBULAR SINGLE-ENDED T4 LAMPS (391, 392, 396, 397)*

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
20	T4	G8.5	41046-4	★†	CDM Elite 20/TC/830	C156/E	12	G, Clear, FadeBlock	2	3 11/32	15,000	1800	1550	85	3000
39	T4	G8.5	40916-9	★†	CDM Elite 35/TC/930	C130/E	12	G, Clear, FadeBlock	2	3 11/32	15,000	4000	3500	90	3000
			40484-8	★	CDM Elite 35/TC/930	C130/E	12	G, Clear, FadeBlock	2	3 11/32	12,000	3500	3150	90	3000
70	T4	G8.5	40917-7	★†	CDM Elite 70/TC/930	C139/E	12	G, Clear, FadeBlock	2	3 11/32	15,000	7650	6700	90	3000
			14837-9	★	CDM Elite 70/TC/930	C139/E	12	G, Clear, FadeBlock	2	3 11/32	12,000	7300	6500	90	3000

MASTERCOLOR CERAMIC METAL HALIDE TUBULAR SINGLE-ENDED T4 LAMPS (391, 392, 396, 397)

Enclosed luminaires only; lifetime color stability within ±200K

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
39	T4	G8.5	37372-0	★	CDM35/TC/830	C130/E	12	G, Clear, FadeBlock	2	3 11/32	12,000	3300	2300	81	3000
			20883-5	★	CDM35/TC/842	C130/E	12	G, Clear, FadeBlock	2	3 11/32	12,000	3300	2640	85	4200
70	T4	G8.5	37373-8	★	CDM70/TC/830	C139/E	12	G, Clear, FadeBlock	2	3 11/32	12,000	6400	4500	83	3000
			20885-0	★	CDM/70/TC/942	C139/E	12	G, Clear, FadeBlock	2	3 11/32	12,000	5900	3840	90	4200

MASTERCOLOR ELITE CERAMIC METAL HALIDE TUBULAR SINGLE-ENDED T6 LAMPS (391, 392, 396, 397)

Enclosed luminaires only; lifetime color stability within ±200K

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
20	T6	G12	41047-2	★†	CDM Elite 20/T6/830	C156/E	12	G, Clear, FadeBlock	2 7/32	3 5/16	15,000	1800	1550	85	3000
39	T6	G12	40914-4	★†	CDM Elite 35/T6/930	C130/E	12	G, Clear, FadeBlock	2 7/32	3 5/16	15,000	4000	3500	90	3000
			40483-0	★	CDM Elite 35/T6/930	C130/E	12	G, Clear, FadeBlock	2 7/32	3 5/16	12,000	3500	3150	90	3000
70	T6	G12	40915-1	★†	CDM Elite 70/T6/930	C139/E	12	G, Clear, FadeBlock	2 7/32	3 5/16	15,000	7650	6700	90	3000
			14836-1	★	CDM Elite 70/T6/930	C139/E	12	G, Clear, FadeBlock	2 7/32	3 5/16	12,000	7300	6500	90	3000
100	T6	G12	40829-4	★†	CDM Elite 100/T6/930	C191/E	12	G, Clear, FadeBlock	2 7/32	4 11/32	15,000	11,000	9680	90	3000

MASTERCOLOR CERAMIC METAL HALIDE TUBULAR SINGLE-ENDED T6 LAMPS (391, 392, 396, 397)

Enclosed luminaires only; lifetime color stability within ±200K

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
39	T6	G12	22328-9	★	CDM35/T6/830	C130/E	12	G, Clear, FadeBlock	2 7/32	3 5/16	12,000	3300	2600	81	3000
			20886-8	★	CDM35/T6/842	C130/E	12	G, Clear, FadeBlock	2 7/32	3 5/16	12,000	3300	2800	84	4200
70	T6	G12	22337-0	★	CDM70/T6/830	C139/E	12	G, Clear, FadeBlock	2 7/32	3 5/16	12,000	6600	4950	81	3000
			28137-8	★	CDM70/T6/942	C139/E	12	G, Clear, FadeBlock	2 7/32	3 5/16	12,000	6600	4620	92	4200
150	T6	G12	23272-8	★	CDM150/T6/830	C142/E	12	G, Clear, FadeBlock, also ANSI M102	2 7/32	4 11/32	12,000	14,000	9800	85	3000
			37369-6	★	CDM150/T6/942	C142/E	12	G, Clear, FadeBlock, also ANSI M102	2 7/32	4 11/32	12,000	12,700	8900	96	4200

For the most current product information, go to the e-catalog on **www.philips.com**

HID symbols and footnotes located on page 89

* By end of 2011, 40916-9 will replace 40484-8, 40917-7 will replace 14837-9, 40914-4 will replace 40483-0, and 40915-1 will replace 14836-1

HIGH INTENSITY DISCHARGE LAMPS

MasterColor Ceramic Metal Halide Lamps

MASTERCOLOR CDM ELITE MW (MEDIUM WATT) CERAMIC METAL HALIDE TUBULAR SINGLE-ENDED T9 LAMPS (391, 392, 396, 397)

Enclosed luminaires only

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref. or MBCP♦	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
210	T9	PGZ18	22062-4	❑★$	CDM EliteMW 210/T9/930/U/E	C183/E	12	G, Clear, Fadeblock	3½	7½	24,000	24,200	22,100	90	3000
			22063-2	❑★$	CDM EliteMW 210/T9/942/U/E	C183/E	12	G, Clear, Fadeblock	3½	7½	24,000	23,100	20,800	90	4200
315	T9	PGZ18	21831-3	❑★$	CDM EliteMW 315/T9/930/U/E	C182/E	12	G, Clear, Fadeblock	3½	7½	30,000	37,800	34,700	90	3000
			22064-0	❑★$	CDM EliteMW 315/T9/942/U/E	C182/E	12	G, Clear, Fadeblock	3½	7½	30,000	36,200	32,600	90	4200

MASTERCOLOR CDM ELITE MW (MEDIUM WATT) CERAMIC METAL HALIDE TUBULAR SINGLE-ENDED T12 LAMPS (391, 392, 396, 397)

Open or Enclosed luminaires; lifetime color stability within ±200K⌘

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref. or MBCP♦	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
210	T12	PGZX18	23806-3	❑★† $	CDM EliteMW 210/T12/930/U/O	C183/O	12	G, Clear, Fadeblock	3½	7½	20,000	22,100	20,700	90	3000
			23808-9	❑★† $	CDM EliteMW 210/T12/942/U/O	C183/O	12	G, Clear, Fadeblock	3½	7½	20,000	22,100	19,900	90	4200
315	T12	PGZX18	23807-1	❑★† $	CDM EliteMW 315/T12/930/U/O	C182/O	12	G, Clear, Fadeblock	3½	7½	20,000	36,200	32,500	90	3000
			23809-7	❑★† $	CDM EliteMW 315/T12/942/U/O	C182/O	12	G, Clear, Fadeblock	3½	7½	20,000	34,700	31,200	90	4200

MASTERCOLOR CERAMIC METAL HALIDE TUBULAR DOUBLE-ENDED LAMPS (374, 391, 392, 396)

Double-Ended TD6 & TD7 Style; enclosed luminaires only; lifetime color stability within ±200K

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref. or MBCP♦	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
70	TD6	RX7s	23160-5	★	CDM70/TD/830	C139/C85/E	12	G, Clear, FadeBlock, Hor. ± 45°	2¼	4 1⁄16	15,000	6500	5200	82	3000
			37370-4	★	CDM70/TD/942	C139/C85/E	12	G, Clear, FadeBlock, Hor. ± 45°	2¼	4 1⁄16	15,000	6000	4500	92	4200
150	TD7	RX7s	23167-0	★	CDM150/TD/830	C142/C102/ C81E	12	G, Clear, FadeBlock, Hor. ± 45°	2 13⁄32	5 7⁄16	15,000	13,250	11,260	88	3000
			37371-2	★	CDM150/TD/942	C142/C102/ C81E	12	G, Clear, FadeBlock, Hor. ± 45°	2 13⁄32	5 7⁄16	15,000	14,200	12,070	96	4200

MASTERCOLOR INTEGRATED PAR LAMPS (396, 406)

These lamps may be used in open fixtures; do not use in totally enclosed recessed fixtures

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref. or MBCP♦	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
25	PAR38	Med.	14477-4	❑★●	CDM-i25W/830/ PAR38/10/ALTO	MBCP = 26,000	6	G, PAR Spot 10°	—	5½	15,000	1450	1015	87	3000
			14478-2	❑★●	CDM-i25W/830/ PAR38/25/ALTO	MBCP = 5600	6	G, PAR Flood 25°	—	5½	15,000	1450	1015	87	3000
			14479-0	❑★●	CDM-i25W/830/ PAR38/40/ALTO	MBCP = 2100	6	G, PAR W. Flood 40°	—	5½	15,000	1450	1015	87	3000

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HID symbols and footnotes located on page **89**

T9
PGZ18

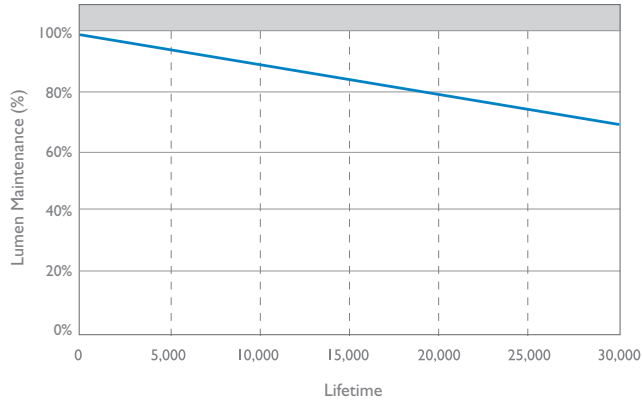
T12
PGZX18

TD
RX7s

PAR38 Integrated
Med.

MAINTENANCE CURVE

Philips MasterColor Elite MW 315W Lamps



HIGH INTENSITY DISCHARGE LAMPS

MasterColor Ceramic Metal Halide Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref. or MBCP♦	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
PROTECTED MASTERCOLOR CERAMIC METAL HALIDE R111 LAMPS (391, 392, 396, 397)															
Open or Enclosed luminaires; lifetime color stability within ±200K															
22	R111	GX8.5	15297-4	☐★	CDM-R111/20W/ 830 10DG	C175/O MBCP=20,000	6	G, R111, N. Spot 10°	—	3¾	9000	750	500	85	3000
			20882-7	☐★	CDM-R111/20W/ 830 24DG	C175/O MBCP=4500	6	G, R111, N. Flood 24°	—	3¾	9000	750	500	85	3000
39	R111	GX8.5	13554-1	☐★	CDM-R111/35W/ 830 10DG	C130/O MBCP=35,000	6	G, R111, Spot 10°	—	3¾	12,000	1100	720	81	3000
			13556-6	☐★	CDM-R111/35W/ 830 24DG	C130/O MBCP=8500	6	G, R111, N. Flood 24°	—	3¾	12,000	1350	880	81	3000
			13921-2	☐★	CDM-R111/35W/ 830 40DG	C130/O MBCP=4000	6	G, R111, Flood 40°	—	3¾	12,000	1350	880	81	3000
70	R111	GX8.5	14754-6	☐★	CDM-R111/70W/ 830 10DG	C139/O MBCP=50,000	6	G, R111, Spot 10°	—	3¾	12,000	2500	1625	84	3000
			14755-3	☐★	CDM-R111/70W/ 830 24DG	C139/O MBCP=15,000	6	G, R111, N. Flood 24°	—	3¾	12,000	2850	1850	84	3000
			14795-8	☐★	CDM-R111/70W/ 830 40DG	C139/O MBCP=9000	6	G, R111, Flood 40°	—	3¾	12,000	2850	1850	84	3000
PROTECTED MASTERCOLOR ELITE CERAMIC METAL HALIDE MR16 LAMPS (391, 392, 396, 397)															
Open or Enclosed luminaires; lifetime color stability within ±200K															
20	MR16	GX10	40918-5	☐★†	CDM-MR16/20W/ 830/10D ELITE	C156/O MBCP=13,500	6	G, MR16 Spot 10°	—	2⅝	15,000	1050	880	85	3000
			40919-3	☐★†	CDM-MR16/20W/ 830/25D ELITE	C156/O MBCP=4500	6	G, MR16 Flood 25°	—	2⅝	15,000	1050	880	85	3000
			40920-1	☐★†	CDM-MR16/20W/ 830/40D ELITE	C156/O MBCP=2100	6	G, MR16 W. Flood 40°	—	2⅝	15,000	1050	880	85	3000
39	MR16	GX10	40921-9	☐★†	CDM-MR16/35W/ 930/10D ELITE	C130/O MBCP=18,000	6	G, MR16 Spot 10°	—	2⅝	12,000	2150	1800	90	3000
			40922-7	☐★†	CDM-MR16/35W/ 930/25D ELITE	C130/O MBCP=8000	6	G, MR16 Flood 25°	—	2⅝	12,000	2150	1800	90	3000
			40923-5	☐★†	CDM-MR16/35W/ 930/40D ELITE	C130/O MBCP=3900	6	G, MR16 W. Flood 40°	—	2⅝	12,000	2150	1800	90	3000
PROTECTED MASTERCOLOR ELITE CERAMIC METAL HALIDE PAR LAMPS (391, 392, 396)															
Open or enclosed luminaires; lifetime color stability within ±200K															
39	PAR30L	Med.	21171-4	☐★●†	CDM35/PAR30L/M/ SP/3K/ALTO ELITE	C130/O MBCP=52,000	6	G, PAR WISO Spot 10°	—	4¾	12,000	2300	1955	90	3000
			21172-2	☐★●†	CDM35/PAR30L/M/ FL/3K/ALTO ELITE	C130/O MBCP=7800	6	G, PAR WISO Flood 30°	—	4¾	12,000	2300	1955	90	3000

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HID symbols and footnotes located on page 89

R111
GX8.5

MR16
GX10

PAR30L
Med.

HIGH INTENSITY DISCHARGE LAMPS

MasterColor Ceramic Metal Halide Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
PROTECTED MASTERCOLOR CERAMIC METAL HALIDE PAR LAMPS (391, 392, 396)															
Open or enclosed luminaires; lifetime color stability within ±200K															
22	PAR20	Med.	21151-6	★ ●	CDM20/PAR20/ M/SP/3K/ALTO	C156/C175/O MBCP=18,000	12	G, PAR WISO Spot 10° (397)	—	3¾	9000	940	600	81	3000
			21152-4	★ ●	CDM20/PAR20/ M/FL/3K/ALTO	C156/C175/O MBCP=2800	12	G, PAR WISO Flood 30° (397)	—	3¾	9000	980	615	81	3000
22	PAR30L	Med.	21149-0	★ ●	CDM20/PAR30L/ M/SP/3K/ALTO	C156/C175/O MBCP=32,000	6	G, PAR WISO Spot 10° (397)	—	4¾	9000	1200	750	81	3000
			21140-9	★ ●	CDM20/PAR30L/ M/FL/3K/ALTO	C156/C175/O MBCP=4625	6	G, PAR WISO Flood 25° (397)	—	4¾	9000	1200	750	81	3000
39	PAR20	Med.	23365-0	★ ●	CDM35/PAR20/ M/SP/3K/ALTO	C130/O MBCP=23,000	12	G, PAR WISO Spot 10° (397)	—	3¾	9000	2000	1300	81	3000
			23364-3	★ ●	CDM35/PAR20/ M/FL/3K/ALTO	C130/O MBCP=5000	12	G, PAR WISO Flood 30° (397)	—	3¾	9000	2000	1300	81	3000
			15140-7	★ ●	CDM35/PAR20/ M/SP/4K/ALTO	C130/O MBCP=21,500	12	G, PAR WISO Spot 10° (397)	—	3¾	6000	1950	1650	92	4000
			15141-5	★ ●	CDM35/PAR20/ M/FL/4K/ALTO	C130/O MBCP=5000	12	G, PAR WISO Flood 30° (397)	—	3¾	6000	1950	1650	92	4000
39	PAR30L	Med.	22329-7	★ ●	CDM35/PAR30L/ M/SP/3K/ALTO	C130/O MBCP=44,000	6	G, PAR WISO Spot 10° (397)	—	4¾	11,000	2200	1430	81	3000
			22330-5	★ ●	CDM35/PAR30L/ M/FL/3K/ALTO	C130/O MBCP=9300	6	G, PAR WISO Flood 25° (397)	—	4¾	11,000	2200	1430	81	3000
70	PAR30L	Med.	23224-9	★ ●	CDM70/PAR30L/ M/SP/3K/ALTO	M143/M98/O MBCP=66,000	6	G, PAR WISO Spot 10°	—	4¾	12,000	5000	3050	83	3000
			23221-5	★ ●	CDM70/PAR30L/ M/FL/3K/ALTO	M143/M98/O MBCP=10,000	6	G, PAR WISO Flood 40°	—	4¾	12,000	5000	3050	83	3000
			15142-3	★ ●	CDM70/PAR30L/ M/SP/4K/ALTO	C139/O MBCP=63,000	6	G, PAR WISO Spot 10°	—	4¾	12,000	4300	3010	94	4000
			15143-1	★ ●	CDM70/PAR30L/ M/FL/4K/ALTO	C139/O MBCP=9000	6	G, PAR WISO Flood 40°	—	4¾	12,000	4300	3010	94	4000
70	PAR38	Med.	22250-5	★ ●	CDM70/PAR38/ SP/3K/ALTO	M143/M98/O MBCP=42,000	12	G, PAR WISO Spot 15° (399)	—	5⅞	12,500	4100	2870	85	3000
			22249-7	★ ●	CDM70/PAR38/ FL/3K/ALTO	M143/M98/O MBCP=16,000	12	G, PAR WISO Flood 25° (399)	—	5⅞	12,500	4100	2870	85	3000
			28872-0	▢ ★ ●	CDM70/PAR38/ SP/4K/ALTO	M143/M98/O MBCP=40,000	12	G, PAR WISO Spot 15° (399)	—	5⅞	12,500	3700	2590	92	4000
			28873-8	▢ ★ ●	CDM70/PAR38/ FL/4K/ALTO	M143/M98/O MBCP=13,000	12	G, PAR WISO Flood 25° (399)	—	5⅞	12,500	3700	2590	92	4000
100	PAR38	Med.	24477-2	★ ●	CDM100/PAR38/ SP/3K/ALTO	M140/M90/O MBCP=55,000	12	G, PAR WISO Spot 15° (399)	—	5⅞	12,500	6200	4340	85	3000
			24476-4	★ ●	CDM100/PAR38/ FL/3K/ALTO	M140/M90/O MBCP=22,000	12	G, PAR WISO Flood 25° (399)	—	5⅞	12,500	6200	4340	85	3000
			28876-1	▢ ★ ●	CDM100/PAR38/ SP/4K/ALTO	M140/M90/O MBCP=50,000	12	G, PAR WISO Spot 15°(399)	—	5⅞	12,500	5700	3990	92	4000
			28878-7	▢ ★ ●	CDM100/PAR38/ FL/4K/ALTO	M140/M90/O MBCP=19,000	12	G, PAR WISO Flood 25° (399)	—	5⅞	12,500	5700	3990	92	4000

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HID symbols and footnotes located on page **89**

PAR20 Med.

PAR30L Med.

PAR38 Med.

HIGH INTENSITY DISCHARGE LAMPS

MasterColor Ceramic Metal Halide Lamps

PROTECTED MASTERCOLOR CERAMIC METAL HALIDE LAMPS (391, 392, 396, 399)

ED17P sleeved arc tube; open or enclosed luminaires; lifetime color stability within ±200K; pulse start

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
50	ED17P	Med.	36891-0	★ ●	MHC50/U/MP/3K/ALTO	M148/M110/O	12	G, Clear, FadeBlock	3⅞	5⅛	10,000	4000	2680	85	3000
			36893-6	★ ●	MHC50/U/MP/4K/ALTO	M148/M110/O	12	G, Clear, FadeBlock	3⅞	5⅛	20,000	3600	2450	92	4000
70	ED17P	Med.	23366-8	★ ●	MHC70/U/MP/3K/ALTO	M143/M98/O	12	G, Clear, FadeBlock	3⅞	5⅛	16,000	5900	4365	85	3000
			23367-6	★ ●	MHC70/C/U/MP/3K/ALTO	M143/M98/O	12	G, Coated, FadeBlock	—	5⅛	16,000	5400	3995	85	3000
			36057-8	★ ●	MHC70/U/MP/4K/ALTO	M143/M98/O	12	G, Clear, FadeBlock	3⅞	5⅛	20,000	5800	4060	92	4000
			36059-4	★ ●	MHC70/C/U/MP/4K/ALTO	M143/M98/O	12	G, Coated, FadeBlock	—	5⅛	20,000	5200	3640	92	4000
100	ED17P	Med.	23368-4	★ ●	MHC100/U/MP/3K/ALTO	M140/M90/O	12	G, Clear, FadeBlock	3⅞	5⅛	16,000	8600	6450	85	3000
			23444-3	★ ●	MHC100/C/U/MP/3K/ALTO	M140/M90/O	12	G, Coated, FadeBlock	—	5⅛	16,000	7900	5925	85	3000
			36060-2	★ ●	MHC100/U/MP/4K/ALTO	M140/M90/O	12	G, Clear, FadeBlock	3⅞	5⅛	20,000	8200	6150	92	4000
			36061-0	★ ●	MHC100/C/U/MP/4K/ALTO	M140/M90/O	12	G, Coated, FadeBlock	—	5⅛	20,000	7500	5625	92	4000
150	ED17P	Med.	13463-5	★ ●	MHC150/U/MP/3K/ALTO	M142/M102/O	12	G, Clear, FadeBlock	3⅞	5⅛	16,000	12,900	9545	85	3000
			13464-3	★ ●	MHC150/C/U/MP/3K/ALTO	M142/M102/O	12	G, Coated, FadeBlock	—	5⅛	16,000	11,900	8805	85	3000
			37724-2	★ ●	MHC150/U/MP/4K/ALTO	M142/M102/O	12	G, Clear, FadeBlock	3⅞	5⅛	20,000	12,000	9000	92	4000
			37726-7	★ ●	MHC150/C/U/MP/4K/ALTO	M142/M102/O	12	G, Coated, FadeBlock	—	5⅛	20,000	11,000	8250	92	4000

MASTERCOLOR CERAMIC METAL HALIDE ED17, ED28 LAMPS (391, 392, 399)

Enclosed luminaires only; lifetime color stability within ±200K; pulse start

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
50	ED17	Med.	36020-6	★ ●	MHC50/U/M/3K/ALTO	M148/M110/E	12	G, Clear (391, 392, 399)	3⅞	5⅛	10,000	4100	2750	85	3000
			36022-2	★ ●	MHC50/C/U/M/3K/ALTO	M148/M110/E	12	G, Coated (391, 392, 399)	—	5⅛	10,000	3800	2545	85	3000
			36023-0	★ ●	MHC50/U/M/4K/ALTO	M148/M110/E	12	G, Clear (391, 392, 399)	3⅞	5⅛	20,000	3750	2550	92	4000
			36024-8	★ ●	MHC50/C/U/M/4K/ALTO	M148/M110/E	12	G, Coated (391, 392, 399)	—	5⅛	20,000	3600	2450	92	4000
70	ED17	Med.	20884-3	★ ●	MHC70/U/M/3K/ALTO	M143/M98/E	12	G, Clear (391, 392, 399)	3⅞	5⅛	16,000	6200	4585	85	3000
			20887-6	★ ●	MHC70/C/U/M/3K/ALTO	M143/M98/E	12	G, Coated (391, 392, 399)	—	5⅛	16,000	5800	4290	85	3000
			28129-5	★ ●	MHC70/U/M/4K/ALTO	M143/M98/E	12	G, Clear (391, 392, 399)	3⅞	5⅛	20,000	5900	4130	92	4000
			28133-7	★ ●	MHC70/C/U/M/4K/ALTO	M143/M98/E	12	G, Coated (391, 392, 399)	—	5⅛	20,000	5500	3850	92	4000
100	ED17	Med.	20888-4	★ ●	MHC100/U/M/3K/ALTO	M140/M90/E	12	G, Clear (391, 392, 399)	3⅞	5⅛	16,000	9500	7125	85	3000
			20889-2	★ ●	MHC100/C/U/M/3K/ALTO	M140/M90/E	12	G, Coated (391, 392, 399)	—	5⅛	16,000	8800	6600	85	3000
			28135-2	★ ●	MHC100/U/M/4K/ALTO	M140/M90/E	12	G, Clear (391, 392, 399)	3⅞	5⅛	20,000	9000	6750	92	4000
			28136-0	★ ●	MHC100/C/U/M/4K/ALTO	M140/M90/E	12	G, Coated (391, 392, 399)	—	5⅛	20,000	8400	6300	92	4000
	ED28	Mog.	36543-7	★	MHC100/U/ED28/HR/4K	M140/M90/E	12	G, Clear (372, 377, 378)	5	8⅝	10,000	8500	6800	92	4100
150	ED17	Med.	13022-9	★ ●	MHC150/U/M/3K/ALTO	M142/M102/E	12	G, Clear (391, 392, 399)	3 1/32	5⅛	16,000	14,000	10,500	85	3000
			13023-7	★ ●	MHC150/C/U/3K/ALTO	M142/M102/E	12	G, Coated (391, 392, 399)	—	5⅛	16,000	12,500	9375	85	3000
			37720-0	★ ●	MHC150/U/M/4K/ALTO	M142/M102/E	12	G, Clear (391, 392, 399)	3⅞	5⅛	20,000	13,000	9750	92	4000
			37721-8	★ ●	MHC150/C/U/M/4K/ALTO	M142/M102/E	12	G, Coated (391, 392, 399)	—	5⅛	20,000	12,000	9000	92	4000

For the most current product information, go to the e-catalog on **www.philips.com**

HID symbols and footnotes located on page 89

ED17P Med. ED17 Med. ED28 Mog.

HIGH INTENSITY DISCHARGE LAMPS

MasterColor Ceramic Metal Halide Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
MASTERCOLOR CERAMIC METAL HALIDE PULSE START ED23.5 LAMPS (391, 392, 399)															
Enclosed luminaires only; lifetime color stability within ±200K; pulse start															
70	ED23½	Mog.	15492-2	❑■★ ●	CDM70/U/PS/4K ALTO	M143/M98/E	12	G, Clear	5	7¾	24,000	5900	4150	85	4000
100	ED23½	Mog.	15493-0	❑■★ ●	CDM100/U/PS/4K ALTO	M140/M90/E	12	G, Clear	5	7¾	24,000	9000	6750	85	4000
150	ED23½	Mog.	15494-8	❑■★ ●	CDM150/U/PS/4K ALTO	M142/M102/E	12	G, Clear	5	7¾	24,000	13,000	9100	85	4000
MASTERCOLOR CERAMIC METAL HALIDE PULSE START PROTECTED LAMPS (374, 391, 392, 399)															
Open or Enclosed luminaires; lifetime color stability within ±200K; (V = Vertical Operation ±15°)⌘															
250	ED28	EX39 Excl.	20583-1	★ ●	CDM250/V/ O/PS/4K/ALTO	M153/O	12	G, Clear, Vertical ±15°	5	8½	24,000	22,500	18,000	90	4200
		Mog.	20584-9	★ ●	CDM250/C/V/ O/PS/4K/ALTO	M153/O	12	G, Coated, Vertical ±15°	—	8½	24,000	21,300	17,000	90	4200
320	ED28	EX39 Excl.	13291-0	★ ●	CDM320/V/ O/PS/4K/ALTO	M170/ M132/O	12	G, Clear, Vertical ±15°	5	8½	24,000	28,800	23,000	90	4200
		Mog.	13256-3	★ ●	CDM320/C/V/ O/PS/4K/ALTO	M170/ M132/O	12	G, Coated, Vertical ±15°	—	8½	24,000	28,000	22,400	90	4200
350	ED37	EX39 Excl.	13257-1	★ ●	CDM350/V/ O/PS/4K/ALTO	M171/ M131/O	6	G, Clear, Vertical ±15°	7	11½	24,000	31,500	25,200	90	4200
		Mog.	13292-8	★ ●	CDM350/C/V/ O/PS/4K/ALTO	M171/ M131/O	6	G, Coated, Vertical ±15°	—	11½	24,000	30,600	24,500	90	4200
400	ED28	EX39 Excl.Mog.	14598-6	★ ●	CDM400/V/O/ PS/4K/ED28/ALTO	M172/ M155/O	12	G, Clear, Vertical ±15°	5	8½	20,000	36,000	28,800	90	4200
	ED37	EX39 Excl.	13290-2	★ ●	CDM400/V/O/ PS/4K/ALTO	M172/ M155/O	6	G, Clear, Vertical ±15°	7	11½	24,000	36,000	28,800	90	4200
		Mog.	13293-6	★ ●	CDM400/C/V/O/ PS/4K/ALTO	M172/ M155/O	6	G, Coated, Vertical ±15°	—	11½	24,000	35,000	27,900	90	4200

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HID symbols and footnotes located on page **89**

HIGH INTENSITY DISCHARGE LAMPS

MasterColor Ceramic Metal Halide, CosmoWhite, Energy Advantage Ceramic Metal Halide Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
MASTERCOLOR CERAMIC METAL HALIDE HPS-RETRO WHITE (374, 399, 403, 404)															
ED18, open or enclosed luminaires; lifetime color stability within ±200K HPS-Retro White Lamps Rated for Vertical Operation Only (V = Vertical Operation ± 15°)⌘															
250	ED18	Mog.	13093-0	★ ●	CDM250S50/V/O/4K/ALTO	M168/O/S50	12	G, Clear, Vertical ± 15°	5¾	9¾	20,000	20,500	16,400	85	4000
400	ED18	Mog.	13094-8	★ ●	CDM400S51/V/O/4K/ALTO	M169/O/S51	12	G, Clear, Vertical ± 15°	5¾	9¾	20,000	34,800	27,840	85	4000
HPS-Retro White Lamps Rated for Horizontal Operation Only (HOR = Horizontal Operation ± 15°)															
250	ED18	Mog.	14649-8	★ ●	CDM250S50/ HOR/4K/ALTO	M168/O/S50	12	G, Clear, Horizontal ± 15°	5¾	9¾	20,000	20,500	16,400	85	4000
400	ED18	Mog.	14650-6	★ ●	CDM400S51/ HOR/4K/ALTO	M169/O/S51	12	G, Clear, Horizontal± 15° (403)	5¾	9¾	15,000	34,800	29,600	85	4000
COSMOWHITE (391, 392, 396, 397)															
Enclosed luminaires only; lifetime color stability within ±200K (HOR = Horizontal Operation ± 15°)															
60	T6	PGZ12	15731-3	☐ ★ $	CPO-T WHITE 60W/728	C187/E	12	G, Clear, FadeBlock, Horiz. ±15°	2½	5½	30,000*	6900	6200	70	2800
90	T6	PGZ12	40604-1	☐ ★ $ †	CPO-T WHITE 90W/728	C188/E	12	G, Clear, FadeBlock, Horiz. ±15°	2⅝	5⅝	30,000*	10,450	8800	70	2800
140	T6	PGZ12	15732-1	☐ ★ $	CPO-T WHITE 140W/728	C189/E	12	G, Clear, FadeBlock, Horiz. ±15°	2⅝	5⅝	30,000*	16,500	14,020	70	2800
ENERGY ADVANTAGE CDM WITH ALLSTART TECHNOLOGY (391, 392, 396, 397)⌘															
145	ED28	EX39 Excl.Mog.	41107-4	☐ ★† $	CDM145/U/O/4K/ ED28 EA AllStart	C192/O**	12	G, Clear, Fadeblock	5	8⅜	20,000	13,500	10,125	87	4000
			41319-5	☐ ★† $	CDM145/C/U/O/4K/ ED28 EA AllStart	C192/O**	12	G, Coated, Fadeblock	—	8⅜	20,000	12,500	9375	87	4000
205	ED28	EX39 Excl.Mog.	23256-1	☐ ★† $	CDM205/U/O/4K EA AllStart	C184/O***	12	G, Clear, Fadeblock	5	8⅜	20,000	19,500	15,600	85	4100
			23692-7	☐ ★† $	CDM205/C/U/O/4K EA AllStart	C184/O***	12	G, Coated, Fadeblock	—	8⅜	20,000	18,000	14,400	85	4100
330	ED28	EX39 Excl.Mog.	41105-8	☐ ★† $	CDM330/U/O/4K/ EA AllStart	C185/O****	12	G, Clear, Fadeblock	5	8⅜	20,000	33,000	26,400	90	4000
	ED37	EX39 Excl.Mog.	23259-5	☐ ★† $	CDM330/U/O/4K EA AllStart	C185/O****	6	G, Clear, Fadeblock	7	11½	24,000	33,000	26,400	90	4000
			23693-5	☐ ★† $	CDM330/C/U/O/4K EA AllStart	C185/O****	6	G, Coated, Fadeblock	—	11½	24,000	31,000	24,800	90	4000

* 30,000 horizontal application but 20,000 vertical application

** 145W compatible with M57 probe start ballast. Also compatible with M152 pulse start ballasts

*** 205W compatible with M58 probe start ballast. Also compatible with M138 and M153 pulse start ballasts

**** 330W compatible with M59 probe start ballast. Also compatible with M128, M135, M155, and M172 pulse start ballasts

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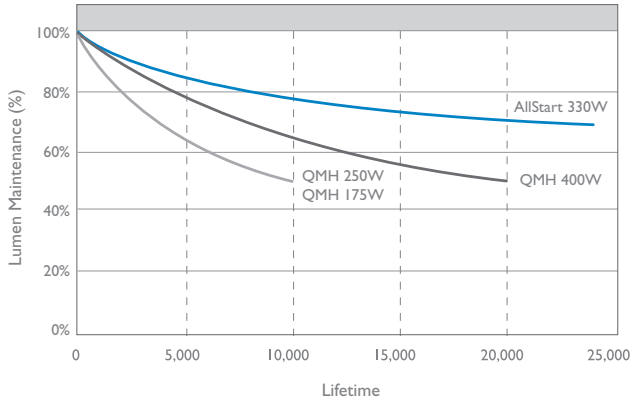
HID symbols and footnotes located on page 89

ED18 Mog. | CosmoWhite T6 PGZ12 | ED28 EX-39 | ED37 EX-39

MAINTENANCE CURVE

Philips Energy Advantage CDM 330W Lamps with AllStart Technology



HIGH INTENSITY DISCHARGE LAMPS

Metal Halide Lamps

PROTECTED PULSE START METAL HALIDE "O" RATED LAMPS (372, 374, 391)

Open or enclosed luminaires; pulse start metal halide is designed for operation on only specified ANSI compatible ballasts with metal halide pulse ignitors⌘

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
175	ED28	EX39 Excl.Mog.	20755-5	■★	MP175/BU/PS	M152/ M137/O	12	G, Clear, Base Up ± 15° Pulse Start	5	8⅝	14,000	16,000	11,200	62	3500
250	ED28	EX39 Excl.Mog.	20756-3	■★	MP250/BU/PS	M153/ M138/O	12	G, Clear, Base Up ± 15° Pulse Start	5	8⅝	14,000	23,000	16,100	62	3800
320	ED37	EX39. Excl.Mog.	13039-3	■★	MP320/BU/PS	M154/ M132/O	6	G, Clear, Base Up ± 15° Pulse Start	7	11½	20,000	29,500	20,650	65	3800
			13040-1	■★	MP320/C/BU/PS	M154/ M132/O	6	G, Coated Base Up ± 15° Pulse Start	—	11½	20,000	27,200	19,040	65	3700
350	ED37	EX39 Excl.Mog.	39101-1	■★	MP350/BU/PS	M131/O	6	G, Clear, Base Up ± 15° Pulse Start	7	11½	20,000	34,000	23,800	64	4000
			39102-9	■★	MP350/C/BU/PS	M131/O	6	G, Coated Base Up ± 15° Pulse Start	—	11½	20,000	31,000	21,700	67	3700
400	ED37	EX39 Excl.Mog.	13334-8	■★	MP400/BU/PS	M155/M128/ M135/O	6	G, Clear, Base Up ± 15° Pulse Start	7	11½	20,000	40,000	28,000	65	3800
			13335-5	■★	MP400/C/BU/PS	M155/M128/ M135/O	6	G, Coated Base Up ± 15° Pulse Start	—	11½	20,000	36,000	23,400	68	3600
750	BT37	EX39 Excl.Mog.	20757-1	■★	MP750/BU/PS	M149/O	6	G, Clear, Base Up ± 15° Pulse Start	7	11½	12,000	70,000	49,000	70	3800

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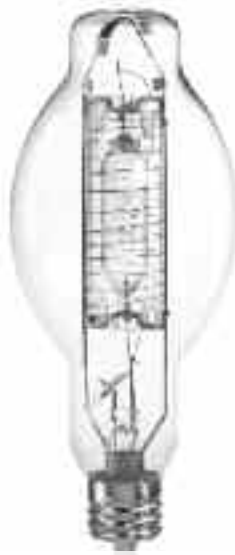
HID symbols and footnotes located on page **89**

ED28
EX-39

ED37
EX-39



BT37
EX-39

HIGH INTENSITY DISCHARGE LAMPS

Metal Halide Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
PULSE START METAL HALIDE LAMPS (372, 374, 391)															
Enclosed luminaires only unless otherwise noted; base up operation ± 15° unless otherwise noted.															
Pulse start metal halide is designed for operation on only specified ANSI compatible ballasts with metal halide pulse ignitors.															
175	ED17	Med.	23249-6	■★	MS175/M/BU/PS	M152/M137/E	12	G, Base Up ±15°, Pulse Start	3⅞	5⅞	15,000	17,500	12,250	68	4000
	ED28	Mog.	27662-6	■★	MS175/BU/PS	M152/M137/E	12	G, Base Up ±15°, Pulse Start	5	8⅜	15,000	16,000	11,200	62	3700
			14913-8	▯■★	MS175/C/BU/PS	M152/M137/E	12	G, Coated, Base Up±15°, Pulse Start	—	8⅜	15,000	16,000	11,200	62	3900
			20751-4	▯■★	MS175/HOR/PS	M152/M137/E	12	G, Clear, Horizontal, Pulse Start	5	8⅜	11,500	12,800	8960	62	4200
200	ED28	Mog.	23250-4		MS200/BU/PS	M136/E	12	G, Base Up ±15°, Pulse Start	5	8⅜	15,000	21,000	14,700	68	4000
	T15	Mog.	23251-2		MS200/HOR/T15/PS	M136/E	12	G, Clear, Horizontal, Pulse Start	5	8⅜	15,000	19,000	13,300	68	4000
250	ED28	Mog.	27661-8	■★	MS250/BU/PS	M153/M138/E	12	G, Base Up ± 15°, Pulse Start	5	8⅜	15,000	23,750	16,625	65	4300
			23280-1	▯■★	MS250/U/PS	M153/M138/E	12	G, Clear, Universal, Pulse Start (385)	5	8⅜	12,000	22,000	15,400	62	3800
320	ED28	Mog.	38381-0	■★	MS320/U/PS	M154/M132/E	12	G, Clear, Pulse Start (385)	5	8⅜	20,000	30,000	21,000	62	4100
			38386-9	■★	MS320/C/U/PS	M154/M132/E	12	G, Coated, Pulse Start (385)	—	8⅜	20,000	29,000	20,300	70	3600
350	ED37	Mog.	38387-7	■★	MS350/BU/PS	M131/E	6	G, Clear, Base Up ± 15°, Pulse Start	7	11½	20,000	36,000	25,200	62	4000
			20753-0	▯■★	MS350/HOR/PS	M131/E	6	G, Clear, Horizontal, Pulse Start	7	11½	15,000	33,000	23,100	62	4000
400	ED28	Mog.	23252-0		MS400/BU/ED28/PS	M155/M128/ M135/E	12	G, Base Up ±15°, Pulse Start	5	8⅜	20,000	44,000	30,800	68	4000
			23253-8		MS400/HOR/ED28/PS	M155/M128/ M135/E	12	G, Clear, Horizontal, Pulse Start	5	8⅜	20,000	40,000	28,000	68	4000
	ED37	Mog.	27816-8	❩■★X	MS400/BU/PS	M155/M128/ M135/S	6	G, Clear, Base Up ± 15°, Pulse Start	7	11½	20,000	42,600	29,820	62	4100
			23283-5	■★	MS400/U/PS	M155/M135/ M128/E	6	G, Clear, Universal, Pulse Start (385)	7	11½	15,000	40,000	28,000	62	3800
750	BT37	Mog.	13540-0	■★	MS750/BU/BT37/PS	M149/E	6	G, Clear, Base Up ± 15°, Pulse Start	7	11½	16,000	82,000	61,500	65	4000
			20754-8	▯■★	MS750/HOR/BT37/PS	M149/E	6	G, Clear, Horizontal, Pulse Start	7	11½	12,000	68,000	47,600	65	4000
1000	BT37	Mog.	36019-8	■★	MS1000/BU/BT37/PS	M141/E	6	G, Clear, Base Up ± 15°, Pulse Start	7	11½	15,000	120,000	96,000	65	3700

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HID symbols and footnotes located on page **89**

HIGH INTENSITY DISCHARGE LAMPS

Metal Halide Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
PROTECTED METAL HALIDE "O" RATED LAMPS (372, 374, 377)⌘															
175	ED28	EX39	28119-6	■★	MP175/BU	M57/O	12	G, Clear, Base Up ±15°	5	8⅝	10,000	15,000	12,000	65	3800
		Excl.Mog.													
250	ED28	EX39	28124-6	■★	MP250/BU	M58/O	12	G, Clear, Base Up ±15°	5	8⅝	10,000	22,000	16,500	62	3800
		Excl.Mog.													
360	ED37	EX39	13067-4	■★ $	MP360BU/EW	M165/M59/O	6	G, Clear, Base Up ±15°	7	11½	20,000	34,200	23,940	65	4000
		Excl.Mog.	13068-2	■★ $	MP360/C/BU/EW	M165/M59/O	6	G, Coated, Base Up ±15°	—	11½	20,000	31,700	20,605	68	360
400	ED37	EX39	13332-2	■★	MP400/BU	M59/O	6	G, Clear, Base Up ±15°	7	11½	20,000	38,000	26,600	65	4000
		Excl.Mog.	13333-0	■★	MP400/C/BU	M59/O	6	G, Coated, Base Up ±15°	—	11½	20,000	34,500	22,425	67	3700
1000	BT56	EX39	28118-8	■★	MP1000/BU	M47/O	6	G, Clear, Base Up ±15°	9½	15⅝	12,000	107,000	75,000	65	3900
		Excl.Mog.													
SAFETY LIFEGUARD METAL HALIDE LAMPS (372, 377, 385, 393)															
Enclosed luminaires only unless otherwise noted															
400	ED37	Mog.	34598-3	★ X	MHT400/U	M59PJ-T400/U/S	6	G, S, Clear	7	11½	20,000	34,200	27,400	65	4000
			34601-5	★ X	MHT400/C/U	M59PK-T400/U/S	6	G, S, Coated	—	11½	20,000	32,500	25,000	65	3700
DOUBLE-ENDED METAL HALIDE LAMPS (374, 387, 393)															
Enclosed luminaires (387)															
1800	TD Special	PSFc20-6/ SFc20-6	31360-1		MHD1800W	—	4	Sports Ltg. Spot Horizontal ± 15°	4¼	14	4500	150,000	—	92	5600

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HIGH INTENSITY DISCHARGE LAMPS

Metal Halide Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
METAL HALIDE LAMPS (372)															
Enclosed luminaires only unless otherwise noted															
150	BD17	Med.	35462-1	★	MH150/U/M	M107/E	12	G, Clear (385, 400)	3⅞	5⅞	10,000	12,500	8500	65	3700
			35463-9	★	MH150/C/U/M	M107/E	12	G, Coated (385, 400)	—	5⅞	10,000	12,000	7900	65	3400
175	BD17	Med.	31358-5	★	MH175/U/M	M57/E	12	G, Clear (377, 385, 393)	3⅞	5⅞	10,000	13,500	9100	65	4000
			31359-3	★	MH175/C/U/M	M57/E	12	G, Coated (377, 385)	—	5⅞	10,000	13,000	8380	65	3700
	ED28	Mog.	28733-4	★	MH175/U	M57/E	12	G, S, Clear (377, 385, 393)	5	8⅜	10,000	13,500	8775	65	4000
			28728-4	★	MH175/C/U	M57/E	12	G, S, Coated (374, 377, 385)	—	8⅜	10,000	13,000	8200	70	3700
250	ED28	Mog.	27484-5	★	MH250/U	M58/E	12	G, S, Clear (377, 385, 393)	5	8⅜	10,000	20,500	13,500	65	4000
			29169-0	★	MH250/C/U	M58/E	12	G, S, Coated (377, 385, 393)	—	8⅜	10,000	19,475	12,500	70	3700
360	ED37	Mog.	39065-8	)$★	MS360/BU/EW	M165/M59	6	High Efficacy, Base Up ± 15°, Clear (374, 377)	7	11½	20,000	36,000	24,500	60	4300
			39066-6	)$★	MS360/C/BU/EW	M165/M59	6	High Efficacy, Base Up ± 15°, Coated (374, 377)	—	11½	20,000	34,200	22,600	65	4000
400	ED28	Mog.	27862-2	★	MH400/U/ED28	M59/E	12	G, Clear (377, 385, 393)	5	8⅜	20,000	36,000	24,000	63	4000
			24673-6	★	MS400/BU/ED28	M59/E	12	G, Clear, Base Up ± 15° (374, 377)	5	8⅜	20,000	40,000	26,000	62	4100
	ED37	Mog.	27449-8	)★†	MH400/U	M59/E	6	G, S, Clear (377, 385, 393)	7	11½	20,000	39,000	25,350	65	3900
			41520-8	)★†	MH400/C/U	M59/E	6	G, S, Coated (377, 385, 393)	—	11½	20,000	38,000	22,800	65	3600
			34415-0	)★X	MH400/U	M59/S	6	G, S, Clear (377, 385, 393)	7	11½	20,000	36,000	24,000	65	4000
			34416-8	)★X	MH400/C/U	M59/S	6	G, S, Coated (377, 385, 393)	—	11½	20,000	34,200	22,300	70	3700
			30170-5	)★X	MS400/BU	M59/S	6	High Efficacy, Base Up ± 15° Clear (374, 377)	7	11½	20,000	40,000	26,500	65	4000
			30172-1	)★X	MS400/C/BU	M59/S	6	High Efficacy, Base Up ± 15° Coated (374, 377)	—	11½	20,000	39,200	27,440	65	3900

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HIGH INTENSITY DISCHARGE LAMPS

Metal Halide Lamps, High Pressure Sodium Lamps

METAL HALIDE LAMPS CONTINUED (372)

Enclosed luminaires only unless otherwise noted

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
1000	BT37	Mog.	32150-5	★	MH1000/U/BT37	M47/E	6	G, Clear (359, 377, 385, 393)	7	11½	10,000	110,000	71,500	65	3700
	BT56	Mog.	41522-4	)★†	MH1000/U	M47/E	6	G, S, Clear (377, 385, 393)	9½	15⅜	12,000	114,000	79,800	65	3900
			41523-2	)★†	MH1000/C/U	M47/E	6	G, S, Coated (377, 385, 393)	—	15⅜,	12,000	110,000	77,000	65	3500
			29826-5	)★✕	MH1000/U	M47/S	6	G, S, Clear (377, 385, 393)	9½	15⅜	12,000	110,000	71,000	65	3700
			29827-3	)★✕	MH1000/C/U	M47/S	6	G, S, Coated (377, 385, 393)	—	15⅜	12,000	104,500	65,800	70	3400
			25093-6	)★✕	MS1000/BU	M47/S	6	High Efficacy, Base Up ± 15° Clear (374, 377)	9½	15⅜	10,000	120,000	78,000	65	3700
			25137-1	)★✕	MS1000/C/BU	M47/S	6	High Efficacy, Base Up ± 15° Coated (374, 377)	—	15⅜	10,000	115,000	72,500	70	3400
1500	BT56	Mog.	13162-3	★	MH1500/U	M48/E	6	G, S, Clear (359, 374, 375, 377, 402)	9½	15⅜	3000	155,000	124,000	60	3700

MINI WHITE SON HIGH PRESSURE SODIUM LAMPS (360, 363, 376)

Incandescent color quality, GX12-1 base compact high pressure sodium lamps to be operated on Advance eVision IWSN100CLF and IWSN100CBLS electronic ballast only

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
100	T6	GX12-1	13425-4	▢★	SDW-TG 100W/T6/825	S167	12	G	2⅛	4 11/32	10,000	4900	4165	83	2550

WHITE SON HIGH PRESSURE SODIUM LAMPS (360, 373, 376, 394)

Incandescent color quality

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
50	T10	PG12	30229-9	▢★	SDW-T 50W/LV	S104	12	G	3 3/16	5⅞	10,000	2300	2070	83	2500
100	T10	PG12	30228-1	▢★	SDW-T 100W/LV	S105	12	G	3 3/16	5⅞	10,000	5000	4250	83	2550
	BD17	Med.	31346-0	■▢★	SDW-100W/LV/D	S105	12	G	—	5 7/16	10,000	4900	4170	85	2700

CERAMALUX COMFORT HIGH PRESSURE SODIUM LAMPS (360, 373, 376)

Improved color rendering

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
70	BD17	Med.	30617-5	★	C70S62/C/M	S62	12	G	3 3/16	5 7/16	15,000	4400	3960	60	2200
100	BD17	Med.	30635-7	★	C100S54/C/M	S54	12	G	3 3/16	5 7/16	15,000	7800	7020	60	2200
150	BD17	Med.	30647-2	★	C150S55/C/M	S55	12	G	3 3/16	5 7/16	15,000	12,000	10,800	60	2200
400	ED18	Mog.	30652-2	★	C400S51/C	S51	12	G	5¾	9¾	15,000	37,500	33,750	65	2200

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HIGH INTENSITY DISCHARGE LAMPS

High Pressure Sodium Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
CERAMALUX HIGH PRESSURE SODIUM LAMPS (360, 373)															
Featuring ALTO Lamp Technology															
35	BD17	Med.	40979-7	★†	C35S76/M	S76	12	G (376)	3 7/16	5 1/16	24,000+	2250	2025	21	2100
50	BD17	Med.	40980-5	★†	C50S68/M	S68	12	G (376)	3 7/16	5 1/16	24,000+	4000	3600	21	2100
	ED23½	Mog.	36867-0	★ ●	C50S68/ALTO	S68	12	G, S (376)	5	7 3/4	24,000+	4000	3600	21	2100
70	BD17	Med.	33192-6	★	C70S62/M	S62	12	G (376)	3 7/16	5 1/16	24,000+	6300	5850	21	2100
			33214-8	★	C70S62/D/M	S62	12	G (376)	—	5 1/16	24,000+	5860	5270	21	2100
	ED23½	Mog.	36869-6	★ ●	C70S62/ALTO	S62	12	G, S (376)	5	7 3/4	24,000+	6500	5670	21	2100
100	BD17	Med.	34446-5	★	C100S54/M	S54S	12	G (376)	3½	5 1/16	24,000+	9500	8550	21	2100
			34448-1	★	C100S54/D/M	S54S	12	G (376)	—	5 1/16	24,000+	8800	7920	21	2100
	ED23½	Mog.	36872-0	★ ●	C100S54/ALTO	S54	12	G, S (376)	5	7 3/4	24,000+	9400	8460	21	2100
			33227-0	★ ●	C100S54/D/ALTO	S54	12	G, S (376)	—	7 3/4	24,000+	8610	7750	21	2100
150	BD17	Med.	30347-9	★	C150S55/M	S55	12	G (376)	3½	5 1/16	24,000+	16,000	14,400	21	2100
			30348-7	★	C150S55/D/M	S55	12	G (376)	—	5 1/16	24,000+	15,000	13,500	21	2100
	ED23½	Mog.	36874-6	★ ●	C150S55/ALTO	S55	12	G, S (370, 376)	5	7 3/4	24,000+	15,800	14,220	21	2100
	ED28	Mog.	36876-1	★ ●	C150S56/ALTO	S56	12	G, S (370, 376)	5	8 15/16	24,000+	15,000	13,950	21	2100
200	ED18	Mog.	36877-9	★ ●	C200S66/ALTO	S66MN-200	12	G, S (376)	5 3/4	9 3/4	24,000+	21,400	19,260	21	2100
250	ED18	Mog.	36879-5	★ ●	C250S50/ALTO	S50	12	G, S (376)	5 3/4	9 3/4	24,000+	27,000	24,300	21	2100
360	ED18	Mog.	32292-5	$★ X	C360S51/EW	S51	12	EW, G, S (376)	5 3/4	9 3/4	24,000+	46,000	41,450	21	2100
400	ED18	Mog.	36881-1	★ ●	C400S51/ALTO	S51	12	G, S (376)	5 3/4	9 3/4	24,000+	50,000	45,000	21	2100
600	T14	Mog.	23982-2	■★	C600S106	S106	12	G (376)	6 7/8	11 1/8	24,000+	90,000	81,000	21	2100
1000	ED25	Mog.	36883-7	■★ ●	C1000S52/ALTO	S52XB-1000	6	G, S (359, 362, 376)	8 3/4	15 1/16	24,000	140,000	126,000	21	2100
	ED37	Mog.	32386-5	■★	C1000S52/ED37	S52	6	G, S (376)	7	11½	24,000	125,000	112,000	21	2100

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HIGH INTENSITY DISCHARGE LAMPS

High Pressure Sodium Lamps

CERAMALUX HIGH PRESSURE SODIUM NON-CYCLING LAMPS (360, 373, 376)

Featuring ALTO Lamp Technology

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
50	ED23½	Mog.	20224-2	★ ●	C50S68/ALTO NC HPS	S68	20	G, S	5	7¾	30,000	4000	3600	21	2100
70	ED23½	Mog.	14739-7	★ ●	C70S62/ALTO NC HPS	S62	12	G, S	5	7¾	30,000	6300	5670	21	2100
100	ED23½	Mog.	14740-5	★ ●	C100S54/ALTO NC HPS	S54	12	G, S	5	7¾	30,000	10,000	9000	21	2100
150	ED23½	Mog.	14741-3	★ ●	C150S55/ALTO NC HPS	S55	12	G, S	5	7¾	30,000	16,000	14,400	21	2100
200	ED18	Mog.	15725-5	★ ●	C200S66/ALTO NC HPS	S66	12	G, S	5¾	9¾	30,000	22,000	19,800	21	2100
250	ED18	Mog.	14742-1	★ ●	C250S50/ALTO NC HPS	S50	12	G, S	5¾	9¾	30,000	28,500	25,650	21	2100
400	ED18	Mog.	14743-9	★ ●	C400S51/ALTO NC HPS	S51	12	G, S	5¾	9¾	30,000	50,000	45,000	21	2100
1000	ED25	Mog.	15726-3	★ ●	C1000S52/ALTO NC HPS	S52	6	G, S	8¾	15⅛	30,000	130,000	117,000	21	2100

CERAMALUX HIGH PRESSURE SODIUM INSTANT RESTRIKE LAMPS (360, 373, 376)

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
50	ED23½	Mog.	35467-0	■★	C50S68/2	S68	12	G, S	5	7¾	24,000+	3800	3450	21	2100
70	ED23½	Mog.	26541-3	■★	C70S62/2	S62	12	G, S	5	7¾	24,000+	5600	5050	21	2100
100	ED23½	Mog.	26560-3	■★	C100S54/2	S54	12	G, S	5	7¾	24,000+	9100	8190	21	2100
150	ED23½	Mog.	26561-1	■★	C150S55/2	S55	12	G, S	5	7¾	24,000+	15,600	14,000	21	2100
250	ED18	Mog.	37717-6	■★	C250S50/2	S50	12	G, S	5¾	9¾	24,000+	27,500	24,750	21	2100
400	ED18	Mog.	37688-9	■★	C400S51/2	S51	12	G, S	5¾	9¾	24,000+	49,000	44,000	21	2100
1000	ED25	Mog.	20412-3	■★	C1000S52/2	S52	6	G, S	8¾	15⅛	24,000+	140,000	126,000	21	2100

HIGH PRESSURE SODIUM—HORTICULTURE LAMPS (360, 373)

- Enhanced spectrum Xtreme grow lamp
- Offers 22% more micromols**
- Excellent lumen maintenance at 97% (405)
- Features ALTO Lamp Technology, environmentally responsible lamps

Note: Best practice suggests grow lamps to be replaced at maximum 40% of their rated average life in order to maintain same level of growth-light on plants over time

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref. or MBCP♦	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
430	ED18	Mog.	31710-7	★	SON AGRO 430W	S145/S51	12	AGRO (389, 396)	5¾	9¾	16,000	54,000	48,600	670	2100
1000	ED25	Mog.	14064-0	■★	C1000S52/AGROLITE XT	S52	6	AGRO (359, 362, 376)	8¾	15⅛	15,000	146,000	135,780	1850	2100

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** The micromol value expresses the amount of light particles (photons) between 400 and 700 nm that are sent out by a light source (=Photosynthetic Photon Flux) per second. The amount that the plant absorbs determines the rate of photosynthesis and as a result the rate of plant growth. Therefore, the micromol value is also called "growth-light." In general, an increase of 22% in growth-light means an increase of 22% in plant growth

HIGH INTENSITY DISCHARGE LAMPS

Low Pressure Sodium Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
LOW PRESSURE SODIUM LAMPS—SOX															
18	T17	D.C. Bay	23404-7		SOX-E18	L69	12	Clear Base Up ± 110°	5½	8½	18,000	1800	1530	—	1700
35	T17	D.C. Bay	32781-7		SOX35	L70	12	Clear Base Up ± 110°	—	12 3/16	18,000	4550	3870	—	1700
55	T17	D.C. Bay	32151-3		SOX55	L71	12	Clear Base Up ± 110°	9½	16¾	18,000	7800	6630	—	1700
90	T21	D.C. Bay	32152-1		SOX90	L72	12	Clear Horizontal ± 20°	—	20¾	18,000	14,300	12,155	—	1700
135	T21	D.C. Bay	32153-9		SOX135	L73	12	Clear Horizontal ± 20°	—	30½	18,000	22,600	19,210	—	1700
180	T21	D.C. Bay	15116-7		SOX180	L74	6	Clear Horizontal ± 20°	—	44⅛	18,000	32,000	22,400	—	1700

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HIGH INTENSITY DISCHARGE LAMPS

Mercury Vapor Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
MERCURY VAPOR LAMPS															
50	BD17	Med.	35664-2	★	H46DL-40-50/DX	H46	12	G, (379, 384)	—	5⅛	24,000+	1580	1260	45	3200
75	BD17	Med.	27524-8	★	H43AV-75/DX	H43	12	G, S, (379)	—	5⅞	24,000+	2800	2250	45	3200
100	A23	Med.	35658-4	★	H38MP-100/DX	H38	24	G, (379)	—	5⅞	24,000+	4300	3700	45	3700
	ED23½	Mog.	33713-9	★	H38JA-100/DX	H38	12	G, S (379)	—	7½	24,000+	4400	3400	45	3700
175	ED28	Mog.	31965-7	★	H39KB-175	H39	12	G, S, B (355)	5	8⅝	24,000+	7900	7400	20	6800
	ED28	Mog.	24805-4	★	H39KC-175/DX	H39	12	G, S (379)	—	8⅝	24,000+	7900	7600	45	3700
250	ED28	Mog.	31985-5	★	H37KB-250	H37	12	G, S, B (355)	5	8⅝	24,000+	12,100	10,500	20	6700
	ED28	Mog.	24814-6	★	H37KC-250/DX	H37	12	G, S (379)	—	8⅝	24,000+	13,000	10,700	45	3700
400	ED37	Mog.	24842-7	★	H33GL-400/DX	H33	6	G, S (379)	—	11½	24,000+	23,000	19,100	45	3700
1000	BT56	Mog.	39707-5	★	H36GW-1000/DX	H36	6	G, S (359, 379)	—	15⅜	24,000+	59,000	54,000	45	3600

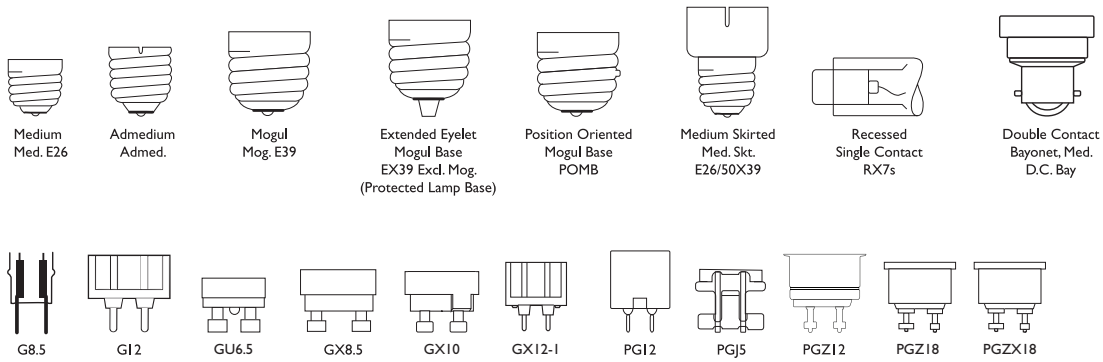
Descriptive symbols for Mercury Vapor Lamps:
B—Black Light
FF—Frosted Face
G—General Lighting
RF—Reflector Flood
S—Street Lighting
VW—Very Wide

For the most current product information, go to the e-catalog on **www.philips.com**
HID symbols and footnotes located on page **89**

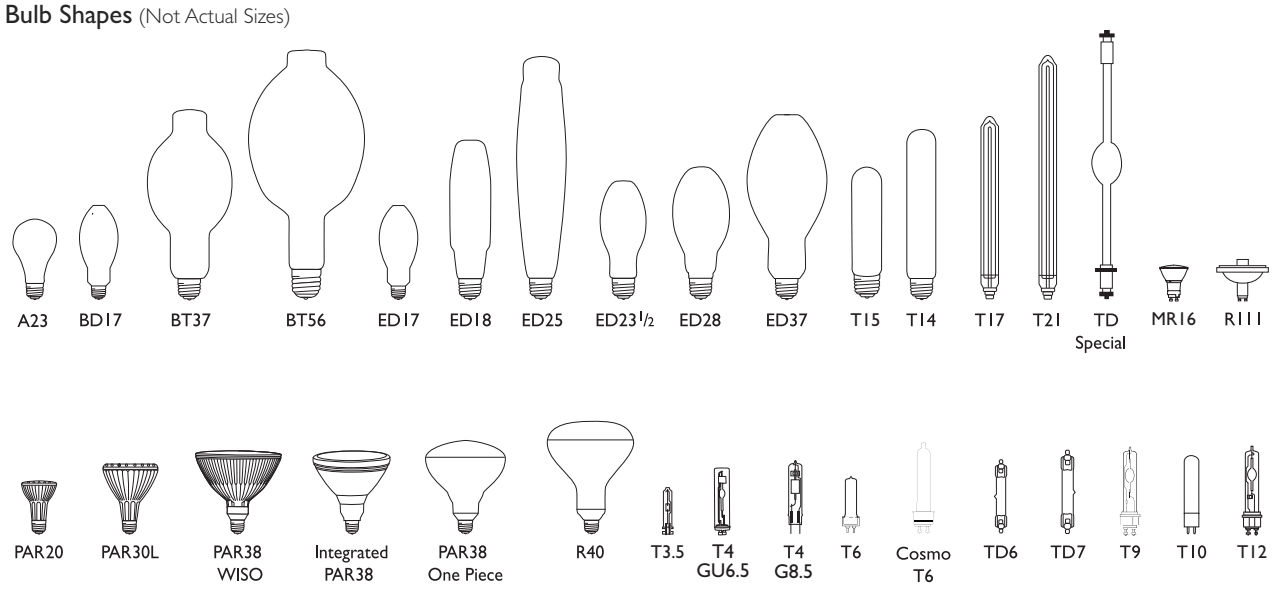
HIGH INTENSITY DISCHARGE LAMPS

Base Types and Bulb Shapes

Base Types (Not Actual Sizes)



Bulb Shapes (Not Actual Sizes)



HIGH INTENSITY DISCHARGE LAMPS

For the most current product information, go to the e-catalog on www.philips.com

□ Exclusive to Philips Lighting Company

■ Nickel plated brass base

$ Energy Saving Product

▲ Aluminum base

★ Heat resisting glass bulb

♦ Maximum Beam Candlepower

❩ Can be used in open luminaire, only if operated vertically ± 15°

● This lamp is better for the environment because of its reduced mercury content. All Philips ALTO lamps give you end-of-life options which can simplify and reduce your lamp disposal costs depending on your state and local regulations

X Orders will be shipped until inventory is depleted; no longer manufactured

Ⓔ This Bulb Meets US Federal Minimum Efficiency Standard

† New since last printing

◇ Designed for instant start operation.

‡ Quantity shown is minimum shipping container—refer to Net Price Schedule for number of lamps to qualify as a standard case

G = General Lighting

S = Street Lighting

▼ PAR38 (one piece)

⌘ Satisfies the 2005 NEC for use in open luminaries. The 2005 NEC states that luminaires that use a metal halide lamp shall be provided with either a containment barrier that encloses the lamp (historically referred to as an enclosed luminaire) or shall be provided with a means, typically a special lampholder, that will only accept ANSI Type-O metal halide lamp. (Exception—this requirement will not apply to open luminaires with thick-glass parabolic reflector PAR lamps.) For more information regarding use of Type-O, S, and E metal halide systems, please refer to the NEMA white paper on this subject that is freely available at www.nema.org

(351) Rated average life is the life obtained, on average, from large representative groups of lamps in laboratory tests under controlled conditions at 10 or more operating hours per start. It is based on survival of at least 50% of the lamps, and allows for individual lamps or groups of lamps to vary considerably from the average. For HPS lamps with a rated average life of 24,000 hours, life is based on survival of 67% of the lamps.

(352) Measured at 100 hrs. life. Approximate lumen values listed are for vertical operation of the lamp.

(353) Approximate lumen output at 40% of lamp rated average life.

(355) Separate filter is required for black light application.

(359) Electrically insulated support for bulb may be required, especially in horizontal and nearly horizontal operating positions.

(360) Follow fixture manufacturer' recommendations regarding proximity of ballast to bulb.

(362) This lamp should be shielded from moisture to prevent breakage.

(364) Rated average life: vertical ± 30° 20,000 hours; other positions, 15,000 hours.

(372) Color characteristics may vary somewhat from one lamp type to another. Time should be allowed for the lamp to stabilize in color when it is turned on for the first time or if for any reason its operating position is changed. This may require several hours' operation, with more than one start. Lamp color and output may change temporarily if the lamp is subjected to excess vibration or shock. Lamp color characteristics may change after long accumulate operating time.

(373) Fixtures should be designed so that sockets and wiring withstand starting pulse up to 5000 volts for 1000 watts and WHITE SON types and 4000 volts for other sizes.

(374) Performance may not be satisfactory unless operated within specified operating positions.

(375) If specified operating position is base up or base down to horizontal, this permits 15° beyond the horizontal.

(376) For use in fixtures which do not redirect a substantial portion of the energy toward the arc tube; otherwise very early failure is anticipated.

(377) Requires a ballast specified or approved for Philips metal halide lamps, or one that is designed to operate all popular brands of metal halide lamps. 1000W types will operate from H36 conventional lag type ballast for Mercury Vapor lamps at ambient temperatures of 50°F or higher. 1000W types must not be operated at 1500W.

(378) Requires auxiliary 10KV pulse ignitor for instant restrike.

(379) It is a characteristic of phosphor-coated vapor lamps to require a few hundred hours of operation to gradually reach normal characteristic color. New lamps may have a slight pink appearance during this initial operating period.

(384) For 40W operation use H45 ballast.

Ordering Code	Approx. Lumens Initial	Mean
H46DL-40-50/DX	1140	910

(385) Rated average life: vertical ±15°. Other positions 75% of vertical life.

(387) This lamp can cause serious skin burns and eye inflammation from shortwave ultraviolet radiation and must be fully enclosed in a fixture with an appropriate UV filter. To protect against possible risk of property damage or personal injury due to an arc tube rupture, the fixture enclosure must be capable of withstanding particles of glass having temperatures up to 1000°C. **DO NOT USE THIS LAMP IF THE UV FILTER IS MISSING.**

(389) Operates at rated output on ANSI 430W S145 SON AGRO ballasts.

(391) Requires a ballast specified or approved for Philips Metal Halide lamp or one designed to the indicated ANSI Standard. A pulse ignitor is required. Sockets and wiring must withstand starting pulse.

(392) Supply volts must be ±5% of rated ballast line volts for reactor type and ±10% for CWA or electronic ballasts.

(393) Vertical lumens. Horizontal lumens 6%–10% lower.

(394) To maintain color consistency within 250K, group relamp at 7500 hours.

(396) UV filtered design (FadeBlock).

(397) Operate only on thermally protected ballasts.

(399) This product utilizes ALTO Lamp Technology. ALTO products pass the US EPA's Toxicity Characteristic Leaching Procedure (TCLP) for non-hazardous waste status.

(400) Energy-saver retrofit for 175W, M107 ballast.

(401) MasterColor Metal Halide Lamps are not recommended for use on dimmers and are not warranted if used on dimmer systems.

(402) Primarily used for sports-lighting applications. Life, initial and mean lumens are for horizontal operation. In vertical position and at 10 or more hours per start, lamp life is extended to 6000 hours, initial lumens are 170,000 and mean lumens are 136,000.

(403) Not to be used in compact Wall Pack or Flood Light type fixtures. Maximum temperature limit of outer bulb may be exceeded in these applications and can lead to premature lamp failure.

(404) Luminaire photometric distributions may be impacted due to difference in arc length vs. HPS lamp arc length.

(405) 97% Lumen maintenance at 10% of rated average life. 93% lumen maintenance at 40% of rated average life.

(406) CAUTION: Beware of inadvertent circuit overload in new construction. Because of power factor of 0.57 in the ballast of the lamp, the lamp uses 0.36 amps.

(407) Operating Position is Universal, unless otherwise indicated. See Warnings, Cautions and Operating Instructions for further information.

HIGH INTENSITY DISCHARGE LAMPS

Warnings, Cautions and Operating Instructions

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for MasterColor Integrated PAR 38 Lamps

Warnings, Cautions and Operating Instructions

"WARNING: These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available."This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21CFR 1040.30 Canada:SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000°C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

This lamp contains an arc tube with a filling gas containing less than 41 nCi of Kr-85 and is distributed by Philips Lighting Company, a division of Philips Electronics North America Corporation, Somerset, New Jersey, 08873.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
2. At high lighting levels or when illuminating light-sensitive materials the use of an extra UV filter is recommended.
3. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
4. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock, and color appearance may vary between individual lamps.
5. Lamps may require up to 10 minutes to re-light if there is a power interruption.
6. Do not operate with an additional ballast, since a ballast is integrated in the lamp itself.
7. **Do not use in totally enclosed recessed fixtures.**
8. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
9. Lamp should not be used with dimmers.
10. Protect lamp, lamp socket and wiring against moisture, corrosive atmosphere and excessive heat. Lamp should be used in dry locations only.

These lamps may be used in open fixtures.

Hg—LAMP CONTAINS MERCURY
Manage in Accord with Disposal Laws
See: www.lamprecycle.org or 1-800-555-0050

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for MasterColor (Elite) Ceramic Metal Halide Lamps: Single Ended CDM-T G12, CDM-TC G8.5, CDM-Tm GU6.5 and CDM-Tm PGJ5 (Universal); Double-Ended CDM-TD RX7 (Horizontal ± 45°, Enclosed Fixtures Only)

Warnings, Cautions and Operating Instructions

"WARNING: These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available." This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21CFR 1040.30 Canada:SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000° C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

Certain lamps that will retain all the glass particles should inner arc-tube rupture occur are commercially available from Philips Lighting Company.

This lamp contains an arc tube with a filling gas containing Kr-85 and is distributed by Philips Lighting Company, a division of Philips Electronics North America Corporation, Somerset, New Jersey, 08873.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
2. Use only in fully enclosed fixtures capable of withstanding particles of glass having temperatures up to 1000° C. Lens/diffuser material must be heat resistant. Consult fixture manufacturer regarding the suitability of the fixture for this lamp.
3. Do not operate a fixture with a missing or broken lens/diffuser. At high lighting levels or when illuminating light-sensitive materials the use of an extra UV filter is recommended.
4. Operate lamp only within specified limits of operating position.
5. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards. When inserting a new CDM-Tm lamp, twist the lamp 45° clock-wise in the holder to ensure proper electrical and mechanical connection.
6. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
   C. Operate CDM-T (G12 base) lamps only on thermally protected ballasts.
   D. Operate CDM-TC lamps (G8.5 base) and CDM-Tm (PGJ5 and GU6.5 base) only on thermally protected electronic ballasts.
   E. Operate CDM-T (G12 base) 39W/842 and CDM-T (G12 base) Elite only on thermally protected electronic ballasts.
7. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
8. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
9. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
10. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock and color appearance may vary between individual lamps.
11. Lamps may require 4–8 minutes (10–15 minutes for CDM-Tm) to re-light if there is a power interruption.
12. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.

HIGH INTENSITY DISCHARGE LAMPS

Warnings, Cautions and Operating Instructions

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for MasterColor CDM Elite Medium Watt Ceramic Metal Halide Tubular Single-Ended T9 Lamps

Warnings, Cautions and Operating Instructions

R **"WARNING:** These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available." This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA: 21CFR 1040.30 Canada:SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000°C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

Certain lamps that will retain all the glass particles should inner arc-tube rupture occur are commercially available from Philips Lighting Company.

WARNING: If a lamp is burned in a horizontal position, a rotation of the lamp over more than 90° around the lamp axis in the sockets can increase the risk that the arc tube will rupture. This holds during operation as well as after a cooling period after switching off the lamp. If one wishes to rotate the lamp over more than 90° around the lamp axis, one should do so in steps of less than 90° and let the lamp burn for at least 2 hours between each step.

This lamp contains an arc tube with a filling gas containing less than 20 nCi of Kr-85 and is distributed by Philips Lighting Company, a division of Philips Electronics North American Corporation.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
2. **Use only in an enclosed fixture capable of withstanding particles of glass having temperatures up to 1000°C.**
3. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
4. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
   C. All Pulse Start lamps require a socket rated to withstand a 4,000 volt pulse
5. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
6. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
7. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
8. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock, and color appearance may vary between individual lamps.
9. Lamps may require 10 minutes to re-light if there is a power interruption.
10. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
11. Use this lamp only in fixtures that contain a Pulse Start metal halide ballast and are specifically designed for use with Pulse Start metal halide lamps.

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Energy Advantage Ceramic Metal Halide lamps with AllStart Technology

Warnings, Cautions and Operating Instructions

R **"WARNING:** These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available." This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21CFR 1040.30 Canada:SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000°C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

These lamps are designed to retain all the glass particles should an arc tube rupture occur. The following operating instructions are recommended to minimize these occurrences.

This lamp contains an arc tube with a filling gas containing less than 65 nCi Kr-85 and is distributed by Philips Lighting Company, a division of Philips Electronics North America Corporation, Somerset, New Jersey, 08873.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
2. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
3. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
   C. These lamps can be used in both Probe Start and Pulse Start Magnetic ballast. Reference the technical data sheet for proper ANSI ballast code compatibility. Do not operate lamps on electronic ballasts.
   D. All Pulse Start mogul based lamps require a socket rated to withstand a 4000 volt pulse.
4. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage
5. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
6. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
7. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock, and color appearance may vary between individual lamps.
8. Lamps may require 10 to 15 minutes to re-light if there is a power interruption. Less than 10 minutes on pulse start ballasts.
9. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.

HIGH INTENSITY DISCHARGE LAMPS

Warnings, Cautions and Operating Instructions

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Protected MasterColor Ceramic Metal Halide PAR, Protected MasterColor Ceramic Metal Halide PAR Elite, MasterColor Ceramic Metal Halide MR16 Elite, and CDM-R111 Lamps (Open or Enclosed Fixtures)

Warnings, Cautions and Operating Instructions

R **"WARNING:** These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available." This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21CFR 1040.30 Canada: SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000° C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE. These lamps are designed to retain all the glass particles should an arc tube rupture occur. The following operating instructions are recommended to minimize these occurrences.**

This lamp contains an arc tube with a filling gas containing Kr-85 and is distributed by Philips Lighting Company, a division of Philips Electronics North America Corporation, Somerset, New Jersey, 08873.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
2. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
3. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
   C. Operate PAR20 3000K and PAR30L 3000K lamps only on thermally protected ballast.
   D. Operate 20W PAR20 3000K and 20W PAR30L 3000K lamps only on thermally protected electronic ballast.
   E. Operate PAR20 4000K and PAR30L 4000K lamps only on thermally protected electronic ballast.
   F. Operate CDM-R111 lamps only on thermally protected electronic ballast.
   G. Operate CDM PAR30L Elite and CDM MR16 Elite lamps only on thermally protected electronic ballast.
4. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
5. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
6. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
7. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock, and color appearance may vary between individual lamps.
8. Lamps may require up to 10 minutes (4–8 minutes for CDM-R111) to re-light if there is a power interruption.
9. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
10. For proper installation and removal, lamp should be handled by the sides of the reflector and not by the aluminum front anti-glare cap.

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for MasterColor Ceramic Metal Halide Lamps ED17 (Enclosed Fixtures); Protected MasterColor Ceramic Metal Halide Lamps ED17P (Open or Enclosed Fixtures)

Warnings, Cautions and Operating Instructions

R **"WARNING:** These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available." This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21CFR 1040.30 Canada:SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000° C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

Use ED17 lamps in enclosed luminaires ONLY that are capable of withstanding particles of glass having temperatures up to 1000°C. ED17P types are designed to retain all the glass particles should an arc tube rupture occur.

This lamp contains an arc tube with a filling gas containing Kr-85 and is distributed by Philips Lighting Company, a division of Philips Electronics North America Corporation, Somerset, New Jersey, 08873.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
2. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
3. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
4. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
5. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
6. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
7. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock and color appearance may vary between individual lamps.
8. Lamps may require 4 to 8 minutes to re-light if there is a power interruption.
9. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.

HIGH INTENSITY DISCHARGE LAMPS

Warnings, Cautions and Operating Instructions

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Philips MasterColor Ceramic Metal Halide Pulse Start ED 23½ Lamps featuring ALTO Lamp Technology (For Enclosed Fixtures Only)

Warnings, Cautions and Operating Instructions

R **"WARNING:** These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available."This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21CFR 1040.30 Canada:SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb could cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000° C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

This lamp contains an arc tube with a filling gas containing not less than 25nCi of Kr-85 and is distributed by Philips Lighting Company, a division of Philips Electronics North America Corporation, Somerset, New Jersey, 08873.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
2. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
3. **Use only in an enclosed fixture capable of withstanding particles of glass having temperatures up to 1000°C.**
4. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
   C. All Pulse Start lamps require a socket rated to withstand a 4000 Volt pulse.
5. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
6. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
7. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
8. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock, and color appearance may vary between individual lamps.
9. Lamps may require 10 to 15 minutes to re-light if there is a power interruption.
10. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
11. Use this lamp only in a fixture that contains a Pulse Start metal halide ballast and is specifically designed for use with Pulse Start metal halide lamps.

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Protected MasterColor Pulse Start Ceramic Metal Halide Lamps ED37 and ED28 (Vertical Operation ± 15°, Open or Enclosed Fixtures)

Warnings, Cautions and Operating Instructions

R **"WARNING:** These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available."This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21CFR 1040.30 Canada:SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000° C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

These lamps are designed to retain all the glass particles should an arc tube rupture occur. The following operating instructions are recommended to minimize these occurrences.

This lamp contains an arc tube with a filling gas containing Kr-85 and is distributed by Philips Lighting Company, a division of Philips Electronics North America Corporation, Somerset, New Jersey, 08873.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
2. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
3. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
   C. All Pulse Start mogul based lamps require a socket rated to withstand a 4000 volt pulse.
4. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage
5. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
6. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
7. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock, and color appearance may vary between individual lamps.
8. Lamps may require 10 to 20 minutes to re-light if there is a power interruption.
9. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
10. Use this lamp only in fixtures that contain Pulse Start metal halide ballasts and are specifically designed for use with Pulse Start metal halide lamps. Do not operate lamps on electronic ballasts.

HIGH INTENSITY DISCHARGE LAMPS

Warnings, Cautions and Operating Instructions

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS CosmoWhite Lamp (For Enclosed Fixtures Only)

Warnings, Cautions and Operating Instructions

R **"WARNING:** These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available." This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21CFR 1040.30 Canada:SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb could cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000°C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

This lamp contains an arc tube with a filling gas containing less than 6.6nCi of Kr-85 and is distributed by Philips Lighting Company, a division of Philips Electronics North America Corporation, Somerset, New Jersey, 08873.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
2. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
3. **Use only in an enclosed fixture capable of withstanding particles of glass having temperatures up to 1000°C.**
4. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturer's electrical data.
   C. All CosmoWhite lamps require a PGZ12 socket rated to withstand a 5000 Volt pulse.
5. Periodically inspect the outer envelope. Replace any broken lamps and lamps that show scratches, cracks or damage immediately.
6. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
7. Protect lamp, lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
8. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock, and color appearance may vary between individual lamps.
9. Lamps may require 10 to 15 minutes to re-light if there is a power interruption.
10. Take care in handling and disposing of lamps. Don't break the outer bulb of an end of life lamp. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
11. Use this lamp only in a fixture that contains an Advance CosmoWhite electronic low frequency square wave ballast.
12. When inserting a new lamp, hold it by the quartz bulb, not by the metal lamp base; twist the lamp 45° clockwise in the lamp holder to ensure proper electrical and mechanical connection.
13. Store the lamps in cool and dry conditions to prevent the oxidation of the exterior metal parts.
14. Consult your Philips Lighting or Advance representative if you have any questions.

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Protected MasterColor Ceramic Metal Halide HPS-Retro White Lamps ED18 (Vertical Operation ± 15°, Open or Enclosed Fixtures or Horizontal Operation ±15°)

Warnings, Cautions and Operating Instructions

R **"WARNING:** These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available." This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21CFR 1040.30 Canada:SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000° C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

These lamps are designed to retain all the glass particles should an arc tube rupture occur. The following operating instructions are recommended to minimize these occurrences.

This lamp contains an arc tube with a filling gas containing Kr-85 and is distributed by Philips Lighting Company, a division of Philips Electronics North America Corporation, Somerset, New Jersey, 08873.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
2. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
3. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
4. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
5. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
6. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
7. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock and color appearance may vary between individual lamps.
8. Lamps may require 10 to 20 minutes to re-light if there is a power interruption.
9. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.

HIGH INTENSITY DISCHARGE LAMPS

Warnings, Cautions and Operating Instructions

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Pulse Start Metal Halide Lamps (Base Up Operation ±15° Unless Otherwise Noted; Enclosed Fixtures Only Unless Otherwise Noted)

Warnings, Cautions and Operating Instructions

R **"WARNING:** These lamps can cause serious skin burn and eye inflammation from shortwave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available." This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21CFR 1040.30 Canada: SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous shortwave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000° C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

Certain lamps that will retain all the glass particles should inner arc-tube rupture occur are commercially available from Philips Lighting Company.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. Turn off lamps at least once a week for at least 15 minutes in systems which are operating on a continuous basis (24 hours/day-7days/week). FAILURE TO TURN OFF LAMPS FOR THE MINIMUM RECOMMENDED TIME MAY INCREASE THE POSSIBILITY OF AN INNER ARC-TUBE RUPTURE.
2. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
3. **Use only in an enclosed fixture capable of withstanding particles of glass having temperatures up to 1000°C, unless otherwise noted.**
4. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
5. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
   C. All Pulse Start mogul based lamps require a socket rated to withstand a 4000 volt pulse.
6. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
7. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
8. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
9. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock and color appearance may vary between individual lamps.
10. Lamps may require 2 to 4 minutes to relight if there is a power interruption.
11. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
12. Use this lamp only in fixtures that contain a Pulse Start metal halide ballast and are specifically designed for use with Pulse Start metal halide lamps.

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Protected Pulse Start Metal Halide Lamps (Base Up Operation ±15° Unless Noted; Open or Enclosed Fixtures)

Warnings, Cautions and Operating Instructions

R **"WARNING:** These lamps can cause serious skin burn and eye inflammation from shortwave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available." This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21CFR 1040.30 Canada:SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous shortwave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000° C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

These lamps are designed to retain all the glass particles should an arc tube rupture occur. The following operating instructions are recommended to minimize these occurrences.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
2. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
3. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
   C. All Pulse Start mogul based lamps require a socket rated to withstand a 4000 volt pulse.
4. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
5. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
6. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
7. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock and color appearance may vary between individual lamps.
8. Lamps may require 2 to 4 minutes to re-light if there is a power interruption.
9. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
10. Use this lamp only in fixtures that contain a Pulse Start metal halide ballast and are specifically designed for use with Pulse Start metal halide lamps.

HIGH INTENSITY DISCHARGE LAMPS

Warnings, Cautions and Operating Instructions

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Protected Metal Halide Lamps (Base Up Operation ± 15° Unless Noted; Open or Enclosed Fixtures)

Warnings, Cautions and Operating Instructions

R **"WARNING:** These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available." This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA: 21CFR 1040.30 Canada: SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000°C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

These lamps are designed to retain all the glass particles should an arc tube rupture occur.

The following operating instructions are recommended to minimize these occurrences.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
2. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
3. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
4. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
5. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
6. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
7. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock and color appearance may vary between individual lamps.
8. Lamps may require 10 to 20 minutes to re-light if there is a power interruption.
9. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
10. Do not use this lamp:
    A. In a fixture that contains a Pulse Start metal halide ballast.
    B. In a fixture that is specifically designed for use with Pulse Start metal halide lamps. **Operation of these lamps on Pulse Start Metal Halide systems may increase the chance of an outer bulb rupture and pieces of extremely hot glass might be discharged into the surrounding environment.**

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Standard Metal Halide Lamps (Enclosed Fixtures Only Unless Otherwise Noted)

Warnings, Cautions and Operating Instructions

R **"WARNING:** These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available." This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA: 21CFR 1040.30 Canada:SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000° C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

Certain lamps that will retain all the glass particles should inner arc-tube rupture occur are commercially available from Philips Lighting Company.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. Turn off lamps at least once a week for at least 15 minutes in systems which are operating on a continuous basis (24 hours/day-7days/week). FAILURE TO TURN OFF LAMPS FOR THE MINIMUM RECOMMENDED TIME MAY INCREASE THE POSSIBILITY OF AN INNER ARC-TUBE RUPTURE.
2. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
3. **Use only in an enclosed fixture capable of withstanding particles of glass having temperatures up to 1000°C.**
4. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
5. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
6. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
7. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
8. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
9. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock and color appearance may vary between individual lamps.
10. Lamps may require 10 to 20 minutes to re-light if there is a power interruption.
11. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
12. Do not use this lamp:
    A. In a fixture that contains a Pulse Start metal halide ballast.
    B. In a fixture that is specifically designed for use with Pulse Start metal halide lamps. **Operation of these lamps on Pulse Start Metal Halide systems may increase the chance of an outer bulb rupture and pieces of extremely hot glass might be discharged into the surrounding environment.**

HIGH INTENSITY DISCHARGE LAMPS

Warnings, Cautions and Operating Instructions

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Standard Metal Halide Lamps (Open or Enclosed Fixtures; S Rated Lamps; Open Fixture Use Restricted to Base Up ± 15° [Base Down, BD ± 15°])

Warnings, Cautions and Operating Instructions

R**"WARNING:** These lamps can cause serious skin burn and eye inflammation from short wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available."This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21 CFR 1040.30 Canada: SOR/DORS/80-381)

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000° C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

Certain lamps that will retain all the glass particles should inner arc-tube rupture occur are commercially available from Philips Lighting Company.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. Turn off lamps at least once a week for at least 15 minutes in systems which are operating on a continuous basis (24 hours/day-7days/week). FAILURE TO TURN OFF LAMPS FOR THE MINIMUM RECOMMENDED TIME MAY INCREASE THE POSSIBILITY OF AN INNER ARC-TUBE RUPTURE.
2. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
3. **If operated other than vertical ± 15°, use only in an enclosed fixture capable of withstanding particles of glass having temperatures up to 1000°C.**
4. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
5. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
6. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
7. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
8. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
9. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock and color appearance may vary between individual lamps.
10. Lamps may require 10 to 20 minutes to re-light if there is a power interruption.
11. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
12. Do not use this lamp:
    A. In a fixture that contains a Pulse Start metal halide ballast.
    B. In a fixture that is specifically designed for use with Pulse Start metal halide lamps. **Operation of these lamps on Pulse Start Metal Halide systems may increase the chance of an outer bulb rupture and pieces of extremely hot glass might be discharged into the surrounding environment.**

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Safety Lifeguard Metal Halide Lamps (Open or Enclosed Fixtures)

Warnings, Cautions and Operating Instructions

T**"WARNING:** This lamp should self extinguish within 15 minutes after outer envelope is broken or punctured. If such damage occurs, turn off and remove lamp to avoid possible injury from hazardous shortwave ultraviolet radiation."This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21CFR 1040.30 Canada:SOR/DORS/80-381)

This lamp should not be used on dimmers and is not warranted if used on dimming systems.

If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.

WARNING: The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000°C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

Certain lamps that will retain all the glass particles should inner arc-tube rupture occur are commercially available from Philips Lighting Company.

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED.

LAMP OPERATING INSTRUCTIONS:

1. Turn off lamps at least once a week for at least 15 minutes in systems which are operating on a continuous basis (24 hours/day-7days/week). FAILURE TO TURN OFF LAMPS FOR THE MINIMUM RECOMMENDED TIME MAY INCREASE THE POSSIBILITY OF AN INNER ARC-TUBE RUPTURE.
2. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
3. **If operated other than vertical ± 15°, use only in an enclosed fixture capable of withstanding particles of glass having temperatures up to 1000° C.**
4. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
5. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
6. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
7. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
8. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
9. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock and color appearance may vary between individual lamps.
10. Lamps may require 10 to 20 minutes to re-light if there is a power interruption.
11. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
12. Do not use this lamp:
    A. In a fixture that contains a Pulse Start metal halide ballast.
    B. In a fixture that is specifically designed for use with Pulse Start metal halide lamps. **Operation of these lamps on Pulse Start Metal Halide systems may increase the chance of an outer bulb rupture and pieces of extremely hot glass might be discharged into the surrounding environment.**

HIGH INTENSITY DISCHARGE LAMPS

Warnings, Cautions and Operating Instructions

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Mini WhiteSON and WhiteSON High Pressure Sodium Lamps

Warnings, Cautions and Operating Instructions

"WARNING: These lamps must be operated in fixtures designed for use with High Pressure Sodium lamps. The fixture wattage rating must match the wattage indicated on the outer glass bulb. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the glass is struck.

CAUTION: Operating the lamp improperly may result in **PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

1. If the outer glass bulb is broken, shut off power immediately and remove the lamp after it has cooled.
2. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   - A. Operate lamp only within specified limits of operation.
   - B. For total supply load refer to ballast manufacturers electrical data.
   - C. Operate Mini WhiteSON lamps only on approved electronic ballasts.
3. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
4. Replace the lamp if the outer glass bulb has been scratched, cracked or damaged in any way.
5. If a lamp bulb support is used, be sure to insulate the support electrically so as to avoid possible decomposition of the bulb glass.
6. Do not use this lamp in a fixture which redirects a substantial portion of the energy toward the arc tube and its immediate vicinity, as this may lead to very early lamp failure.
7. Take care in handling and disposing of lamps. If arc tube is broken, avoid skin contact with any of the contents or fragments.
8. The arc tube of this lamp contains sodium and mercury. Dispose of in accordance with federal, state and local requirements.
9. It is possible that the light color will suddenly change. After some time the lamp will regain its old color.
10. In order to prevent damage to the ballast, the lamp should be replaced as quickly as possible at the end of its lifetime (lamp color turns yellow, lamp flickers and fails to start).
11. For Mini WhiteSON lamps, after 10,000 hours of burning the light color will become yellow. The lamp must then be replaced.
12. For WhiteSON lamps, after 7,500 hours of burning the light color will become yellow. The lamp must then be replaced.

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Ceramalux High Pressure Sodium Lamps

Warnings, Cautions and Operating Instructions

WARNING: These lamps must be operated in fixtures designed for use with High Pressure Sodium lamps. The fixture wattage rating must match the wattage indicated on the outer glass bulb. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the glass is struck.

CAUTION: Operating the lamp improperly may result in **PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

1. If the outer glass bulb is broken, shut off power immediately and remove the lamp after it has cooled.
2. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   - A. Operate lamp only within specified limits of operation.
   - B. For total supply load refer to ballast manufacturers electrical data.
3. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
4. Replace the lamp if the outer glass bulb has been scratched, cracked or damaged in any way.
5. If a lamp bulb support is used, be sure to insulate the support electrically so as to avoid possible decomposition of the bulb glass.
6. Do not use this lamp in a fixture which redirects a substantial portion of the energy toward the arc tube and its immediate vicinity, as this may lead to very early lamp failure.
7. Take care in handling and disposing of lamps. If arc tube is broken, avoid skin contact with any of the contents or fragments.
8. The arc tube of this lamp contains sodium and mercury. Dispose of in accordance with federal, state and local requirements.

HIGH INTENSITY DISCHARGE LAMPS
Warnings, Cautions and Operating Instructions

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Low Pressure Sodium Lamps—SOX

Warnings, Cautions and Operating Instructions

WARNING: These lamps must be operated in fixtures designed for use with Low Pressure Sodium lamps. The fixture wattage rating must match the wattage indicated on the outer glass bulb. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter.

CAUTION: Operating the lamp improperly and not following operating instructions may result in **PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

1. If the outer glass bulb is broken, shut off power immediately and remove the lamp after it has cooled.
2. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
   A. Operate lamp only within specified limits of operation.
   B. For total supply load refer to ballast manufacturers electrical data.
3. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
4. Replace the lamp if the outer glass bulb has been scratched, cracked or damaged in any way.
5. Take care in handling and disposing of lamps. If arc tube is broken, avoid skin contact with any of the contents or fragments.
6. The arc tube of this lamp contains sodium. Sodium can generate a high degree of heat when exposed to water. Dispose of in accordance with federal, state and local requirements.

WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for Mercury Vapor Lamps

Warnings, Cautions and Operating Instructions

"WARNING: This lamp can cause serious skin burn and eye inflammation from shortwave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available." This lamp complies with FDA radiation performance standard 21 CFR subchapter J. (USA:21CFR 1040.30 Canada:SOR/DORS/80-381)

WARNING: The following **GOOD LAMP PRACTICES** are recommended to reduce the possibility of an arc tube rupture and the associated risk of property damage or personal injury.

GOOD LAMP PRACTICES:

1. TURN LAMPS OFF AT LEAST ONCE PER WEEK FOR AT LEAST 15 MINUTES, in systems which are otherwise operating on a continuous basis (24 hours/day-7 days/week).
2. **RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
3. OPERATE LAMP WITH PROPER CIRCUITS AND AUXILIARY EQUIPMENT.

CAUTION: Electric discharge lamp—use only with proper circuits and auxiliary equipment designed to produce established electrical values for this lamp. Operating the lamp improperly may result in damage to equipment or personal injury, for which the lamp manufacturer does not assume any responsibility.

If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass. Do not scratch the bulb or subject it to pressure, as it could fail violently. If the outer bulb is broken, turn off the lamp and replace it promptly.

Do not use this lamp in a fixture which redirects a substantial portion of the energy toward the arc tube and its immediate vicinity, as this may lead to very early lamp failure.

NOTICE: For total supply load, add auxiliary (ballast) watts to lamp watts.

Halogen lighting

Put people and merchandise in the best light

The Philips Halogen lamp family is perfect for retail lighting. Halogen lamps provide bright, white light and help save on energy and maintenance costs.

Philips Halogen Lamps are designed to provide visual appeal, highlight merchandise and save on energy costs.

Halogen Energy Advantage IR Plus Lamps provide the most enhanced features of our halogen lamp line. The double-ended burner with an IR coating optimizes lumen output. Therefore, you can use a lower wattage lamp to achieve energy savings and also get a longer rated average life than standard halogen equivalents.

Halogena Energy Advantage Lamps provide increased energy saving when compared to standard incandescent lamps and last longer.

EcoVantage Lamps are an elegant, energy saving alternative to ordinary household incandescent light. EcoVantage lamps are fully dimmable and meet the requirement of EISA 2007* legislation.

* Complies with the Energy Independence and Security Act of 2007 (Public Law 110-140). Section 321—Efficient Light Bulbs.

UPGRADE TO ENERGY EFFICIENT LAMPS

CURRENT PRODUCT	PHILIPS UPGRADE PRODUCT	BENEFIT	PAGE
60W PAR38 Halogen	Energy Advantage Halogen PAR38 IR Plus 39W	> High quality light brings out colors and textures > High performance IR coating on a double-ended quartz burner > Increased uniform beam intensity without hot spots	109
75W R20 Incandescent	Halogená Energy Advantage R20 40W	> Save 35W and 47% energy saving† > Complies with EISA 2007 (Energy Independence and Security Act of 2007) efficiency standards for 2012-2014	102
60W A19 Incandescent	EcoVantage Natural Light 43W	> Provides light similar to natural daylight > Saves 28% in energy costs when replacing a 60W incandescent◊ > Complies with EISA 2007 (Energy Independence and Security Act of 2007) efficiency standards for 2012-2014	102

† 75W - 40W = 35W / 75W = 47%. When compared to a 75-Watt standard incandescent A19 rated at 570 lumens, the 40-Watt EcoVantage A19 rated at 570 lumens provides 47% energy savings.

◊ 60W - 43W = 17W / 60W = 28%. When compared to a 60-Watt standard incandescent A19 rated at 680 lumens, the 43-Watt EcoVantage A19 rated at 630 lumens provides 28% energy savings.

HALOGEN LAMPS

Ecovantage, Halogená Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class, Filament	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
ECOVANTAGE													
29	A19	Med.	40983-9	$Ⓔ□†(103)	29A19/EV	120	12	White	C, CC-8	4 7/16	1000	—	380
			41050-6	$Ⓔ□†(103)	29A19/EV/CL	120	12	Clear	C, CC-8	4 7/16	1000	—	380
43	A19	Med.	40948-7	$Ⓔ□†(103)	43A19/EV	120	12	White	C, CC-8	4 7/16	1000	—	750
			41049-8	$Ⓔ□†(103)	43A19/EV/CL	120	12	Clear	C, CC-8	4 7/16	1000	—	750
			22695-1	$Ⓔ□†(103)	43A19/EV/NTL	120	12	Natural Light	C, CC-8	4 7/16	1250	—	630
53	A19	Med.	22696-9	$Ⓔ□†(103)	53A19/EV/NTL	120	12	Natural Light	C, CC-8	4 7/16	1250	—	830
72	A19	Med.	40982-1	$Ⓔ□†(103)	72A19/EV	120	12	White	C, CC-8	4 7/16	1000	—	1490
			41048-0	$Ⓔ□†(103)	72A19/EV/CL	120	12	Clear	C, CC-8	4 7/16	1000	—	1490
			22699-3	$Ⓔ□†(103)	72A19/EV/NTL	120	12	Natural Light	C, CC-8	4 7/16	1000	—	1200
HALOGENÁ ENERGY SAVER													
40	T60	Med.	20967-6	$Ⓔ□(103)	40T60/HES/WH	120	6	White	C, CC-8	4 1/8	3000	—	800
	R20	Med.	21202-7	$Ⓔ□(104)	40R20/HES/FL	120	6	Flood	C, CC-8	3 15/16	3000	—	570
	BR30	Med.	20970-0	$Ⓔ□(104)	40BR30/HES/FL	120	5	Flood	C, CC-8	5 3/8	3000	—	600
	BR40	Med.	20972-6	$Ⓔ□(104)	40BR40/HES/FL	120	4	Flood	C, CC-8	6 1/2	3000	—	630
50	BR30	Med.	22998-9	$Ⓔ□†(104)	50BR30/HES/FL	120	5	Flood	C, CC-8	5 3/8	3000	—	800
70	BR40	Med.	22999-7	$Ⓔ□†(104)	70BR40/HES/FL	120	4	Flood	C, CC-8	6 1/2	3000	—	1285
	T60	Med.	20969-2	$Ⓔ□(103)	70T60/HES/WH	120	6	White	C, CC-8	4 1/8	3000	—	1600
HALOGENÁ ENERGY ADVANTAGE PRO PACKS (102)													
40	T60	Med.	21354-6	$Ⓔ□†(103)	40T60/HEA/WH	120	12	White	C, CC-8	4 1/8	3000	—	800
	R20	Med.	22236-4	$Ⓔ□†(104)	40R20/HEA/FL	120	12	Flood	C, CC-8	3 15/16	3000	450	—
	BR30	Med.	21359-5	$Ⓔ□†(104)	40BR30/HEA/FL	120	12	Flood	C, CC-8	5 3/8	3000	2250	—
	BR40	Med.	22238-0	$Ⓔ□(104)	40BR40/HEA/FL	120	12	Flood	C, CC-8	6 1/2	3000	—	630
50	T60	Med.	21356-1	$Ⓔ□†(103)	50T60/HEA/WH	120	12	White	C, CC-8	4 1/8	3000	—	1100
	BR30	Med.	22994-8	$Ⓔ□†(104)	50BR30/HEA/FL	120	12	Flood	C, CC-8	5 3/8	3000	—	800
70	BR40	Med.	22997-1	$Ⓔ□†(104)	70BR40/HEA/FL	120	12	Flood	C, CC-8	6 1/2	3000	—	1285
	T60	Med.	21358-7	$Ⓔ□(103)	70T60/HEA/WH	120	12	White	C, CC-8	4 1/8	3000	—	1600
HALOGENÁ CLASSIC BLISTER-CARDED (96)													
60	BT15	Med.	24924-3		BC60BT15/HAL/CL	120	10	Clear, Blister Card	C, CC-8	4	3000	—	900
			24926-8		BC60BT15/HAL/W	120	10	White, Blister Card	C, CC-8	4	3000	—	840
			38915-5		BC60BT15/HAL/W	120	80	White, Blister Card	C, CC-8	4	3000	—	840
75	BT15	Med.	24927-6		BC75BT15/HAL/W	120	10	White, Blister Card	C, CC-8	4	3000	—	1120
100	BT15	Med.	24931-8		BC100BT15/HAL/W	120	10	White, Blister Card	C, CC-8	4	3000	—	1670
150	BT15	Med.	24933-4		BC150BT15/HAL/W	120	10	White, Blister Card	C, CC-8	4	3000	—	2650

For the most current product information, go to the e-catalog on **www.philips.com**

Halogen symbols and footnotes located on page 116

A19 White Med. | A19 Clear Med. | A19 Natural Light Med. | T60 Med. | R20 Med. | BR30 Med. | BR40 Med. | BT15 Med.

HALOGEN LAMPS

Halogená Classic, Halogená Decorative Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class, Filament	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
HALOGENÁ CLASSIC BLISTER-CARDED—REDUCED WATTAGE (96, 102)													
55	BT15	Med.	21378-5	$ (101)	BC55BT15/HAL/CL	120	10	Clear, Blister Card	C, CC-8	4	3000	—	825
			21280-1	$	BC55BT15/HAL/CL	120	4	Clear, Blister Card	C, CC-8	4	3000	—	825
			21379-3	$ (101)	BC55BT15/HAL/W	120	10	White, Blister Card	C, CC-8	4	3000	—	770
			21381-9	$	BC55BT15/HAL/W	120	4	White, Blister Card	C, CC-8	4	3000	—	770
	CP19	Med.	21383-5	$ ▢	BC55CP19/HAL/CL	120	6	Clear, Blister Card	C, CC-8	4⅛	3000	—	825
70	BT15	Med.	21386-8	$ (101)	BC70BT15/HAL/W	120	10	White, Blister Card	C, CC-8	4	3000	—	1045
			21387-6	$	BC70BT15/HAL/W	120	4	White, Blister Card	C, CC-8	4	3000	—	1045
HALOGENÁ DECORATIVE BLISTER-CARDED (96)													
25	F10½	Cand.	14450-1		BC25F10½C/HAL/CL	120	12	Clear, Blister Card	C, CC-8	4⅜	3000	—	300
		Med.	14453-5		BC25F10½/HAL/CL TP	120	12	Clear, Blister Card	C, CC-8	4⅜	3000	—	300
40	CP19	Med.	36485-1	▢	BC40CP19/HAL/CL	120	6	Clear, Blister Card	C, CC-8	4⅛	3000	—	540
	F10½	Cand.	14451-9		BC40F10½C/HAL/CL	120	12	Clear, Blister Card	C, CC-8	4⅜	3000	—	540
	F10½	Med.	14454-3		BC40F10½/HAL/CL TP	120	12	Clear, Blister Card	C, CC-8	4⅜	3000	—	540
60	CP19	Med.	36411-7	▢	BC60CP19/HAL/CL	120	6	Clear, Blister Card	C, CC-8	4⅛	3000	—	900
	F10½	Cand.	14452-7		BC60F10½C/HAL/CL	120	12	Clear, Blister Card	C, CC-8	4⅜	3000	—	900
		Med.	14455-0		BC60F10½/HAL/CL TP	120	12	Clear, Blister Card	C, CC-8	4⅜	3000	—	900
	F15	Med.	38551-8		BC60F15/HAL/POST TOP	120	4	Clear, Blister Card	C, CC-8	4 13⁄16	3000	—	900
HALOGENÁ DECORATIVES BOXED													
25	F10½	Med.	22405-5		25F10½/HEA/CL	120	15	Clear	C, CC-8	4⅜	3000	—	300
		Cand.	22400-6		25F10½C/HEA/CL	120	15	Clear	C, CC-8	4⅜	3000	—	300
40	F10½	Med.	22408-9		40F10½/HEA/CL	120	15	Clear	C, CC-8	4⅜	3000	—	540
		Cand.	22407-1		40F10½C/HEA/CL	120	15	Clear	C, CC-8	4⅜	3000	—	540
	G25	Med.	15024-3		40G25/CL/HAL	120	6	Clear	C, CC-8	4⅞	3000	—	500
			15023-5		40G25/W/HAL	120	6	White	C, CC-8	4⅞	3000	—	475
60	G25	Med.	15026-8		60G25/CL/HAL	120	6	Clear	C, CC-8	4⅞	3000	—	990
			15025-0		60G25/W/HAL	120	6	White	C, CC-8	4⅞	3000	—	870

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Halogen symbols and footnotes located on page 116


BT15 Med.


CP19 Med.


F10½ Cand.


F10½ Med.


F15 Med.


G25 Med.

HALOGEN LAMPS

Halogená Natural Light, Halogená Reflector Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class, Filament	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
HALOGENÁ NATURAL LIGHT PLUS INDOOR FLOODLIGHT (97, 103, 104)													
45	R20	Med.	20571-6	▢	45R20/HAL/NLP/FL	120	12	Flood	C, CC-8	3 15/16	3000	330	415
60	BR30	Med.	20257-2	▢	60BR30/HAL/NLP/FL	120	6	Flood	C, CC-8	5⅜	3000	380	500
	BR40	Med.	20573-2	▢	60BR40/HAL/NLP/FL	120	6	Flood	C, CC-8	6½	3000	360	600
HALOGENÁ INDOOR FLOODLIGHT, SPOTLIGHT (97, 103, 104)													
45	R20	Med.	14727-2	▢	45R20/HAL/FL	120	12	Flood	C, CC-8	3 15/16	3000	450	420
60	BR30	Med.	38875-1	▢	60BR30/HAL/SP	120	6	Spot	C, CC-8	5⅜	3000	2250	700
			38849-6	▢	60BR30/HAL/FL	120	6	Flood	C, CC-8	5⅜	3000	500	700
			15879-0	▢	60BR30/HAL/FL	120	20	Flood	C, CC-8	5⅜	3000	500	700
	BR40	Med.	39174-8	▢	60BR40/HAL/FL	120	6	Flood	C, CC-8	6½	3000	325	750
HALOGENÁ LONG LIFE INDOOR FLOODLIGHT (97, 103, 104)													
60	BR30	Med.	20579-9	▢	60BR30/HAL/FL/LL	120	6	Flood	C, CC-8	5⅜	4400	2250	700
	BR40	Med.	20580-7	▢	60BR40/HAL/FL/LL	120	6	Flood	C, CC-8	6½	4400	325	750
HALOGENÁ PAR16 LAMPS BLISTER-CARDED (82, 86)													
45	PAR16	Med.	13412-2		BC45PAR16/HAL/FL/LL	120	6	Blister Card, Flood	C, CC-8	3½	3000	1250	420
60	PAR16	Med.	13413-0		BC60PAR16/HAL/FL/LL	120	6	Blister Card, Flood	C, CC-8	3½	3000	1800	580
HALOGENÁ PAR20 ELECTRONIC LAMPS (82, 86)													
20	PAR20	Med.	40494-7	$ ▢	20PAR20E/SP10	120	12	Spot	C, C-8	3⅜	5000	6600	—
			15216-5	$ ▢	20PAR20E/FL25	120	12	Flood	C, C-8	3⅜	5000	1200	—
HALOGENÁ LONG LIFE PAR20 LAMPS (82, 86)													
50	PAR20	Med.	13411-4		50PAR20/HAL/SP/LL	120	6	Spot	C, CC-8	3⅜	3000	4000	520
			13410-6		50PAR20/HAL/FL/LL	120	6	Flood	C, CC-8	3⅜	3000	900	520
HALOGENÁ PAR30 LONG LAMPS (82, 86)													
50	PAR30L	Med.	13407-2	Ⓔ	50PAR30L/HAL/FL/LL	120	6	Flood	C, CC-8	4½	3000	2350	590
75	PAR30L	Med.	13409-8	Ⓔ	75PAR30L/HAL/SP/LL	120	6	Spot	C, CC-8	4½	3000	12,300	1000
			13408-0	Ⓔ	75PAR30L/HAL/FL/LL	120	6	Flood	C, CC-8	4½	3000	4100	1000

For the most current product information, go to the e-catalog on **www.philips.com**

Halogen symbols and footnotes located on page 116

HALOGEN LAMPS

Halogená Reflectors, Halogen PAR38, PAR16, PAR20 Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class, Filament	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
HALOGENÁ PAR38 LAMPS (82, 86)													
45	PAR38 Standard Reflector	Med.Skt.	13404-9	Ⓔ	45PAR38/HAL/SP/LL	120	6	Spot	C, CC-8	5⅝	3000	5800	530
			13401-5	Ⓔ	45PAR38/HAL/FL/LL	120	6	Flood	C, CC-8	5⅝	3000	2000	530
60	PAR38 Standard Reflector	Med.Skt.	14022-8	Ⓔ	60PAR38/HAL/FL/LL	120	6	Flood	C, CC-8	5⅝	3000	3000	800
75	PAR38 Standard Reflector	Med.Skt.	14720-7	Ⓔ	75PAR38/NLP/FL	120	6	Flood	C, CC-8	5⅝	3000	3600	960
90	PAR38 Standard Reflector	Med.Skt.	13405-6	Ⓔ	90PAR38/HAL/SP/LL	120	6	Spot	C, CC-8	5⅝	3000	14,500	1350
			13402-3	Ⓔ	90PAR38/HAL/FL/LL	120	6	Flood	C, CC-8	5⅝	3000	4500	1350
HALOGEN PAR38 LAMPS (82, 86)													
45	PAR38	Med.Skt.	26883-9	Ⓔ	45PAR38/HAL/FL	120	6	Flood	C, CC-8	5⅝	2000	2000	560
90	PAR38	Med.Skt.	26877-1	Ⓔ	90PAR38/HAL/FL	120	6	Flood	C, CC-8	5⅝	2000	4500	1370
			13403-1	Ⓔ	90PAR38/HAL/FL/LL	120	36	Flood	C, CC-8	5⅝	3000	4500	1350
HALOGEN PAR16 LAMPS (82, 86)													
45	PAR16	Med.	26335-0		45PAR16/HAL/SP10	120	15	Spot 10°	C, CC-8	3⅛	3000	3850	420
			26345-9		45PAR16/HAL/FL27	120	15	Flood 27°	C, CC-8	3⅛	3000	1275	420
60	PAR16	Med.	33004-3		60PAR16/HAL/SP10	120	15	Spot 10°	C, CC-8	3⅛	3000	5075	580
			33006-8		60PAR16/HAL/FL27	120	15	Flood 27°	C, CC-8	3⅛	3000	1900	580
HALOGEN PAR16 LAMPS 130V (82, 86)													
45	PAR16	Med.	26348-3	$	45PAR16/HAL/FL27	130	15	Flood 27°	C, CC-8	3⅛	2500	1275	450
								Ratings @ 120V=40W			5000	1040	340
60	PAR16	Med.	33005-0	$	60PAR16/HAL/SP10	130	15	Spot 10°	C, CC-8	3⅛	3000	5075	580
								Ratings @ 120V=53W			6000	4000	450
			33007-6	$	60PAR16/HAL/FL27	130	15	Flood 27°	C, CC-8	3⅛	3000	1900	580
								Ratings @ 120V=53W			6000	1440	450
HALOGEN PAR20 LAMPS WISO REFLECTOR (82, 86)													
50	PAR20	Med.	22906-2		50PAR20/HAL/SP10	120	15	Spot 10°	C, CC-8	3⅜	3000	4000	530
			22911-2		50PAR20/HAL/FL25	120	15	Flood 25°	C, CC-8	3⅜	3000	1100	530

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PAR38 Med. Skt.


PAR16 Med.


PAR20 Med.

HALOGEN LAMPS

PAR20, PAR30L, PAR30S Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class, Filament	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
HALOGEN PAR20 LAMPS 130V WISO REFLECTOR (82, 86)													
50	PAR20	Med.	13846-1	$	50PAR20/HAL/SP10	130	15	Spot 10°	C, CC-8	3⅜	2000	4000	550
								Ratings @ 120V=44W			4000	3320	420
			22921-1	$	50PAR20/HAL/FL25	130	15	Flood 25°	C, CC-8	3⅜	2000	1100	550
								Ratings @ 120V=44W			4000	880	420
HALOGEN PAR30L LONG NECK LAMPS WISO REFLECTOR (82, 86)													
50	PAR30L	Med.	22922-9	Ⓔ	50PAR30L/HAL/SP10	120	15	Spot 10°	C, CC-8	4½	3000	5500	590
			22923-7	Ⓔ	50PAR30L/HAL/WSP16	120	15	Wide Spot 16°	C, CC-8	4½	3000	3500	590
			22925-2	Ⓔ	50PAR30L/HAL/FL25	120	15	Flood 25°	C, CC-8	4½	3000	2100	590
			22927-8	Ⓔ	50PAR30L/HAL/WFL40	120	15	Wide Flood 40°	C, CC-8	4½	3000	950	590
75	PAR30L	Med.	22930-2	Ⓔ	75PAR30L/HAL/SP10	120	15	Spot 10°	C, CC-8	4½	3000	12,300	1000
			22934-4	Ⓔ	75PAR30L/HAL/WSP16	120	15	Wide Spot 16°	C, CC-8	4½	3000	6700	1000
			22941-9	Ⓔ	75PAR30L/HAL/FL25	120	15	Flood 25°	C, CC-8	4½	3000	4100	1000
			22944-3	Ⓔ	75PAR30L/HAL/WFL40	120	15	Wide Flood 40°	C, CC-8	4½	3000	1650	1000
HALOGEN PAR30L LONG NECK LAMPS 130V WISO REFLECTOR (82, 86)													
50	PAR30L	Med.	22926-0	$ Ⓔ	50PAR30L/HAL/FL25	130	15	Flood 25°	C, CC-8	4½	2000	2300	630
								Ratings @ 120V=44W			4000	1960	470
			22928-6	$ Ⓔ	50PAR30L/HAL/WFL40	130	15	Wide Flood 40°	C, CC-8	4½	2000	1050	630
								Ratings @ 120V=44W			4000	840	470
75	PAR30L	Med.	13848-7	$ Ⓔ	75PAR30L/HAL/SP10	130	15	Spot 10°	C, CC-8	4½	2500	13,000	1050
								Ratings @ 120V=66W			5000	10,400	780
			22943-5	$ Ⓔ	75PAR30L/HAL/FL25	130	15	Flood 25°	C, CC-8	4½	2500	4200	1050
								Ratings @ 120V=66W			5000	3360	780
			22945-0	$ Ⓔ	75PAR30L/HAL/WFL40	130	15	Wide Flood 40°	C, CC-8	4½	2500	1750	1050
								Ratings @ 120V=66W			5000	1400	780
HALOGEN PAR30S SHORT LAMPS WISO REFLECTOR (82, 86)													
50	PAR30S	Med.	26349-1	Ⓔ	50PAR30S/HAL/SP10	120	15	Spot 10°	C, CC-8	3⅜	3500	5800	610
			26358-2	Ⓔ	50PAR30S/HAL/FL25	120	15	Flood 25°	C, CC-8	3⅜	3500	1800	610
			26364-0	Ⓔ	50PAR30S/HAL/WFL40	120	15	Wide Flood 40°	C, CC-8	3⅜	3500	900	610
60	PAR30S	Med.	35751-7	Ⓔ	60PAR30S/HAL/SP10	120	15	Spot 10°	C, CC-8	3⅜	3000	8000	800
			35753-3	Ⓔ	60PAR30S/HAL/FL25	120	15	Flood 25°	C, CC-8	3⅜	3000	2500	800
			35758-2	Ⓔ	60PAR30S/HAL/WFL40	120	15	Wide Flood 40°	C, CC-8	3⅜	3000	1250	800
75	PAR30S	Med.	28479-4	Ⓔ	75PAR30S/HAL/SP10	120	15	Spot 10°	C, CC-8	3⅜	3500	9600	1050
			28488-5	Ⓔ	75PAR30S/HAL/FL25	120	15	Flood 25°	C, CC-8	3⅜	3500	3850	1050
			28491-9	Ⓔ	75PAR30S/HAL/WFL40	120	15	Wide Flood 40°	C, CC-8	3⅜	3500	1650	1050
HALOGEN ENERGY ADVANTAGE IR PAR30L LONG NECK LAMPS FEATURING HALOGEN INFRARED TECHNOLOGY AND WISO REFLECTOR (82, 86)													
LOWER WATTAGE ENERGY SAVING LAMPS													
50	PAR30L	Med.	23799-0	$ Ⓔ †	50PAR30L/IRC/SP10	120	15	Spot 10°	C, CC-8	4½	4200	12,000	1000
			23429-4	$ Ⓔ †	50PAR30L/IRC/FL25	120	15	Flood 25°	C, CC-8	4½	4200	3500	1000
			23800-6	$ Ⓔ †	50PAR30L/IRC/WFL40	120	15	Wide Flood 40°	C, CC-8	4½	4200	1600	1000

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HALOGEN LAMPS

PAR30S, Energy Advantage IR Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class, Filament	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
HALOGEN PAR30S SHORT LAMPS 130V WISO REFLECTOR (82, 86)													
50	PAR30S	Med.	26357-4	$ Ⓔ	50PAR30S/HAL/SP10	130	15	Spot 10°	C, CC-8	3⅛	2000	6000	630
								Ratings @ 120V=44W			4000	5680	480
			26362-4	$ Ⓔ	50PAR30S/HAL/FL25	130	15	Flood 25°	C, CC-8	3⅛	2000	2000	630
								Ratings @ 120V=44W			4000	1840	480
			26384-8	$ Ⓔ	50PAR30S/HAL/WFL40	130	15	Wide Flood 40°	C, CC-8	3⅛	2000	1050	630
								Ratings @ 120V=44W			4000	816	480
60	PAR30S	Med.	35752-5	$ Ⓔ	60PAR30S/HAL/SP10	130	15	Spot 10°	C, CC-8	3⅛	3000	8000	800
								Ratings @ 120V=53W			6000	7720	610
			35788-9	$ Ⓔ	60PAR30S/HAL/FL25	130	15	Flood 25°	C, CC-8	3⅛	3000	2500	800
								Ratings @ 120V=53W			6000	2320	610
			35762-4	$ Ⓔ	60PAR30S/HAL/WFL40	130	15	Wide Flood 40°	C, CC-8	3⅛	3000	1250	800
								Ratings @ 120V=53W			6000	1040	610
75	PAR30S	Med.	13849-5	$ Ⓔ	75PAR30S/HAL/SP10	130	15	Spot 10°	C, CC-8	3⅛	2500	11,700	1050
								Ratings @ 120V=66W			5000	10,320	800
			13467-6	$ Ⓔ	75PAR30S/HAL/FL25	130	15	Flood 25°	C, CC-8	3⅛	2500	3900	1050
								Ratings @ 120V=66W			5000	3280	800
			28492-7	$ Ⓔ	75PAR30S/HAL/WFL40	130	15	Wide Flood 40°	C, CC-8	3⅛	2500	1750	1050
								Ratings @ 120V=66W			5000	1320	800
HALOGEN ENERGY ADVANTAGE IR PAR30S SHORT LAMPS FEATURING HALOGEN INFRARED TECHNOLOGY AND WISO REFLECTOR (82, 86)													
LOWER WATTAGE ENERGY SAVING LAMPS													
40	PAR30S	Med.	14496-3	$ Ⓔ	40PAR30S/IRC/HAL/SP10	120	15	Spot 10°	C, CC-8	3⅛	4200	8240	720
			14497-1	$ Ⓔ	40PAR30S/IRC/HAL/FL25	120	15	Flood 25°	C, CC-8	3⅛	4200	2420	720
			14498-9	$ Ⓔ	40PAR30S/IRC/HAL/WFL40	120	15	Wide Flood 40°	C, CC-8	3⅛	4200	1000	720
50	PAR30S	Med.	14499-7	$ Ⓔ	50PAR30S/IRC/HAL/SP10	120	15	Spot 10°	C, CC-8	3⅛	4200	12,000	970
			14500-3	$ Ⓔ	50PAR30S/IRC/HAL/FL25	120	15	Flood 25°	C, CC-8	3⅛	4200	3850	970
			14501-1	$ Ⓔ	50PAR30S/IRC/HAL/WFL40	120	15	Wide Flood 40°	C, CC-8	3⅛	4200	1420	970
60	PAR30S	Med.	15004-5	$ Ⓔ	60PAR30S/IRC/HAL/SP10	120	15	Spot 10°	C, CC-8	3⅛	4200	15,100	1140
			15007-8	$ Ⓔ	60PAR30S/IRC/HAL/FL25	120	15	Flood 25°	C, CC-8	3⅛	4200	4300	1140
			14989-8	$ Ⓔ	60PAR30S/IRC/HAL/WFL40	120	15	Wide Flood 40°	C, CC-8	3⅛	4200	1800	1140
ENERGY ADVANTAGE IR PLUS HALOGEN PAR30 SHORT LAMPS													
39	PAR30S	Med.	23853-5		39PAR30S/IRC+/SP10	120	15	Spot 10°	C, CC-8	3⅛	4200	11,000	650
			23854-3		39PAR30S/IRC+/FL25	120	15	Flood 25°	C, CC-8	3⅛	4200	2200	650
55	PAR30S	Med.	23855-0		55PAR30S/IRC+/SP10	120	15	Spot 10°	C, CC-8	3⅛	4200	13,000	1015
			23856-8		55PAR30S/IRC+/FL25	120	15	Flood 25°	C, CC-8	3⅛	4200	3300	1015
			23857-6		55PAR30S/IRC+/WFL40	120	15	Wide Flood 40°	C, CC-8	3⅛	4200	1500	1015
HALOGEN ENERGY ADVANTAGE IR PAR30S SHORT LAMPS 130V FEATURING HALOGEN INFRARED TECHNOLOGY AND WISO REFLECTOR (82, 86)													
50	PAR30S	Med.	13853-7	$ Ⓔ	50PAR30S/IRC/HAL/SP10	130	15	Spot 10°	C, CC-8	3⅛	3000	11,000	840
								Ratings @ 120V=44W			6000	—	650
			13854-5	$ Ⓔ	50PAR30S/IRC/HAL/FL25	130	15	Flood 25°	C, CC-8	3⅛	3000	2800	840
								Ratings @ 120V=44W			6000	—	650
			13855-2	$ Ⓔ	50PAR30S/IRC/HAL/WFL40	130	15	Wide Flood 40°	C, CC-8	3⅛	3000	1400	840
								Ratings @ 120V=44W			6000	—	650

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PAR30S
Med.

HALOGEN LAMPS

PAR36, PAR38 Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class, Filament	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
HALOGEN PAR36 LAMPS													
11	PAR36	MP	15683-6		11PAR36Q/FL30	12	6	PAR, Flood	C, C-6	2¾	2000	—	60
36	PAR36	MP	15685-1		36OAR36Q/FL30	12	6	PAR, Flood	C, C-6	2¾	4000	—	450
50	PAR36	MP	15684-4		50PAR36Q/FL30	12	6	PAR, Flood	C, C-6	2¾	4000	—	650
			13082-3		50PAR36Q/VNSP6	12	12	PAR, Narrow Spot	C, C-6	2¾	4000	35,000	400
HALOGEN PAR38 LAMPS (82, 86)													
45	PAR38	Med. Skt.	22946-8	Ⓔ	45PAR38/HAL/SP10	120	12	Spot 10°	C, CC-8	5⅞	3000	5800	530
	Standard		20231-7	Ⓔ	45PAR38/HAL/FL25	120	12	Flood 25°	C, CC-8	5⅞	3000	2000	530
	Reflector												
60	PAR38	Med. Skt.	14482-4	Ⓔ	60PAR38/HAL/SP10	120	12	Spot 10°	C, CC-8	5⅞	3000	10,500	800
	Standard		14483-2	Ⓔ	60PAR38/HAL/FL25	120	12	Flood 25°	C, CC-8	5⅞	3000	3200	800
	Reflector		14484-0	Ⓔ	60PAR38/HAL/WFL40	120	12	Wide Flood 40°	C, CC-8	5⅞	3000	1300	800
75	PAR38	Med. Skt.	14485-7	Ⓔ	75PAR38/HAL/SP10	120	12	Spot 10°	C, CC-8	5⅞	3000	13,000	1050
	Standard		14486-5	Ⓔ	75PAR38/HAL/FL25	120	12	Flood 25°	C, CC-8	5⅞	3000	3800	1050
	Reflector												
90	PAR38	Med. Skt.	23069-8	Ⓔ	90PAR38/HAL/SP10	120	12	Spot 10°	C, CC-8	5⅞	3000	14,500	1350
	Standard		20234-1	Ⓔ	90PAR38/HAL/FL25	120	12	Flood 25°	C, CC-8	5⅞	3000	4500	1350
	Reflector		27429-0	Ⓔ	90PAR38/HAL/FL	120	15	Flood 28°	C, CC-8	5⅞	2000	4500	1370
			38925-4	Ⓔ	90PAR38/HAL/FL	120	18	Flood 28°	C, CC-8	5⅞	2000	4500	1370
			14487-3	Ⓔ	90PAR38/HAL/WFL40	120	12	Wide Flood 40°	C, CC-8	5⅞	3000	2200	1350
HALOGEN PAR38 LAMPS 130V (82, 86)													
45	PAR38	Med. Skt.	22947-6	$ Ⓔ	45PAR38/HAL/SP10	130	12	Spot 10°	C, CC-8	5⅞	2500	5800	530
	Standard							Ratings @ 120V=40W			5000	4960	410
	Reflector		22949-2	$ Ⓔ	45PAR38/HAL/FL25	130	12	Flood 25°	C, CC-8	5⅞	2500	2000	530
								Ratings @ 120V=40W			5000	1600	410
60	PAR38	Med. Skt.	14488-1	$ Ⓔ	60PAR38/HAL/SP10	130	12	Spot 10°	C, CC-8	5⅞	3000	10,500	800
	Standard							Ratings @ 120V=53W			6000	8400	610
	Reflector		14490-7	$ Ⓔ	60PAR38/HAL/FL25	130	12	Flood 25°	C, CC-8	5⅞	3000	3200	800
								Ratings @ 120V=53W			6000	2560	610
			14489-9	$ Ⓔ	60PAR38/HAL/FL25	130	36	Flood 25°	C, CC-8	5⅞	3000	3200	800
								Ratings @ 120V=53W			6000	2560	610
			14491-5	$ Ⓔ	60PAR38/HAL/WFL40	130	12	W. Flood 40°	C, CC-8	5⅞	3000	1300	800
								Ratings @ 120V=53W			6000	1040	610
75	PAR38	Med. Skt.	14493-1	$ Ⓔ	75PAR38/HAL/SP10	130	12	Spot 10°	C, CC-8	5⅞	2500	14,000	1100
	Standard							Ratings @ 120V=66W			5000	11,200	840
	Reflector		14494-9	$ Ⓔ	75PAR38/HAL/FL25	130	12	Flood 25°	C, CC-8	5⅞	2500	4350	1100
								Ratings @ 120V=66W			5000	3480	840
90	PAR38	Med. Skt.	23650-5	$ Ⓔ	90PAR38/HAL/SP10	130	12	Spot 10°	C, CC-8	5⅞	2500	14,500	1350
	Standard							Ratings @ 120V=79W			5000	13,120	1020
	Reflector		23651-3	$ Ⓔ	90PAR38/HAL/FL25	130	12	Flood 25°	C, CC-8	5⅞	2500	4500	1350
								Ratings @ 120V=79W			5000	3600	1020
			14495-5	$ Ⓔ	90PAR38/HAL/WFL40	130	12	Wide Flood 40°	C, CC-8	5⅞	2500	2200	1350
								Ratings @ 120V=79W			5000	1760	1020

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PAR36
MP

PAR38
Med. Skt.

HALOGEN LAMPS

Energy Advantage IR PAR38 Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class, Filament	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
HALOGEN ENERGY ADVANTAGE IR PAR38 LAMPS FEATURING HALOGEN INFRARED TECHNOLOGY AND DIOPTIC REFLECTOR (82, 86)													
LOWER WATTAGE ENERGY SAVING LAMPS													
40	PAR38	Med.Skt.	14502-9	$ ©	40PAR38/IRC/HAL/SP10	120	12	Spot 10°	C, CC-8	5⅞	4200	11,000	720
	Dioptic		14503-7	$ ©	40PAR38/IRC/HAL/FL25	120	12	Flood 25°	C, CC-8	5⅞	4200	3000	720
	Reflector		14504-5	$ ©	40PAR38/IRC/HAL/WFL40	120	12	Wide Flood 40°	C, CC-8	5⅞	4200	1050	720
50	PAR38	Med.Skt.	14505-2	$ ©	50PAR38/IRC/HAL/SP10	120	12	Spot 10°	C, CC-8	5⅞	4200	15,500	970
	Dioptic		14506-0	$ ©	50PAR38/IRC/HAL/FL25	120	12	Flood 25°	C, CC-8	5⅞	4200	4000	970
	Reflector		14507-8	$ ©	50PAR38/IRC/HAL/WFL40	120	12	Wide Flood 40°	C, CC-8	5⅞	4200	1500	970
60	PAR38	Med.Skt.	13873-5	$ ©	60PAR38/IRC/HAL/SP10	120	12	Spot 10°	C, CC-8	5⅞	4200	15,500	1120
	Dioptic		13874-3	$ ©	60PAR38/IRC/HAL/FL25	120	12	Flood 25°	C, CC-8	5⅞	4200	5100	1120
	Reflector		13875-0	$ ©	60PAR38/IRC/HAL/WFL40	120	12	Wide Flood 40°	C, CC-8	5⅞	4200	1800	1120
70	PAR38	Med.Skt.	13861-0	$ ©	70PAR38/IRC/HAL/SP10	120	12	Spot 10°	C, CC-8	5⅞	4200	17,800	1550
	Dioptic		13862-8	$ ©	70PAR38/IRC/HAL/FL25	120	12	Flood 25°	C, CC-8	5⅞	4200	6170	1550
	Reflector		13863-6	$ ©	70PAR38/IRC/HAL/WFL40	120	12	Wide Flood 40°	C, CC-8	5⅞	4200	2320	1550
100	PAR38	Med.Skt.	13876-8	$ ©	100PAR38/IRC/HAL/SP10	120	12	Spot 10°	C, CC-8	5⅞	4200	26,400	2200
	Dioptic		13877-6	$ ©	100PAR38/IRC/HAL/FL25	120	12	Flood 25°	C, CC-8	5⅞	4200	8500	2200
	Reflector		13878-4	$ ©	100PAR38/IRC/HAL/WFL40	120	12	Wide Flood 40°	C, CC-8	5⅞	4200	3500	2200
HALOGEN ENERGY ADVANTAGE IR PLUS HALOGEN PAR38 LAMPS													
39	PAR38	Med.	23844-4		39PAR38/IRC+/SP10	120	12	Spot 10°	C, CC-8	5⅞	4200	11,000	720
			23845-1		39PAR38/IRC+/FL25	120	12	Flood 25°	C, CC-8	5⅞	4200	2500	720
55	PAR38	Med.	23847-7		55PAR38/IRCE/SP10	120	12	Spot 10°	C, CC-8	5⅞	4200	16,500	1120
			23865-9		55PAR38/IRCE/FL25	120	12	Flood 25°	C, CC-8	5⅞	4200	4100	1120
			23849-3		55PAR38/IRCE/WFL40	120	12	Wide Flood 40°	C, CC-8	5⅞	4200	1800	1120
83	PAR38	Med.	23850-1		83PAR38/IRC+/SP10	120	12	Spot 10°	C, CC-8	5⅞	4200	25,000	2000
			23851-9		83PAR38/IRC+FL25	120	12	Flood 25°	C, CC-8	5⅞	4200	7000	2000
			23852-7		83PAR38/IRC+/WFL40	120	12	Wide Flood 40°	C, CC-8	5⅞	4200	3000	2000
HALOGEN ENERGY ADVANTAGE IR PAR38 LAMPS 130V FEATURING HALOGEN INFRARED TECHNOLOGY AND DIOPTIC REFLECTOR (82, 86)													
60	PAR38	Med.Skt.	13920-4	$ ©	60PAR38/IRC/HAL/SP10	130	12	Spot 10°	C, CC-8	5⅞	4200	15,500	1120
	Dioptic							Ratings @ 120V=53W			8400	—	880
	Reflector		13879-2	$ ©	60PAR38/IRC/HAL/FL25	130	12	Flood 25°	C, CC-8	5⅞	4200	5100	1120
								Ratings @ 120V=53W			8400	—	880
			13918-8	$ ©	60PAR38/IRC/HAL/WFL40	130	12	Wide Flood	C, CC-8	5⅞	4200	1800	1120
								Ratings @ 120V=53W			8400	—	880

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Halogen symbols and footnotes located on page 116

Energy Advantage IR PAR38 Med. Skt.

HALOGEN LAMPS

Long Life IR PAR38, PAR38, MRC11 Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class, Filament	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
HALOGEN LONG LIFE IR PAR38 FEATURING HALOGEN INFRARED TECHNOLOGY AND DIOPTIC REFLECTOR (82, 86)													
These lamps are 130V lamps run on 120V.													
45	PAR38	Med.Skt.	13919-6	$ ©	45PAR38/IRC/HAL/SP10	120	12	Spot 10°	C, CC-8	5⅞	6000	8750	675
			13856-0	$ ©	45PAR38/IRC/HAL/FL25	120	12	Flood 25°	C, CC-8	5⅞	6000	3000	675
			13857-8	$ ©	45PAR38/IRC/HAL/WFL40	120	12	Wide Flood 40°	C, CC-8	5⅞	6000	1140	675
55	PAR38	Med.Skt.	13858-6	$ ©	55PAR38/IRC/HAL/SP10	120	12	Spot 10°	C, CC-8	5⅞	6000	10,700	880
			13859-4	$ ©	55PAR38/IRC/HAL/FL25	120	12	Flood 25°	C, CC-8	5⅞	6000	3730	880
			13860-2	$ ©	55PAR38/IRC/HAL/WFL40	120	12	Wide Flood 40°	C, CC-8	5⅞	6000	1488	880
90	PAR38	Med.Skt.	13864-4	$ ©	90PAR38/IRC/HAL/SP10	120	12	Spot 10°	C, CC-8	5⅞	6000	19,500	1650
			13865-1	$ ©	90PAR38/IRC/HAL/FL25	120	12	Flood 25°	C, CC-8	5⅞	6000	7200	1650
			13866-9	$ ©	90PAR38/IRC/HAL/WFL40	120	12	Wide Flood 40°	C, CC-8	5⅞	6000	2500	1650
HALOGEN PAR38 LAMPS, MEDIUM SIDE PRONG BASE (82, 86)													
60	PAR38 Standard Reflector	Med. Side Prong	38887-6		60PAR38/HAL/3FL	120	12	Flood 25°	C, CC-8	4⅛	3000	3000	770
90	PAR38 Standard Reflector	Med. Side Prong	38890-0		90PAR38/HAL/3FL	130	12	Flood 25° Ratings @ 120V=79W	C, CC-8	4⅛	2500 5000	4500 3600	1350 1020
HALOGEN PAR38 LAMPS, COOL BEAM REFLECTOR													
60	PAR38 Standard Reflector	Med.Skt.	38884-3	$ ©	60PAR38/HAL/2FL	130	12	Flood 25° Ratings @ 120V=53W	C, CC-8	5⅞	3000 6000	2500 2200	770 590
90	PAR38 Standard Reflector	Med.Skt.	38886-8	$ ©	90PAR38/HAL/2FL	130	12	Flood 25° Ratings @ 120V=79W	C, CC-8	5⅞	2500 5000	4500 3600	1350 1020
HALOGEN MRC11 BLISTER-CARDED (92)													
20	MRC11	GU4	20333-1		BC20MRC11/FL30 FTD	12	12	Blister Card, Flood 30°	C, CC-8	1⅝	2000	500	230
HALOGEN MRC11 (FORMERLY BRILLIANTLINE PRO) (92)													
20	MRC11	GU4	37821-6		20MRC11/SP10 PRO FTB	12	50	Spot 10°	C, CC-8	1⅝	4000	4800	310
			37822-4		20MRC11/FL30 PRO FTD	12	50	Flood 30°	C, CC-8	1⅝	4000	690	320
35	MRC11	GU4	15219-9		35MRC11/FL30 PRO FTH	12	50	Flood 30°	C, CC-8	1⅝	4000	1500	550
HALOGEN MRC11 LANDSCAPE (92)													
10	MRC11	GU4	15675-2		10MRC11/FL30/LAND/TP	12	6	Flood 30°	C, CC-8	1⅝	2000	550	230
20	MRC11	GU4	15676-0		20MRC11/FL30/LAND/TP	12	6	Flood 30°	C, CC-8	1⅝	2000	500	230

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Halogen symbols and footnotes located on page 116

PAR38
Med. Skt.

PAR38 Side Prong
Med.

MRC11
GU4

HALOGEN LAMPS

MRC16, MR16 Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class, Filament	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
HALOGEN MRC16 DISPLAY LAMPS BLISTER-CARDED (FORMERLY ACCENTLINE) DICHROIC REFLECTOR WITH LENS (92)													
20	MRC16	GU5.3	15527-5		BC20MRC16/SP10	12	18	Spot 10°	C, C-8	1¾	3000	550	200
			20357-0		BC20MRC16/FL36 BAB	12	12	Blister Card, Flood 36°	C, C-8	1⅞	3000	550	240
			15528-3		BC20MRC16/FL36	12	18	Blister Card, Flood 36°	C, C-8	1⅞	3000	—	200
35	MRC16	GU5.3	20364-6		BC35MRC16/FL36 FMW	12	12	Blister Card, Flood 36°	C, C-8	1⅞	3000	1000	540
50	MRC16	GU5.3	20366-1		BC50MRC16/SP10 EXT	12	12	Blister Card, Spot 10°	C, C-8	1⅞	3000	8800	790
			15529-1		BC50MRC16/SP10	12	18	Blister Card, Spot 10°	C, C-8	1⅞	3000	—	600
			20365-3		BC50MRC16/FL36 EXN	12	12	Blister Card, Flood 36°	C, C-8	1⅞	3000	1600	850
			14111-9		BC50MRC16/FL	12	18	Blister Card, Flood 36°	C, C-8	1⅞	2000	1200	400
			20575-7		BC50MRC16/NTL/FL	12	12	Blister Card, Flood 36°	C, C-8	1⅞	3000	1000	—
HALOGEN MRC16 DISPLAY LAMPS BLISTER-CARDED REFLECTOR WITH LENS (92)													
20	MRC16	GU5.3	15527-5		BC20MRC16/SP10	12	18	Blister Card, Spot 10°	C, C-8	1¾	3000	550	200
			15528-3		BC20MRC16/FL36	12	18	Blister Card, Flood 36°	C, C-8	1⅞	3000	—	200
50	MRC16	GU5.3	15529-1		BC50MRC16/SP10	12	18	Blister Card, Spot 10°	C, C-8	1⅞	3000	—	600
HALOGEN MRC16 LANDSCAPE LAMPS BLISTER-CARDED (FORMERLY ACCENTLINE) DICHROIC REFLECTOR WITH LENS (92)													
20	MRC16	GU5.3	15677-8		BC20MRC16/FL36/LAND	12	6	Blister Card, Flood 36°	C, C-8	1¾	3000	—	240
35	MRC16	GU5.3	15678-6		BC35MRC16/FL36/LAND	12	6	Blister Card, Flood 36°	C, C-8	1¾	3000	—	400
50	MRC16	GU5.3	15679-4		BC50MRC16/FL36/LAND	12	6	Blister Card, Flood 36°	C, C-8	1¾	3000	—	600
HALOGEN MR (FORMERLY ACCENTLINE) (91)													
20	MR16	GU5.3	37802-6		20MR16/SP10 ESX	12	50	Spot 10°	C, C-8	1⅞	3000	3400	240
			37803-4		20MR16/FL36 BAB	12	50	Flood 36°	C, C-8	1⅞	3000	550	240
35	MR16	GU5.3	14055-8		35MR16/SP10	12	50	Spot 10°	C, C-8	1⅞	3000	6000	510
			14056-6		35MR16/FL36	12	50	Flood 36°	C, C-8	1⅞	3000	1000	540
50	MR16	GU5.3	37804-2		50MR16/SP10 EXT	12	50	Spot 10°	C, C-8	1⅞	3000	8800	790
			37807-5		50MR16/NFL24 EXZ	12	50	Narrow Flood 24°	C, C-8	1⅞	3000	2500	800
			37805-9		50MR16/FL36 EXN	12	50	Flood 36°	C, C-8	1⅞	3000	1600	850
HALOGEN MR LONG LIFE (FORMERLY BRILLIANTLINE PRO AND CONTINUUM COLOR) (91, 92)													
20	MRC16	GU5.3	37814-1		20MRC16/SP10 ESX	12	50	Spot 10°	C, C-8	1⅞	6000	5000	310
			37815-8		20MRC16/FL36 BAB	12	50	Flood 36°	C, C-8	1⅞	6000	780	320
35	MRC16	GU5.3	14054-1		35MRC16/SP10	12	50	Spot 10°	C, C-8	1⅞	6000	8000	680
			14052-5		35MRC16/NFL24	12	50	Narrow Flood 24°	C, C-8	1⅞	6000	3100	690
			14053-3		35MRC16/FL36	12	50	Flood 36°	C, C-8	1⅞	6000	1500	710
50	MRC16	GU5.3	37816-6		50MRC16/SP10 EXT	12	50	Spot 10°	C, C-8	1⅞	6000	13,000	920
			14061-6		50MRC16/SP15	12	50	Spot 15°	C, C-8	1⅞	6000	8000	920
			37817-4		50MRC16/NFL24 EXZ	12	50	Narrow Flood 24°	C, C-8	1⅞	6000	4400	960
			37818-2		50MRC16/FL36 EXN	12	50	Flood 36°	C, C-8	1⅞	6000	2200	970
75	MR16	GU5.3	37808-3		75MR16/SP10 EYF	12	50	Spot 10°	C, C-8	1⅞	6000	14,000	1320
			37809-1		75MR16/FL36 EYC	12	50	Flood 36°	C, C-8	1⅞	6000	2500	1410

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Halogen symbols and footnotes located on page 116

MRC16
GU5.3

MR16
GU5.3

HALOGEN LAMPS

MRC16, ALR, ALUline Pro 111, Twistline GU10 Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class, Filament	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
HALOGEN MR ENERGY ADVANTAGE IR (FORMERLY MASTERLINE ES IRC) (92)													
20	MRC16	GU5.3	20258-0	$	20MRC16/IRC/ALU/SP8	12	20	Spot 8°	C, C-8	1⅞	5000	6000	320
			20259-8	$	20MRC16/IRC/ALU/FL36	12	20	Flood 36°	C, C-8	1⅞	5000	925	325
30	MRC16	GU5.3	20260-6	$	30MRC16/IRC/ALU/SP8	12	20	Spot 8°	C, C-8	1⅞	5000	10,000	560
			20261-4	$	30MRC16/IRC/ALU/NFL24	12	20	Narrow Flood 24°	C, C-8	1⅞	5000	3000	570
			20262-2	$	30MRC16/IRC/ALU/FL36	12	20	Flood 36°	C, C-8	1⅞	5000	1500	580
35	MRC16	GU5.3	21031-0	$	35MRC16/IRC/SP8	12	20	Spot 8°	C, C-8	1⅞	5000	13,500	770
			20263-0	$	35MRC16/IRC/ALU/SP8	12	20	Spot 8°	C, C-8	1⅞	5000	12,500	720
			21030-2	$	35MRC16/IRC/NFL24	12	20	Narrow Flood 24°	C, C-8	1⅞	5000	4400	780
			20267-1	$	35MRC16/IRC/ALU/NFL24	12	20	Narrow Flood 24°	C, C-8	1⅞	5000	4000	730
			20268-9	$	35MRC16/IRC/ALU/FL36	12	20	Flood 36°	C, C-8	1⅞	5000	2000	740
			20269-7	$	35MRC16/IRC/ALU/WFL60	12	20	Wide Flood 60°	C, C-8	1⅞	5000	975	750
45	MRC16	GU5.3	20271-3	$	45MRC16/IRC/SP8	12	20	Spot 8°	C, C-8	1⅞	5000	14,000	1030
			20272-1	$	45MRC16/IRC/NFL24	12	20	Narrow Flood 24°	C, C-8	1⅞	5000	5400	1040
			20273-9	$	45MRC16/IRC/FL36	12	20	Flood 36°	C, C-8	1⅞	5000	2600	1050
			20274-7	$	45MRC16/IRC/WFL60	12	20	Wide Flood 60°	C, C-8	1⅞	5000	1250	1180
HALOGEN MR ALUMINUM (FORMERLY CONTINUUM PRO) (92)													
50	MRC16	GU5.3	13981-6		50 MRC16/NFL24/A	12	50	Narrow Flood 24°	C, C-8	1⅞	5000	3300	940
			13982-4		50 MRC16/FL36/A	12	50	Flood 36°	C, C-8	1⅞	5000	2100	950
CLOSED ALUMINUM REFLECTOR (ALR) LAMPS ALUMINUM REFLECTOR WITH LENS (92)													
20	37mm	BA15d	32840-1		20ALR12/NSP6 GBD Clear	12	50	Clear, Narrow Spot 6°	C, C-8	1½	2000	7000	250
			34002-6		20ALR12/SP18 GBE Frost	12	50	Frost, Spot 18°	C, C-8	1½	2000	1500	250
			34003-4		20ALR12/FL32 GBF Frost	12	50	Frost, Flood 32°	C, C-8	1½	2000	750	250
50	56mm	B15d	32826-0		50ALR18/SP10 GBJ Clear	12	50	Clear, Spot 10°	C, C-8	2¼	2000	13,000	820
			34091-9		50ALR18/NFL25 GBK Frost	12	50	Frost, Narrow Flood 25°	C, C-8	2¼	2000	2500	820
ALULINE PRO 111													
50	ALU Pro 111	G53	13396-6		ALU111MM 50W G53 12V 8D	12	6	Spot 8°	C, C-8	2 3/4	3000	23,000	950
			13397-4		ALU111MM 50W G53 12V 24D	12	6	Flood 24°	C, C-8	2 3/4	3000	4000	950
75	ALU Pro 111	G53	13398-2		ALU111MM 75W G53 12V 8D	12	6	Spot 8°	C, C-8	2 3/4	3000	30,000	1575
HALOGEN MRC16 GU7 BASE (92)													
35	MRC16	GU7	14851-0		35MRC16/SP10/GU7	12	20	Spot 10°	C, C-8	2	4000	8000	500
TWISTLINE GU10 BLISTER-CARDED (98)													
25	Twistline	GU10	21129-2		BC25TWISTLINE GU10/FL25	120	6	Blister Card, Flood 25°	C, C-6	2	2000	345	160
35	Twistline	GU10	20335-6		BC35TWISTLINE GU10/FL25	120	6	Blister Card, Flood 25°	C, C-6	2	2000	480	265
50	Twistline	GU10	14112-7		BC50GU10/HAL/TL	120	6	Blister Card, Flood 25°	C, C-6	2	2000	700	430
			20331-5		BC50TWISTLINE GU10/FL25	120	6	Blister Card, Flood 25°	C, C-6	2	2000	700	430
			20576-5		BC50TWISTLINE GU10/NTL/FL	120	6	Blister Card, Flood 25°	C, C-6	2	2000	1200	—

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MRC16 GU5.3


37mm ALR BA15d


56mm ALR B15d


ALU Pro 111 G53


MRC16 GU7


Twistline GU10

HALOGEN LAMPS

Single-Ended Linear, Double-Ended Linear, Capsule Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class, Filament	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
HALOGEN SINGLE-ENDED LINEAR LAMPS BLISTER-CARDED (95)													
50	T4	Mini-Can	20347-1		BC50Q/CL	120	12	Blister Card	C, CC-8	2¾	1000	—	500
75	T4	Mini-Can	20359-6		BC75Q/CL	120	12	Blister Card	C, CC-8	3	1000	—	1050
100	T4	Mini-Can	20350-5		BC100Q/CL ESN	120	12	Blister Card	C, CC-8	2 13/16	1000	—	1600
150	T4	Mini-Can	20354-7		BC150Q/CL ETG	120	12	Blister Card	C, CC-8	3	1000	—	2800
HALOGEN SINGLE-ENDED LINEAR LAMPS (95)													
100	T4	D.C. Bay	44278-0		100Q/CL/DC ESR	120	12	Clear	C, CC-8	2 7/16	1000	—	1600
150	T4	Mini-Can	29856-2		150Q ETH	120	12	Frost	C, CC-8	3	1000	—	2700
			20049-3		150Q/CL	130	12	Clear	C, CC-8	3	1000	—	2800
	T4	D.C. Bay	26676-7		150Q/CL/DC ETC	120	12	Clear	C, CC-8	2½	1000	—	2800
			29850-5		150Q/DC ETF	120	12	Frost	C, CC-8	2½	1000	—	2700
250	T4	Mini-Can	14668-8		250Q/CL EHT	120	12	Clear	C, CC-8	3⅛	1000	—	5000
			14667-0		250Q/CL	130	12	Clear	C, CC-8	3⅛	1000	—	5000
	T4	D.C. Bay	14666-2		250Q/CL/DC ESS	120	12	Clear	C, CC-8	3	1000	—	5000
			14669-6		250Q/CL/DC	130	12	Clear	C, CC-8	3	1000	—	5000
500	T4	Mini-Can	38079-0		500Q/CL EVR	120	12	Clear	C, C-8	3⅝	2000	—	10,000
750	T5	Med. 2-Pin	26972-0		750Q/CL EHG	120	24	Clear	C, CC-8	4¼	2000	—	15,000
HALOGEN DOUBLE-ENDED LINEAR LAMP BLISTER-CARDED (99)													
100	T3	RSC	20352-1		BC100T3Q/CL	120	12	Blister Card	C, C-8	3⅛	2000	—	1400
150	T3	RSC	20353-9		BC150T3Q/CL	120	12	Blister Card	C, C-8	3⅛	2000	—	2400
			20343-0		BC150T3Q/CL LONG	120	12	Blister Card	C, C-8	4⅝	1500	—	2400
250	T3	RSC	20360-4		BC250T3Q/CL	120	12	Blister Card	C, C-8	3⅛	1500	—	4000
300	T3	RSC	20355-4		BC300T3Q/CL	120	12	Blister Card	C, C-8	4 1/16	2000	—	5200
			20336-4		BC300T3Q/CL/TP	120	12	Blister Card	C, C-8	4 1/16	2000	—	5200
500	T3	RSC	20356-2		BC500T3Q/CL	120	12	Blister Card	C, C-8	4 1/16	2000	—	9500
			20341-4		BC500T3Q/CL/TP	120	12	Blister Card	C, C-8	4 1/16	2000	—	9500
HALOGEN DOUBLE-ENDED LINEAR LAMP (99)													
300	T3	RSC	39282-9		300T3Q/CL EHM	120	12	Clear	C, C-8	4 1/16	2000	—	5200
500	T3	RSC	13223-3		500T3Q/CL	125–130	12	Clear	C, C-8	4 1/16	2000	—	9200
			20010-5		500T3Q/CL FCL	120	12	Clear	C, C-8	4 1/16	2000	—	9500
1000	T3	RSC	15040-9		1000T3Q/CL	240	12	Clear	C, C-8	10 1/16	2000	—	21,500
1500	T3	RSC	15039-1		1500T3Q/CL	277	12	Clear	C, C-8	10 1/16	2000	—	33,000
			13226-6		1500T3Q/CL	240	12	Clear	C, C-8	10 1/16	2000	—	32,250
HALOGEN MAINS-VOLTAGE CAPSULE LAMP BLISTER-CARDED (95)													
35	T4	GY8.6	20345-5		BC35W/T4/120V/CAPSULE	120	12	Blister Card	C. CC2V	1 3/16	2500	—	400
50	T4	GY8.6	20348-9		BC50W/T4/120V/CAPSULE	120	12	Blister Card	C, C-8	2¼	2500	—	600
75	T4	GY8.6	20349-7		BC75W/T4/120V/CAPSULE	120	12	Blister Card	C, C-8	2¼	2000	—	1200
100	T4	GY8.6	20346-3		BC100W/T4/120V/CAPSULE	120	12	Blister Card	C, C-8	2¼	2500	—	1650

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HALOGEN LAMPS

Low-Voltage Capsule Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class, Filament	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
HALOGEN LOW-VOLTAGE CAPSULE LAMP BLISTER-CARDED (95)													
10	T3	G4	20361-2		BC10W/T3/12V	12	12	Blister Card	C, C-8	1¼	2000	—	100
20	T3	G4	20329-9		BC20W/T3/12V	12	12	Blister Card	C, C-8	1¼	2000	—	250
35	T4	GY6.35	20324-9		BC35W/T4/12V	12	12	Blister Card	C, C-8	1¾	2000	—	465
50	T4	GY6.35	20330-7		BC50W/T4/12V	12	12	Blister Card	C, C-8	1¾	2000	—	700
75	T4	GY6.35	20342-2		BC75W/T4/12V	12	12	Blister Card	C, C-8	1¾	2000	—	1100
HALOGEN LOW-VOLTAGE LANDSCAPE CAPSULE LAMP BLISTER-CARDED (95)													
10	T3	G4	20361-2		BC10W/T3/LAND/TP	12	12	Blister Card	C, C-8	1¼	2000	—	100
20	T3	G4	15681-0		BC20W/T3/LAND/TP	12	12	Blister Card	C, C-8	1¼	2000	—	250
50	T4	GY6.35	15682-8		BC50W/T4/12V	12	12	Blister Card	C, C-8	1¼	2000	—	465
HALOGEN LOW-VOLTAGE CAPSULE LAMP													
All Lamps Contain UV Block and are Low Pressure (95)													
10	T3	G4	23262-9		10W/T3/12V	12	100	Capsule Type 13284	C, C-8	1¼	2000	—	140
20	T3	G4	23264-5		20W/T3/12V	12	100	Capsule Type 13078	C, C-8	1¼	2000	—	320
35	T4	GY6.35	29553-5		35W/T4/12V	12	100	Capsule Type 13103	C, C-8	1¾	2000	—	600
50	T4	GY6.35	23265-2		50W/T4/12V	12	100	Capsule Type 13079	C, C-8	1¾	2000	—	800

For the most current product information, go to the e-catalog on **www.philips.com**

Halogen symbols and footnotes located on page 116

T3
G4

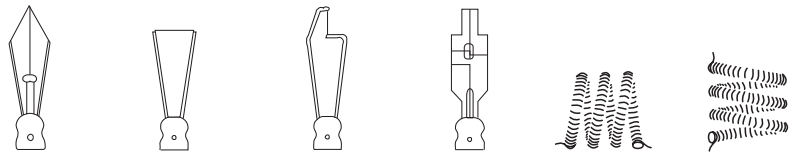
T4
GY6.35

HALOGEN LAMPS

Filament Designations, Base Types and Bulb Shapes

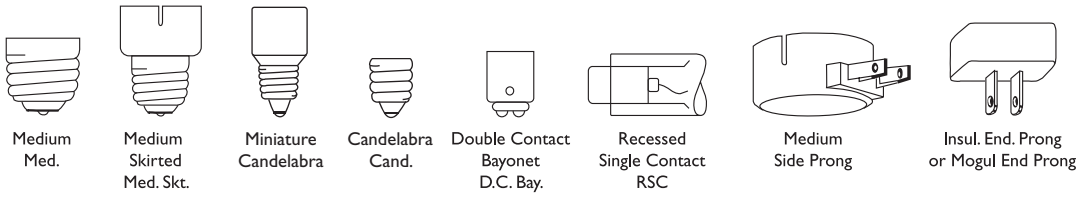
FILAMENT DESIGNATIONS (NOT ACTUAL SIZES)

Filament Designations consist of a letter or letters to indicate how the wire is coiled and an arbitrary number sometimes followed by a letter to indicate the arrangement of the filament on the supports. Prefix letters include C (coil) — wire is wound into a helical coil or it may be deeply fluted; CC (coiled coil) — wire is wound into a helical coil and this coiled wire again wound into a helical coil. Some of the more commonly used types of filament arrangements are illustrated.



C-2V CC-2V | C-6 CC-6 | C-8 CC-8 | 2CC-8 | CC-6 | CC-8

BASE TYPES (NOT ACTUAL SIZES)



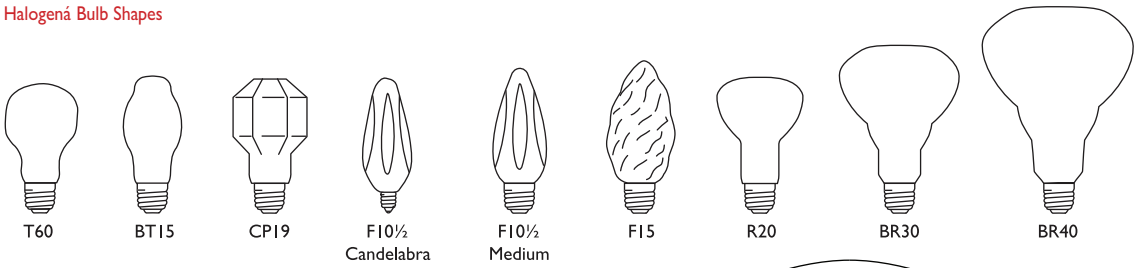
Medium Med. | Medium Skirted Med. Skt. | Miniature Candelabra | Candelabra Cand. | Double Contact Bayonet D.C. Bay. | Recessed Single Contact RSC | Medium Side Prong | Insul. End. Prong or Mogul End Prong

GU4 | GU5.3 | Medium 2-Pin | B15d | BA15d | G4 | GY6.35 | GY8.6 | GU10 | G53 | GU7

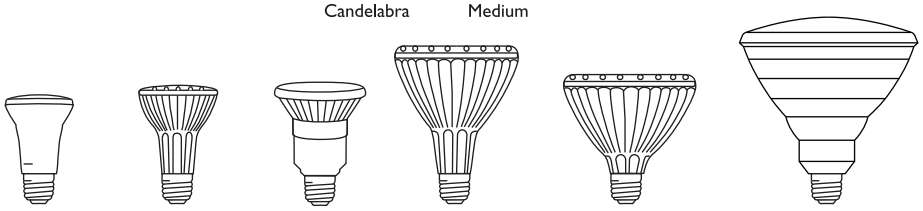
BULB SHAPES (NOT ACTUAL SIZES)

The size and shape of a bulb is designated by a letter or letters followed by a number. The letter indicates the shape of the bulb while the number indicates the diameter of the bulb in eighths of an inch. For example, "T10" indicates a tubular shaped bulb having a diameter of 1⅛ or 1¼ inches. The following illustrations show some of the more popular bulb shapes and sizes.

Halogená Bulb Shapes

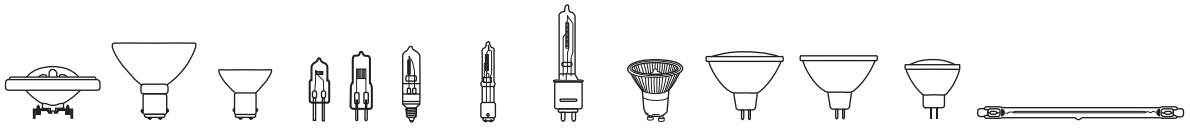


T60 | BT15 | CP19 | F10½ Candelabra | F10½ Medium | F15 | R20 | BR30 | BR40

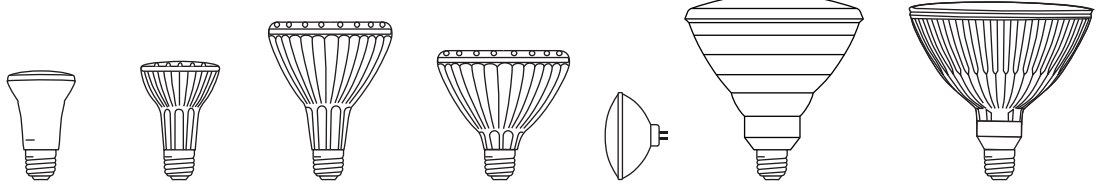


PAR16 | PAR20 | PAR20 Electronic | PAR30L | PAR30S | PAR38 Standard Reflector

Halogen Bulb Shapes



ALU-Pro III | 56mm ALR | 37mm ALR | T3 | T4 | T4 Mini-Can | T4 DC Bay | T5 Med. 2-Pin | Twistline GU10 | MRC16 | MR16 | MRC11 | T3 RSC



PAR16 | PAR20 | PAR30L | PAR30S | PAR36 | PAR38 Standard Reflector | PAR38 DiOptic Reflector

HALOGEN LAMPS

For the most current product information, go to the e-catalog on www.philips.com

□ Exclusive to Philips Lighting Company

$ Energy Saving Product

♦ Maximum Beam Candlepower

Ⓔ This Bulb Meets US Federal Minimum Efficiency Standards

† New since last printing

* Two Lamp Carded Pack

‡ Quantity shown is minimum shipping container—refer to Net Price Schedule for number of lamps to qualify as a standard case

(82) CAUTION: To avoid deterioration of lampholder by heat, use only heat resistant lampholders or fixtures listed by a nationally recognized electrical testing organization for use with reflector or PAR lamps.

(86) PAR Halogen Caution Notice: Before using bulb, see operating instructions on inside flap. Adherence to the operating instructions will reduce the risk of personal injury or fire. The filament capsule contained inside this glass bulb is pressurized, operates at high temperature and could unexpectedly shatter. Should the outer bulb break, particles of extremely hot glass could be discharged into the fixture and/or the surrounding environment, thereby creating a risk of personal injury or fire. **Operating Instructions:** Before replacing, turn off power and let lamp cool to avoid electrical shock or burn.

— For indoor or outdoor use. A weather-protected fixture is recommended for wet locations.

— Suitable for use in open fixtures.

— Do not exceed the maximum wattage rating of the fixture.

— Do not use if outer glass is scratched or broken since it may break during operation or removal.

— If outer glass breaks the lamp may continue to light, however, immediately discontinue use.

— Due to the heat that radiates from the bulb, do not use in close proximity to combustible materials or objects susceptible to drying or fading.

— Manage in accord with disposal laws.

(91) CAUTION: Do not touch inner capsule with bare hands. Fingerprints may result in shorter life. Remove fingerprints with alcohol. **THIS LAMP IS PRESSURIZED AND COULD SHATTER** so to avoid injury and to avoid exposure to
ultraviolet radiation, use only in fixtures that provide a protective shield of tempered glass. Provide adequate ventilation to ensure that seal temperature does not exceed 350°C and use only in fixtures rated for the wattage stated on this package. To avoid risks of burns or other injury, turn power off and allow lamp to fully cool before attempting to replace. Socket condition may affect lamp life. Inspect and replace socket if deterioration has occurred.

(92) CAUTION: THIS LAMP IS PRESSURIZED AND COULD SHATTER so to avoid injury and to avoid exposure to ultraviolet radiation, this lamp should be used in a fixture that provides a protective shield of tempered glass. Provide adequate ventilation to ensure that seal temperature does not exceed 350° C and use only in fixtures rated for the wattage stated on this package. To avoid risks of burns or other injury, turn power off and allow lamp to fully cool before attempting to replace. Socket condition may affect lamp life. Inspect and replace socket if deterioration has occurred.

(93) Rated average life is the length of operation (in hours) at which point an average of 50% of the lamps will still be operational and 50% will not.

(95) NOTICE: Do not touch bulb with bare hands. Fingerprints may result in shorter life. Remove fingerprints with alcohol.

CAUTION: THIS LAMP IS PRESSURIZED AND COULD SHATTER so to avoid injury and to avoid exposure to ultraviolet radiation, use only in fixtures that provide a protective shield of tempered glass. Provide adequate ventilation to ensure that seal temperature does not exceed 350° C and use only in fixtures rated for the wattage stated on this package. To avoid risks of burns or other injury, turn power off and allow lamp to fully cool before attempting to replace. Socket condition may affect lamp life. Inspect and replace socket if deterioration has occurred.

(96) Operating Instructions: Do not use lamp in close proximity to combustible materials. If used outdoors, use in an enclosed fixture only. If used indoors, no additional shield is required. Can be operated in all positions.

CAUTION: Read operating instructions before use. If outer glass breaks, turn power off immediately and avoid touching any metal components. To avoid potential burn and electrical shock during lamp replacement, always turn power off and let lamp cool before replacing bulb.

(97) Operating Instructions: Before replacing, turn off power and let lamp cool to avoid electrical shock or burn. For indoor use only. Do not allow hot bulb to come in contact with liquid or metal parts of the fixture as glass may shatter. Do not exceed the maximum wattage rating of the fixture. Do not use if outer glass is scratched or broken since it may break during operation or removal. If outer glass breaks the lamp may continue to light, however, immediately discontinue use. Due to the heat that radiates from the bulb, do not use in close proximity to combustible materials or objects susceptible to drying or fading. Manage in accord with disposal laws.

CAUTION: Adherence to the operating instructions will reduce the risk of personal injury or fire. The filament capsule contained inside this glass bulb is pressurized, operates at high temperature and could unexpectedly shatter. Should the outer bulb break, particles of extremely hot glass could be discharged into the fixture and/or the surrounding environment, thereby creating a risk of personal injury or fire.

(98) NOTICE: This twistline has a GU10 base and may be used in fixtures that have either GU10 or GZ10 sockets. **Operating Instructions:** Do not use in close proximity to combustible materials or objects adversely affected by drying or fading. Can be operated in all positions.

CAUTION: THIS LAMP IS PRESSURIZED AND COULD SHATTER so to avoid injury and to avoid exposure to
ultraviolet radiation, this lamp should be used in a fixture that provides a protective shield of tempered glass. If outer glass breaks, immediately discontinue use. Always turn power off and let lamp cool before removal to avoid potential burn or electric shock.

(99) WARNING: BULB OPERATES AT VERY HIGH TEMPERATURES AND MUST BE USED PROPERLY TO AVOID/REDUCE RISK OF FIRE. Do not use bulbs greater than 300 watts in indoor residential fixtures. Use only in fixtures specifying this bulb type and that meet revised UL 153 standard for tungsten-halogen torchiere lamps. Bulb is pressurized and could shatter and should only be used in fixtures that provide a protective shield of tempered glass. To avoid exposure to ultraviolet radiation which could cause skin and eye irritation use only in fixtures that provide a protective shield of tempered glass.
NOTICE: Do not touch bulb with bare hands. Fingerprints may result in reduced performance unless they are removed with alcohol. When operating, bulb is hot. To avoid risks of burns or injury, turn power off and allow bulb to cool before replacing. Socket conditions may affect bulb life. Inspect and replace socket if deterioration has occurred. Provide adequate ventilation to ensure that seal temperature does not exceed 350°C. **TO AVOID/REDUCE RISK OF FIRE, DO NOT USE NEAR COMBUSTIBLE MATERIALS.**

(101) Available for sale only in the state of CA

(102) Complies with CEC-140-2008-001, Part 1605.2 State Standards for Federally Regulated Appliances, Table K-3. For more information go to www.energy.ca.gov/siting/title20/.

(103) Complies with the Energy Independence and Security Act of 2007 (Public Law 110-140). Section 321—Efficient Light Bulbs.

(104) Complies with the Energy Independence and Security Act of 2007 (Public Law 110-140), Section 322—Incandescent Reflector Lamp Efficiency Standards.

Incandescent lighting

Create a brighter standard

Dramatically changing the look of a room can be as easy as changing a light bulb.

Natural Light Lamps help you see things the way they should be. Natural Light's distinctive blue coating reduces dull light effects to provide light that is more vibrant and natural.

DuraMax Long Life Lamps reduce the hassle of replacing light bulbs every few months, since all DuraMax products last longer than standard incandescent light bulbs.

Philips family of Specialty Incandescents provide the perfect light for accent and display lighting as well as general lighting in a variety of applications. From tubular shapes and appliance bulbs, to colored lamps for special effects, this family of lamps is ideal for professional and consumer applications.

UPGRADE TO ENERGY EFFICIENT LAMPS

CURRENT PRODUCT	PHILIPS UPGRADE PRODUCT	BENEFIT	PAGE
Incandescent A19	Natural Light A19	> Vibrant light similar to natural daylight > Distinctive blue coating reduces dull light effects	124
40W R20 Incandescent	DuraMax R20 Flood	> Long life household lighting reduces the hassle of replacing bulbs > Soft, white accent light is suited for indoor track, recessed and pendant fixtures	121

INCANDESCENT LAMPS

DuraMax Long Life

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP*	Lumens
DURAMAX LONG LIFE SOFT WHITE														
15	A15	Med.	16860-9	▲	15A/WL 12/2	120	24	Soft White Long Life	B, C-9		3½	3000		115
25	A19	Med.	16868-2	▲	25A/WL 12/2	120	24	Soft White Long Life	C, CC-6		4⅞	3000		235
30	A21	3 Ct. Med.	16947-4	▲ (8)	30/100A/WL 12/1	120	12	Soft White Long Life 3-Way	C, 2CC-8		5⅜	1750		285
70														920
100														1205
40	A19	Med. ++	16869-0	▲	40A/WL 12/4	120	48	Soft White Long Life	C, CC-6		4⅞	1500		475
			16737-9	▲	40A/WL 24/4	120	96	Soft White Long Life	C, CC-6		4⅞	1500		475
50	A21	3 Ct. Med.	16948-2	▲ (8)	50/150A/WL 12/1	120	12	Soft White Long Life 3-Way	C, 2CC-8		5⅜	1750		575
100														1440
150														2015
50	A21	3 Ct. Med.	16949-0	▲ (8)	50/250A/WL 12/1	120	12	Soft White Long Life	C, 2CC-8		5⅜	1750		575
200														3120
250														3695
60	A19	Med. ++	16874-0	▲	60A/WL 12/4	120	48	Soft White Long Life	C, CC-6		4⅞	1500		830
			16738-7	▲	60A/WL 24/4	120	96	Soft White Long Life	C, CC-6		4⅞	1500		830
		Med.	16877-3	▲	60A/WL 120/4	120	480	Soft White Long Life	C, CC-6		4⅞	1500		830
75	A19	Med. ++	16879-9	▲	75A/WL 12/4	120	48	Soft White Long Life	C, CC-6		4⅞	1500		1060
			16739-5	▲	75A/WL 24/4	120	96	Soft White Long Life	C, CC-6		4⅞	1500		1060
100	A19	Med. ++	16862-5	▲	100A/WL 12/4	120	48	Soft White Long Life	C, CC-6		4⅞	1500		1440
			16740-3	▲	100A/WL 24/4	120	96	Soft White Long Life	C, CC-8		4⅞	1500		1440
150	A21	Med.	16866-6	▲	150A/WL 12/1	120	12	Soft White Long Life	C, CC-8		5⅜	2000		2310
200	A21	Med.	16867-4	▲	200A/WL 6/1	120	6	Soft White Long Life	C, CC-8		5⅜	1500		3100

For the most current product information, go to the e-catalog on **www.philips.com**

Incandescent symbols and footnotes located on page 149


A15
Med.


A19
Med.


A21
Med.

INCANDESCENT LAMPS

DuraMax Long Life

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
DURAMAX LONG LIFE GLOBES														
25	G25	Med.	16748-6	▲	25G25/W/LL 12/1	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		210
			16887-2	▲	25G25/CL/LL 12/1	120	12	Clear Long Life Globe	C, CC-6		4 7/16	2000		235
			16901-1	▲	25G25/CL/LL 4/3	120	12	Clear Long Life Globe	C, CC-6		4 7/16	2000		235
			16902-9	▲	25G25/W/LL 4/3	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		210
40	G25	Med.	16903-7	▲	40G25/CL/LL 4/3	120	12	Clear Long Life Globe	C, CC-6		4 7/16	2000		460
			16904-5	▲	40G25/W/LL 4/3	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		415
			16746-0	▲	40G25/W/LL 12/1	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		415
			16747-8	▲	40G25/CL/LL 12/1	120	12	Clear Long Life Globe	C, CC-6		4 7/16	2000		460
			16702-3	▲	40G25/CT 6/1	120	6	Clear Long Life Chrome Top	C, C-9		4 7/16	2000		200
	G40	Med.	16857-5	▲	40G40/CL/LL 6/1	120	6	Clear Long Life Globe	C, C-9		6 15/16	3000		372
			16858-3	▲	40G40/W/LL 6/1	120	6	White Long Life Globe	C, C-9		6 15/16	3000		335
60	G25	Med.	16749-4	▲	60G25/W/LL 12/1	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		700
			16896-2	▲	60G25/CL/LL 12/1	120	12	Clear Long Life Globe	C, CC-6		4 7/16	2000		775
			16899-6	▲	60G25/CL/LL 4/3	120	12	Clear Long Life Globe	C, CC-6		4 7/16	2000		775
			16900-3	▲	60G25/W/LL 4/3	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		700
	G30	Med.	16849-2	▲	60G30/W/LL 6/1	120	6	White Long Life Globe	C, C-9		5 1/2	3000		580
	G40	Med.	16851-8	▲	60G40/W/LL 6/1	120	6	White Long Life Globe	C, C-9		6 15/16	3000		595
			16852-6	▲	60G40/CL/LL 6/1	120	6	Clear Long Life Globe	C, C-9		6 15/16	3000		665
100	G25	Med.	13423-9	▲	100G25/W/LL 12/1	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		1180
	G30	Med.	16850-0	▲	100G30/W/LL 6/1	120	6	White Long Life Globe	C, C-9		5 1/2	3000		945
	G40	Med.	16853-4	▲	100G40/W/LL 6/1	120	6	White Long Life Globe	C, C-9		6 15/16	3000		985
			16859-1	▲	100G40/CL/LL 6/1	120	6	Clear Long Life Globe	C, C-9		6 15/16	3000		1100
150	G40	Med.	16854-2	▲	150G40/W/L 6/1	120	6	White Long Life Globe	C, C-9		6 15/16	3000		1770
DURAMAX LONG LIFE REFLECTORS (87)														
30	R20	Med.	16753-6	▲	30R20/LL 12/1	120	12	Frost Long Life Reflector	C, CC-6		3 15/16	2500	350	205
45	R20	Med.	20323-2	▲	45R20/LL 12/1	120	12	Long Life Reflector Flood	C, CC-6		3 15/16	2500		385
	BR30	Med.	16751-0	▲	45BR30/FL55/LL 12/1	120	12	Long Life Reflector Flood	C, CC-6		5 3/8	2500		340
65	BR30	Med.	16768-4	▲	65BR30/FL55/LL 12/1	120	12	Long Life Reflector Flood	C, CC-6		5 3/8	2500	510	595
			16769-2	▲	65BR30/SP20/LL 12/1	120	12	Long Life Reflector Spot	C, CC-6		5 3/8	2500	530	610
	BR40	Med.	16741-1	▲	65BR/FL60/LL 8/1	120	8	Long Life Reflector Flood	C, CC-6		6 1/2	2500	500	630

For the most current product information, go to the e-catalog on **www.philips.com**

Incandescent symbols and footnotes located on page 149

INCANDESCENT LAMPS

DuraMax Long Life

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP*	Lumens
DURAMAX LONG LIFE SPARKLING CLEAR														
40	A19	Med. ++	16797-2	▲	40A/CL/LL 12/2	120	24	Clear Long Life	C, CC-6		4⅞	1500		505
60	A19	Med. ++	16794-0	▲	60A/CL/LL 12/2	120	24	Clear Long Life	C, CC-6		4⅞	1500		900
75	A19	Med. ++	16801-3	▲	75A/CL/LL 12/2	120	24	Clear Long Life	C, CC-6		4⅞	1500		1080
100	A19	Med. ++	15008-6	▲	100A/CL/LL 12/2	120	24	Clear Long Life	C, CC-6		4⅞	1500		1440
150	A21	Med.	15009-4	▲	150A/CL/LL 12/1 TP	120	12	Clear Long Life	C, CC-8		5⅝	1500		2000
200	A23	Med.	16798-0	▲	200A/CL/LL 6/1	120	6	Clear Long Life	C, CC-8		6⅝	1500		3400
DURAMAX LONG LIFE FAN LIGHTS														
40	A15	Med.	16934-2	▲	BC40A15/FAN/CL/LL 6/2	120	12	Clear Long Life Fan	C, C-9		3½	2000		395
			16935-9	▲	BC40A15/FAN/W/LL 6/2	120	12	White Long Life Fan	C, C-9		3½	2000		365
60	A15	Med.	16945-8	▲	BC60A15/FAN/W/LL 6/2	120	12	White Long Life Fan	C, C-9		3½	2000		570
			16946-6	▲	BC60A15/FAN/CL/LL 6/2	120	12	Clear Long Life Fan	C, C-9		3½	2000		630
DURAMAX LONG LIFE DECORATIVES (12)														
3	CA10	Cand.	16698-2	▲	BC3CA10C/CL/LL 6/1	120	6	Clear Long Life Flicker Flame	B, C-7A		4⅛	2000		
15	BA9	Cand.	16811-2	▲	BC15BA9C/CL/LL 6/2	120	12	Clear Long Life Bent Tip	B, CC-2V, C-7A		4⅜	2000		110
			16696-6	▲	BC15BA9C/CL/LL 6/4	120	24	Clear Long Life Bent Tip	B, CC-2V, C-7A		3¾	2000		110
	F10	Cand.	16830-2	▲	BC15F10C/CL/LL 6/2	120	12	Clear Long Life Flame	B, C-7A		3⅛	2000		95
			16831-0	▲	BC15F10C/A/LL 6/2	120	12	Amber Long Life Flame	B, C-7A		3⅛	2000		85
25	BA9	Cand.	16719-7	▲	BC25BA9C/CL/LL 6/4	120	24	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		150
			16806-2	▲	BC25BA9C/CL/LL 6/2	120	12	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		150
			16810-4	▲	BC25BA9C/F/LL 6/2	120	12	Frost Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		145
	BA9½	Med.	16819-5	▲	BC25BA9-½/CL/LL 6/2	120	12	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅛	2000		150
	B10½	Cand.	16824-5	▲	BC25B10-½C/CL/LL 6/2	120	12	Clear Long Life Blunt Tip	C, CC-2V, C-7A		4⅛	2000		150
	B13	Med.	16827-8	▲	BC25B13/CL/LL 6/2	120	12	Clear Long Life Blunt Tip	C, C-7A		4⅛	2000		150
	CA8	Cand.	13568-1	▲	BC25CA8C/CL/LL 6/2	120	12	Clear Petite Long Life Bent Tip	C, CC-2V		3½	2000		220

For the most current product information, go to the e-catalog on **www.philips.com**

Incandescent symbols and footnotes located on page 149

INCANDESCENT LAMPS

DuraMax Long Life

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
DURAMAX LONG LIFE DECORATIVES CONTINUED														
25	F10	Cand.	16832-8	▲	BC25F10C/CL/LL 6/2	120	12	Clear Long Life Flame	B, C-7A		3⅛	2000		105
	F15	Med.	16833-6	▲	BC25F15/CL/LL 6/2	120	12	Clear Long Life Flame	B, C-9		4½	2000		150
			16839-3	▲	BC25F15/IR/LL 6/2	120	12	Iridescent Long Life Flame	C, C-9		4½	2000		150
			16841-9	▲	BC25F15/A/LL 6/2	120	12	Amber Long Life Flame	B, C-9		4½	2000		130
	G16½	Cand.	16845-0	▲	BC25G16-½C/CL/LL 6/2	120	12	Clear Long Life Globe	B, C-7A		3	2000		200
			16847-6	▲	BC25G16-½C/W/LL 6/2	120	12	White Long Life Globe	B, C-7A		3	2000		165
			13535-0	▲	BC25G16-½/CL/LL 6/2	120	12	Clear Long Life Globe	C, CC-2V		2¾	2000		180
			13534-3	▲	BC25G16-½/W/LL 6/2	120	12	White Long Life Globe	C, CC-2V		2¾	2000		160
40	BA9	Cand.	16720-5	▲	BC40BA9C/CL/LL 6/4	120	24	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		300
			16807-0	▲	BC40BA9C/CL/LL 6/2	120	12	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		300
			16809-6	▲	BC40BA9C/F/LL 6/2	120	12	Frost Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		295
	BA9½	Med.	16760-1	▲	BC40BA9-½/CL/LL 6/4	120	24	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅛	2000		300
			16820-3	▲	BC40BA9-½/CL/LL 6/2	120	12	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅛	2000		300
			16821-1	▲	BC40BA9-½/F/LL 6/2	120	12	Frost Long Life Bent Tip	C, CC-2V, C-7A		4⅛	2000		295
	B10½	Cand.	16825-2	▲	BC40B10-½C/CL/LL 6/2	120	12	Clear Long Life Blunt Tip	C, CC-2V		4⅛	2000		300
	B13	Med.	16828-6	▲	BC40B13/CL/LL 6/2	120	12	Clear Long Life Blunt Tip	C, C-7A		4⅛	2000		300
	F15	Med.	16835-1	▲	BC40F15/CL/LL 6/2	120	12	Clear Long Life Flame	C, C-9		4½	2000		385
			16837-7	▲	BC40F15/IR/LL 6/2	120	12	Iridescent Long Life Flame	C, C-9		4½	2000		370
			16838-5	▲	BC40F15/W/LL 6/2	120	12	White Long Life Flame	C, C-9		4½	2000		300
	G16½	Cand.	16846-8	▲	BC40G16-½C/CL/LL 6/2	120	12	Clear Long Life Globe	C, CC-2V, C-7A		3	2000		300
			16848-4	▲	BC40G16-½C/W/LL 6/2	120	12	White Long Life Globe	C, CC-2V, C-7A		3	2000		245
	G16½	Med.	13537-6	▲	BC40G16-½/CL/LL 6/2	120	12	Clear Long Life Globe	C, CC-2V		2¾	2000		300
			13536-8	▲	BC40G16-½/W/LL 6/2	120	12	White Long Life Globe	C, CC-2V		2¾	2000		270
60	BA9	Cand.	16808-8	▲	BC60BA9C/CL/LL 6/2	120	12	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		550
			16721-3	▲	BC60BA9C/CL/LL 6/4	120	24	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		550
			16805-4	▲	BC60BA9C/F/LL 6/2	120	12	Frost Long Life Bent Tip	C, CC-2V, C-7A		4⅛	2000		545
	BA9½	Med.	16822-9	▲	BC60BA9-½/CL/LL 6/2	120	12	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅛	2000		550
			16823-7	▲	BC60BA9-½/F/LL 6/2	120	12	Frost Long Life Bent Tip	C, CC-2V, C-7A		4⅛	2000		545
	B10½	Cand.	16826-0	▲	BC60B10-½C/CL/LL 6/2	120	12	Clear Long Life Blunt Tip	C, CC-2V		4⅛	2000		550
	B13	Med.	16829-4	▲	BC60B13/CL/LL 6/2	120	12	Clear Long Life Blunt Tip	C, C-7A		4⅛	2000		550
	F15	Med.	16842-7	▲	BC60F15/CL/LL 6/2	120	12	Clear Long Life Flame	C, C-9		4½	2000		630
	G16½	Cand.	16699-0	▲	BC60G16-½C/CL/LL 6/2	120	12	Clear Long Life Globe	C, CC-2V		3	2000		540
			16700-7	▲	BC60G16-½C/W/LL 6/2	120	12	White Long Life Globe	C, CC-2V		3	2000		450
	G16½	Med.	13538-4	▲	BC60G16-½/CL/LL 6/2	120	12	Clear Long Life Globe	C, CC-2V		2¾	2000		540
			13530-1	▲	BC60G16-½/W/LL 6/2	120	12	White Long Life Globe	C, CC-2V		2¾	2000		420
100	F20	Med.	16844-3	▲	100F20/POSTLT/CL/LL 6/1	120	6	Clear Long Life PostLight	C, C-9		5⅛	4000		1250

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INCANDESCENT LAMPS

Natural Light

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP*	Lumens
NATURAL LIGHT STANDARD														
40	A19	Med.	13558-2	▲	40A/NTL 12/4	120	48	Natural Light Standard	C, CC-6		4 7/16	1000		400
60	A19	Med.	13559-0	▲	60A/NTL 12/4	120	48	Natural Light Standard	C, CC-6		4 7/16	1000		680
75	A19	Med.	13560-8	▲	75A/NTL 12/4	120	48	Natural Light Standard	C, CC-6		4 7/16	750		950
100	A19	Med.	13561-6	▲	100A/NTL 12/4	120	48	Natural Light Standard	C, CC-6		4 7/16	750		1350
NATURAL LIGHT STANDARD LONG LIFE														
75	A19	Med.	15129-0		75A/NTL/2X 12/4	120	48	Natural Light Standard Long Life	C, CC-6		4 7/16	1500		790
100	A19	Med.	15130-8		100A/NTL/2X 12/4	120	48	Natural Light Standard Long Life	C, CC-6		4 7/16	1500		1210
NATURAL LIGHT 3-WAY														
50	A21	3 Ct. Med.	13564-0	▲ (8)	50/150A/NTL 12/1	120	12	Natural Light 3-Way	C, 2CC-6		5 5/16	1200		490
100														1250
150														1740
NATURAL LIGHT GLOBE														
40	G25	Med.	13563-3	▲	40G25/NTL 6/1	120	6	Natural Light Globe	C, CC-6		4 7/16	1500		320
NATURAL LIGHT FAN														
40	A15	Med.	13565-7	▲	BC40A15/FAN/NTL 6/2	120	12	Natural Light Fan	C, C-9		3 1/2	1500		340
NATURAL LIGHT REFLECTOR														
50	R20	Med.	13797-5	▲ (87)	50R20/FL/NTL 12/1	120	12	Natural Light Reflector	C, CC-6		3 5/16	2000		265
65	BR30	Med.	13785-1	▲ (87)	65BR30/FL/NTL 12/1	120	12	Natural Light Reflector	C, CC-6		5 3/8	2000		500
NATURAL LIGHT DECORATIVE														
40	G16½	Cand.	14129-1	▲ (12)	BC40G16-½C/NTL 6/2	120	12	Natural Light Decorative	C, CC-2V, C-7A		3	2000		270
	B10½	Cand.	14125-9	▲ (12)	BC40B10-½C/NTL 6/2	120	12	Natural Light Decorative	C, CC-2V, C-7A		4 1/16	2000		270
	B13	Med.	14127-5	▲ (12)	BC40B13/NTL 6/2	120	12	Natural Light Decorative	C, C-7A, CC-2V		4 1/16	2000		270

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Natural Light A19 | Natural Light A21 3-Way | Natural Light G25 | Natural Light A15 | Natural Light R20 | Natural Light BR30 | Natural Light G16½ | Natural Light B10½ | Natural Light B13

INCANDESCENT LAMPS

INCANDESCENT LAMPS (BY WATTAGE)

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
3	S6	Cand.	37374-6	▲	3S6/5	120–130	48	Clear Indicator	B, C-7A		1⅞	3000		12
4	C-7	Cand.	25706-3	▲	BC4C7 12/2	120	24	Clear Night Light	B, C-7A		2⅛	3000		16
			24741-1	▲	BC4C7/4 12/4	120	48	Clear Night Light	B, C-7A		2⅛	3000		16
			25708-9	▲	BC4C7/W 12/2	120	24	White Night Light	B, C-7A		2⅛	3000		14
6	S6	Cand.	24835-1		6S6	120–130	48	Clear Indicator	B, C-7A		1⅞	1500		39
			23462-5		6S6	145	48	Clear Indicator	B, C-7A		1⅞	1500		37
			23476-5		6S6	155	48	Clear Indicator	B, C-7A		1⅞	1500		37
			23477-3		6S6/3	130	48	Clear Vibration	B, C-7A		1⅞	1500		18
	S6	Inter. D.C. Bay	37376-1		6S6DC	120–130	48	Clear Indicator	B, C-7A	1⅛	1 3⁄16	1500		39
7	C-7	Cand.	37378-7	▲	7C7	120–130	24	Clear Indicator	B, C-7A		2⅛	3000		45
			25714-7	▲	BC7C7/W 12/2	120	24	White Night Light	B, C-7A		2⅛	3000		35
7½	S11	Med.	24811-2	▲	7½ S	120–130	24	Clear	B, C-7A		2¼	1400		45
			37380-3	▲	7½ S/W	120–130	24	White Night Light	B, C-7A		2¼	1400		35
10	S6	Cand.	23485-6	▲	10S6/10	230	48	Clear Indicator	B, C-7A		1⅞	1500		65
			23488-0	▲	10S6/10	250	48	Clear Indicator	B, C-7A		1⅞	1500		65
	S11	Inter.	37381-1	▲	10S11N	120–130	24	Clear	B C-7A	1⅜	2¼	1500		70
	S14	Med.	13828-9		10S14/IF	130	24	Frost Sign	B, C-9		3½	1500		82
			13829-7		10S14	120–130	24	Clear Sign	B, C-9		3½	1500		82
11	S14	Med.	13822-2		BC11S14/W 120V 6/1TP	120	6	White Sign	B, C-9		3½	3000		
			16706-4		BC11S14/F 130V 6/1PK	130	6		B, C-9		3½	3000		70
			16705-6		BC11S14/CL130V6/1PK	130	6	Clear Sign	B, C-9		3½	3000		70
			13830-5		11S14 120/130V 24/1	120–130	24		B, C-9		3½	3000		75
15	A15	Med.	14587-0	▲	15A15/CL	120–130	60	Clear	B, C-9	2⅜	3½	2500		110
			16860-9	▲	15A/WL 12/2	120	24	Soft White Long Life	B, C-9		3½	3000		115
			14585-4	▯	15A15/35	130	60	Frost Industrial Service	B, C-9		3½	3500		123
	T6	Cand.	23582-0	▲	15T6	120	24	Clear Switchboard	B, C-7A		3 1⁄16	2000		110
			24815-3	▲ (63)	15T6	140–150	24	Clear Switchboard	B, C-7A		3 1⁄16	2000		100
	T7	D.C. Bay	22307-3	(4)	15T7DC	120	24	Clear Appliance	B, C-7A		2¼	1000		104
	T7	Cand.	22308-1	▲(4)	15T7C	120	24	Clear Appliance	B, C-7A		2¼	1000		104
	T7	Inter.	24816-1	▲(4)	15T7N	120	24	Clear Appliance	B, C-7A		2¼	1000		104
	T8	Inter.	23594-5	▲	15T8N	120	24	Clear Appliance	B, C-7A		2⅝	1000		110
	T10	Med.	39041-9	▲	BC15T10 6/1	120	6	Clear Showcase	B, C-9		5⅝	2500		120

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INCANDESCENT LAMPS

INCANDESCENT LAMPS (BY WATTAGE) CONTINUED

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP*	Lumens
20	T6½	Inter.	24853-4		20T6-½IF	120	24	Frost Exit Sign	B, C-8		5½	5000		150
	T6½	D.C. Bay	24839-3		20T6-½DC/IF	120	24	Frost Exit Sign	B, C-8		5½	5000		150
			24838-5		20T6-½DC	120	24	Clear Exit Sign	B, C-8		5½	5000		160
25	A15	Med.	14584-7	▲	25A15/1	120	60	Frost Refrigerator	B, C-9		3½	1000		210
			16710-6	▲	BC25A15/IF 12/1	120	12	Frost Appliance	B, C-9		3½	1000		210
			16868-2	▲	25A/WL 12/2	120	24	Soft White Long Life	C, CC-6		4⅞	3000		235
			14421-2	▲	25A/TG 6/1	120	6	Transparent Green	B, C-9		3⅝	3000		
			14422-0	▲	25A/TR 6/1	120	6	Transparent Red	B, C-9		3⅝	3000		
			14423-8	▲	25A/TY 6/1	120	6	Transparent Yellow	B, C-9		3⅝	3000		
			14420-4	▲	25A/TB 6/1	120	6	Transparent Blue	B, C-9		3⅝	3000		
			14152-3	▲	25A	24	60	Frost	C, C-6		4¼	1000		345
			14153-1	▲	25A	34	60	Frost Train	C, C-6		4¼	1000		325
			25564-6	▲	25A/IF	120	48	Frost	C, CC-6		4⅞	2500		232
	A19	Med.	20178-0		25A/IF/TG 24/2	130	48	TuffGuard Coated Lamp	C, CC-6		4⅞	2500		
			25566-1	▲	25A/IF	130	48	Frost	C, CC-6		4⅞	2500		232
			25569-5	▲	25A/CL 24/2	120–130	48	Clear	C, CC-6		4⅞	2500		220
			14973-2	▲	25A/TF	120	120	Frost Silicone Coated	B, C-9		3⅝	2500		
			14160-6	▲	25A/R	120	60	Red	B, C-9		3⅝	2500		
			14158-0	▲	25A/Y	120	60	Yellow	B, C-9		3⅝	2500		
			37386-0	▲	25A/RS	120–130	120	Frost Rough Service	R, C-9		3⅝	1000		235
			37387-8	▯	25A19/35	120–130	60	Frost Industrial Service	B, C-9		3⅝	3500		220
	R14	Inter.	24828-6	■	R14N	120	24	Mini Refl. Lt. Fr. Actual Bulb Dia. 1¾"	C, CC-2V		2⅝	1500		200
			13336-3	■	BC25R14N 120V 6/1 TP	120	6	Mini Refl. Lt. Fr.	C, CC-2V		3½	1500		150
	T6½	Inter.	37388-6	▲	25T6-½IF	120–130	24	Frost Appliance	B, C-8		5½	1000		210
			37389-4	▲	25T6-½	120–130	24	Clear Appliance	B, C-8		5½	1000		220
	T6½	D.C. Bay	37392-8		25T6-½DC	120–130	24	Clear Appliance	B, C-8		5½	1000		220
	T8	D.C. Bay	24827-8	(4)	25T8DC	120	24	Clear Appliance	B, C-7A		2⅝	1000		210
	T8	Inter.	23593-7	▲ (4)	25T8N	120	24	Clear Appliance	B, C-7A		2⅝	1000		220
	T10	Med.	39040-1	▲	BC25T10/IF/TP 6/1	120	6	Frost Showcase	B, C-8		5⅝	1000		245
			13812-3	▲	25T10/IF 24/1	120–130	24	Frost Showcase	B, C-8		5⅝	1000		255
			38985-8	▲	BC25T10/TP 6/1	120	6	Clear Showcase	B, C-8		5⅝	1000		250
			13813-1	▲	25T10 24/1	120–130	24	Clear Showcase	B, C-8		5⅝	1000		260
			20179-8	▲	25T10/TG	120–130	24	TuffGuard Coated Clear Showcase	B, C-8		5⅝	1000		260

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INCANDESCENT LAMPS

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
INCANDESCENT LAMPS (BY WATTAGE) CONTINUED														
30	R20	Med.	22078-0	▲ (87)	30R20 12/1	130	12	Lt. Frost Reflector	C, CC-6		3⅜	2000		205
			20181-4	▲ (87)	30R20/TG 120V 12/1	120	12	TuffGuard Coated Reflector Lamp	C, CC-6		3⅜	2000		205
			20165-7	▲ (87)	30R20 12/1	120	12	Lt. Frost Reflector	C, CC-6		3⅜	2000		205
			14597-8	▯ (66)	30R20/SFL/TF	130	60	Frost Silicone Coated Reflector Sign	C, CC-6		3⅜	6000		210
			16753-6	▲ (87)	30R20/LL 12/1	120	12	Frost Long Life Reflector	C, CC-6		3⅜	2500	335	205
30	A21	3 Ct. Med.	16947-4	▲ (8)	30/100A/WL 12/1	120	12	Soft White Long Life 3-Way	C, 2CC-8		5⅛	1750		285
70														920
100														1205
			36662-5	▲ (8)	30/100A/W 12/1	120	12	Soft White 3-Way	C, 2CC-8		5⅛	1200		310
														945
														1255
34	A19	Med.	22234-9	▲ ✔ $	40A-34A/EW	120	48	Frost Econ-o-watt	C, CC-6		4⅞	1500		410
			22235-6	▲ $	40A-34A/EW	130	48	Frost Econ-o-watt	C, CC-6		4⅞	1500		400
								Ratings @ 120V = 30W				4245		305
38	A19	Med. *	21446-0		38A/CL/LL 12-2 WP TP	120	24	Clear Longer Life	C, CC-6		4⅞	1500		420
			21443-7		38A/W/TP 12/4	120	48	Soft White	C, CC-6		4⅞	1000		415
			21462-7		38A/W/TP 24/4	120	96	Soft White	C, CC-6		4⅞	1000		415
			21444-5		38A/CL	130	48	Clear	C, CC-6		4⅞	1500		420
			21447-8		38A/WL/TP 12/4	120	48	Soft White Longer Life	C, CC-6		4⅞	1500		385
			21495-7		38A/WL 24/4	120	96	Soft White Longer Life	C, CC-6		4⅞	1500		385
40	A15	Med.	29999-0	▲	BC40A15/CL/LL	120	12	Clear Longer Life Home Appliance	C, C-9		3½	1750		400
			37398-5	▲	40A15	120–130	120	Frost Home Appliance	C, C-9		3½	1000		415
			20182-2	▲	40A15/TG	120–130	120	TuffGuard Coated Frost Home Appliance	C, C-9		3½	1000		415
			14073-1	▲	40A15/CL PRO	130	24	ProPack Clear	C, C-9		3½	1000		415
			14963-3	▲ ▯ (66)	40A15/TF	120–130	120	Frost Refrigerator Silicone Coated	C, C-9		3½	1000		
			16934-2	▲	BC40A15/FAN/CL/LL 6/2	120	12	Clear Long Life Fan	C, C-9		3½	2000		395
			16935-9	▲	BC40A15/FAN/W/LL 6/2	120	12	White Long Life Fan	C, C-9		3½	2000		365
			20002-2	▲	40A15/22	120	120	Clear Home Oven	C, C-9		3½	1000		420
			13565-7	▲	BC40A15/FAN/NTL 6/2	120	12	Natural Light Fan	C, C-9		3½	1500		340
	A19	Med. ++	27081-9	▲	40A 12/4	120	48	Frost	C, CC-6		4⅞	1500		495
		Med. ++	16797-2	▲	40A/CL/LL 12/2	120	24	Clear Long Life	C, CC-6		4⅞	1500		505
		Med ++	16737-9	▲	40A/WL 24/4	120	96	Soft White Long Life	C, CC-6		4⅞	1500		475
			16869-0	▲	40A/WL 12/4	120	48	Soft White Long Life	C, CC-6		4⅞	1500		475
		Med ++	13558-2	▲	40A/NTL 12/4	120	48	Natural Light Standard	C, CC-6		4⅞	1000		400
		Med ++	37465-2	▲	40A	120	48	Frost	C, CC-6		4⅞	1500		495
			37466-0	▲	40A	130	48	Frost	C, CC-6		4⅞	1500		490
								Ratings @ 120V = 35W				4245		375
		Med ++	13993-1	▲	40A 120/1 PRO	130	120	Frost ProPack	C, CC-6		4⅞	1500		490
		Med ++	37399-3	▲	40A/CL	120–130	48	Clear	C, CC-6	3⅛	4⅞	1500		500
								Ratings @ 120V = 37W				2550		435
		Med	20183-0	▲	40A/CL/TG	120–130	48	TuffGuard Coated Clear	C, CC-6		4⅞	1500		500

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INCANDESCENT LAMPS

INCANDESCENT LAMPS (BY WATTAGE) CONTINUED

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP*	Lumens
40	K19	Med.	30728-0	▲	40K19/DL 6/2	120	12	Director	C, C-9		4⅛	1150		500
	R14	Med.	35454-8		40R14/SP	120	24	Light Fr. Mini. Refl.	C, CC-2V		2⅝	1500		250
			13355-3		BC40R14N 6/1 TP	120	6	Light Fr. Mini. Refl.	C, CC-2V		2⅝	1500		
			16704-9		BC-40R14/SP 120V 6/1PK TP	120	6	Surge Proof Light Mini. Refl.	C, CC-2V		2⅝	1500		250
	R16	Med.	13337-1		BC40R16/SP 6/1 TP	120	6	Surge Proof Light Mini. Refl.	C, CC-2V		3⅜	1500		250
	S11	Inter.	21216-7	▲	BC40S11/N TP 16/1	120	16	Clear High Intensity	C, CC-2V		2¼	500		440
			14075-6		40S11N/IF PRO	130	24	ProPack Clear High Intensity	C, CC-2V		2¼	500		420
			24830-2	▲	40S11N/IF	120	24	Frost High Intensity	C, CC-2V		2¼	500		420
	T6½	Inter.	20491-7	▲	BC40T6-½/2 12/1	120	12	Clear Refrigerator	B, C-8		5½	1000		350
	T10	Med.	38989-0	▲	BC40T10/IF/TP 6/1	120	6	Frost Showcase	B, C-8		5⅝	1000		250
			13814-9	▲	40T10/IF 24/1	120–130	24	Frost Showcase	B, C-8		5⅝	1000		435
			38988-2	▲	BC40T10/TP 6/1	120	6	Clear Showcase	B, C-8		5⅝	1000		435
			13815-6	▲	40T10 24/1	120–130	24	Clear Showcase	B, C-8		5⅝	1000		440
			20184-8	▲	40T10/TG	120–130	24	TuffGuard Coated Clear Showcase	B, C-8		5⅝	1000		440
45	BR30	Med.	16751-0	▲ (87)	45BR30/FL55/LL 12/1	120	12	Long Life Reflector Flood	C, CC-6		5⅜	2500		340
	R20	Med.	20323-2	▲ (87)	45R20/LL 12/1	120	12	Long Life Reflector Flood	C, CC-6		3⅛	2500		385
			20322-4	▲ (87)	45R20 12/1	130	12	Reflector Flood	C, CC-6		3⅛	2000		380
			20324-0	(87)	45R20 12/1 PRO	130	12	ProPack Reflector Flood	C, CC-6		3⅛	2000		380
50	A19	Med.	14154-9	▲	50A	24	60	Frost Train	C, C-6		4¼	1000		825
			24569-6	▲	50A	250	120	Frost	C, RC-9		3⅛	1000		
			21952-7	▲	50A19/31	120	120	Clear Commercial Oven	B, C-9	2½	3⅛	1000		500
			37403-3	▲	50A/RS	120–130	120	Frost Rough Service Ratings @ 120V =47W	B, RC-9		3⅛	1000 1700		500 440
			20163-2	▲	50A/RS 12/2	120	24	Frost Rough Service	B, RC-9		3⅛	1000		480
			24572-0	▲	50A/RS	250	120	Frost Rough Service	C, RC-9		3⅛	1000		355
			14977-3	▲ (66)	50A/RS/TF	120–130	120	Frost Rough Service Silicone Coated	B, C-17A		3⅛	1000		
	BR30	Med.	24889-8	▲ (87)	50BR30/FL	120	12	Reflector Flood	C, CC-6		5⅜	2000		

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INCANDESCENT LAMPS

INCANDESCENT LAMPS (BY WATTAGE) CONTINUED

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
50	ER30	Med.	14355-2	▲ $ (87)	50ER30	120–130	24	Elliptical Reflector	C, CC-6		6⅜	2000		360
	PAR36	M.P.	29603-8		50PAR36/WFL	12	12	Compact Wide Flood	C, C-6		2¾	2000		
			22859-3		50PAR36/NSP	12	12	Compact Narrow Spot	C, C-6		2¾	2000		
	R20	Med.	20187-1	▲ (87)	50R20/TG 12/1	120	12	TuffGuard Coated Reflector Lamp	C, CC-6		3 15/16	2000		380
		Med.	26635-3	▲X(19,87)	50R20/PK	120	60	Pink Reflector	C, CC-6		3 15/16	2000		
		Med.	13797-5	▲ (87)	50R20/FL/NTL 12/1	120	12	Natural Light Reflector	C, CC-6		3 15/16	2000		265
		Med.	16709-8	▲ (19,87)	50R20/Agro 12/1	120	12	Agro-Lite Plant Light	C, CC-6		3 15/16	2000		
50 100 150	A21	3 Ct. Med.	36671-6	▲ (8)	50/150A/W 12/1	120	12	Soft White 3-Way	C, 2CC-8		5 5/16	1200		610 1510 2120
			31739-6	▲ (8)	50/150A/STP/PK 8/1	120	8	Pink Softone Pastel	C, 2CC-8		5 5/16	1200		550 1310 1860
			13564-0	▲ (8)	50/150A/NTL 12/1	120	12	Natural Light Reflector	C,2CC-6		5 5/16	1200		490 1250 1740
			16948-2	▲ (8)	50/150A/WL 12/1	120	12	Soft White Long Life 3-Way	C, 2CC-8		5 5/16	1750		575 1440 2015
			32359-2	▲ ▢ (8)	50/150A/DL 12/1	120	12	Director 3-Way	C, 2CC-8		5 15/16	1200		530 1260 1790
50 200 250	A21	3 Ct. Med.	16949-0	▲ (8)	50/250A/WL 12/1	120	12	Soft White Long Life 3-Way	C, 2CC-8		5 5/16	1750		575 3120 3695
52	A19	Med.	22237-2	▲ ✔	60A-52A/EW	120	48	Frost Econ-o-watt	C, CC-6		4 7/16	1000		700
			22239-8	▲ $	60A-52A/EW	130	48	Frost Econ-o-watt	C, CC-6		4 7/16	1000		680
			14999-6	▲ $	60A-52A/99/EW	120–130	48	Frost Econ-o-watt Extended Service Ratings @ 120V =49W	C, CC-6		4 7/16	2000 3400		660 570
57	A19	Med. *	21497-3	▲	57A 12/4	120	48	Frost	C, CC-6		4 7/16	1000		850
			21464-3		57A 120/1 PRO	130	120	Frost ProPack	C, CC-6		4 7/16	1000		850
			21448-6	▲	57A	120	48	Frost	C, CC-6		4 7/16	1000		850
			21466-8	▲	57A	130	48	Frost	C, CC-6		4 7/16	1000		850
			21463-5	▲	57A/CL	130	48	Clear	C, CC-6		4 7/16	1000		850
			21465-0		57A/CL 120/1 PRO	130	120	Clear ProPack	C, CC-6		4 7/16	1000		920
			21452-8	▲	57A/CL/LL/TP 12/2	120	24	Clear Long Life	C, CC-6		4 7/16	1500		810
			21449-4	▲	57A/W/TP 24/4	120	96	Soft White	C, CC-6		4 7/16	1000		780
			21498-1	▲	57A/W/TP 12/4	120	48	Soft White	C, CC-6		4 7/16	1000		780
			21451-0	▲	57A/WL 24/4	120	96	Soft White Longer Life	C, CC-6		4 7/16	1500		750
			21499-9	▲	57A/WL 12/4 TP	120	48	Soft White Longer Life	C, CC-6		4 7/16	1500		750
			21500-4	▲	57A/WL 120/4 TP	120	480	Soft White Longer Life	C, CC-6		4 7/16	1500		750

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INCANDESCENT LAMPS

INCANDESCENT LAMPS (BY WATTAGE) CONTINUED

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP*	Lumens
60	A15	Med.	16945-8	▲	BC60A15/FAN/W/ LL 6/2	120	12	White Long Life Fan	C, C-9		3½	2000		570
			16946-6	▲	BC60A15/FAN/CL/LL 6/2	120	12	Clear Long Life Fan	C, C-9		3½	2000		630
			14072-3		60A15/FAN/CL 130V 24/1 PRO	130	24	ProPack Clear Fan	C, C-9		3½	2000		630
	A19	Med. ++	16794-0	▲	60A/CL/LL 12/2	120	24	Clear Long Life	C, CC-6		4⅞	1500		900
		Med. ++	16738-7	▲	60A/WL 24/4	120	96	Soft White Long Life	C, CC-6		4⅞	1500		830
		Med. ++	16874-0	▲	60A/WL 12/4	120	48	Soft White Long Life	C, CC-6		4⅞	1500		830
		Med.	16877-3	▲	60A/WL 120/4	120	480	Soft White Long Life	C, CC-6		4⅞	1500		830
		Med.	13559-0	▲	60A/NTL 12/4	120	48	Natural Light Standard	C, CC-6		4⅞	1000		680
		Med. ++	27082-7	▲ ✔	60A 12/4	120	48	Frost	C, CC-6		4⅞	1000		890
		Med. ++	37469-4	▲ ✔	60A	120	48	Frost	C, CC-6		4⅞	1000		890
		Med. ++	37471-0	▲ ✔	60A	130	48	Frost	C, CC-6		4⅞	1000		850
								Ratings @ 120V =53W				2830		650
		Med.	14979-9	▲ (66)	60A/TF	120	120	Frost Silicone Coated	C, CC-6		4⅞	1000		
		Med. ++	22245-5	▲ ✔	60A/99	120	48	Frost Extended Service	C, CC-6		4⅞	2500		800
		Med. ++	22246-3	▲ ✔	60A/99	130	48	Frost Extended Service	C, CC-6		4⅞	2500		790
								Ratings @ 120V =53W				7075		595
		Med. ++	37522-0	▲	60A/CL	130	48	Clear	C, CC-6	3⅛	4⅞	1000		880
								Ratings @ 120V =53W				2830		665
		Med. ++	13995-5		60A 120/1 PRO	130	120	Frost ProPack	C, CC-6	3⅛	4⅞	1000		850
		Med.	14424-6	▲	60A/AGRO 12/1	120	12	Agro-Lite Plant Light	C, C-9		4⅞	1000		
		Med.	16703-1	▲	BC60A/CL/GDO 6/2	120	6	Garage Door Opener	C,C-9		4⅞	3500		630
		Med.	37517-0	▲	60A/Y	120–130	48	Bug-A-Way	C, CC-6		4⅞	1350		
		Med.	14074-9		60A/Y PRO	130	24	ProPack Bug-A-Way	C, CC-6		4⅞	1000		
		Med.	14164-8	▲	60A19/B	120	60	Blue	C, C-9		4⅞	1000		
		Med.	14162-2	▲	60A19/R	120	60	Red	C, C-9		4⅞	1000		
		Med.	14399-9	▲	60A/IF/SB	120	120	Frost Silvered Bowl	C, CC-6		4⅞	1000		720
		Med. ++	37483-5	▲ ✔	60A/W 12/4	120	48	Soft White	C, CC-6		4⅞	1000		860
		Med. ++	37484-3	▲	60A/W/TP 24/4	120	96	Soft White Tra-Pak	C, CC-6		4⅞	1000		860
			34822-7	▲ ▢	60A/STP/PK 12/2	120	24	Pink Softone Pastel	C, CC-6		4⅜	1000		
		Med. ++	22573-0	▲ ✔ ▢	60A/YL 12/2	120	24	Bug-A-Way Yellow Longer Life	C, CC-6		4⅞	1350		
		Med. ++	22247-1	▢	60A19/35	120	48	Frost Industrial Service	C, C-9		4⅞	3500		600
			22248-9	▢	60A19/35	130	48	Frost Industrial Service	C, C-9		4⅞	3500		585
								Ratings @ 120V =53W				9987		446
		Med.	20188-9	▢	60A19/35/TG	120	48	TuffGuard Coated Lamp	C, C-9		4⅞	3500		600
		Med.	15925-1	▢	60A19/35/TG	130	48	TuffGuard Coated Lamp	C, C-9		4⅞	3500		585
		Med.	14965-8	▢ (66)	60A/35/TF	120	60	Frost Silicone Coated Industrial Service	C, C-9		4⅞	3500		
		Med. +	21056-7	(12)	K60A19/TS/EW	120–125	120	Clear Krypton Econ-o-watt Traffic Signal	C, C-11V	2⅞	4⅜	8000		610
		Med. +	37167-4	(12)	K60A19/TS/EW	130	120	Clear Krypton Econ-o-watt Traffic Signal	C, C-11V	2⅞	4⅜	8000		610
	K19	Med.	22486-5	▲ ▢	60K19/DL 6/2	120	12	Director	C, CC-6		4⅛	1150		770
	T10	Med.	13811-5	▲	60T10/64IF 24/1	120	24	Frost	B, C-8		5⅝	1000		660
			13810-7	▲	60T10/64 24/1	120	24	Clear	B, C-8		5⅝	1000		665

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A15 Med.


A19 Med.


K19 Med.


T10 Med.

INCANDESCENT LAMPS

INCANDESCENT LAMPS (BY WATTAGE) CONTINUED

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
65	BR30	Med.	24876-5	▲ ✔ (87)	65BR30/FL55 12/1	120	12	Reflector Flood	C, CC-6		5⅜	2000		635
			24884-9	▲ ✔ (87)	65BR30/FL55	130	12	Reflector Flood	C, CC-6		5⅜	2000		635
			20191-3	▲ ✔ (87)	65BR30/FL55/TG 12/1	130	12	TuffGuard Coated Reflector Flood	C, CC-6		5⅜	2000		635
			20190-5	▲ ✔ (87)	65BR30/FL55/TG 12/1	120	12	TuffGuard Coated Reflector Flood	C, CC-6		5⅜	2000		635
			24880-7	▲ (87)	65BR30/SP20	130	12	Reflector Spot	C, CC-6		5⅜	2000		655
			24452-5	(87)	65BR30/SFL	120	12	Reflector Sign Frost	C, C-17A		5⅜	5000		635
			13785-1	▲ (87)	65BR30/FL/NTL 12/1	120	12	Natural Light Reflector	C, CC-6		5⅜	2000		500
			16768-4	▲ (87)	65BR30/FL55/LL 12/1	120	12	Long Life Reflector Flood	C, CC-6		5⅜	2500	510	595
			16769-2	▲ (87)	65BR30/SP20/LL 12/1	120	12	Long Life Reflector Spot	C, CC-6		5⅜	2500	530	610
			14007-9	(87)	65BR30/FL 12/1 PRO	130	12	ProPack Reflector	C, CC-6		5⅜	2000		635
			29380-3		65BR30/FL55 SP 12/1	120–130	12	Surge Proof Reflector Ratings @ 130V = 69W	C, CC-6		5⅜	3000 2000		570 660
	BR40	Med.	22537-5	▲ ✔ (87)	65BR/FL60	130	24	Reflector Flood	C, CC-6		6½	2000		685
			14008-7	(87)	65BR40/FL 12/1 PRO	130	12	ProPack Reflector	C, CC-6		6½	2000		600
			16741-1	▲ (87)	65BR/FL60/LL 8/1	120	8	Long Life Reflector Flood	C, CC-6		6½	2500	500	630
			38913-0	▲ (87)	65BR/FL60 24/1	120	24	Long Life Reflector Flood	C, CC-6		6½	2000	500	630
67	A19	Med.	22240-6	▲ ✔ $	75A-67A/EW	120	48	Frost Econ-o-watt	C, CC-6		4⅞	750		1010
			22241-4	▲ ✔ $	75A-67A/EW	130	48	Frost Econ-o-watt Ratings @ 120V =59W	C, CC-6		4⅞	750 2120		990 805
			15000-3	▲ $	75A-67A/99/EW	120–130	48	Frost Econ-o-watt Extended Service Ratings @ 120V =63W	C, CC-6		4⅞	2000 3400		970 840
71	A19	Med.*	21469-2	▲	71A	130	48	Frost	C, CC-6		4⅞	750		1135
			21454-4	▲	71A	120	48	Frost	C, CC-6		4⅞	750		1135
			21470-0	▲	71A/CL	130	48	Clear	C, CC-6		4⅞	750		1135
			21455-1	▲	71A/CL/LL 120V 12/2 WPTP	120	48	Clear Long Life	C, CC-6		4⅞	1125		1050
			21453-6	▲	71A/W/TP 24/4	120	96	Soft White	C, CC-6		4⅞	750		1050
			21501-2	▲	71A/W/TP 12/4	120	48	Soft White	C, CC-6		4⅞	750		1050
			21502-0	▲	71A/WL 24/4	120	96	Soft White Long Life	C, CC-6		4⅞	1125		
			21503-8	▲	71A/WL /TP 12/4	120	48	Soft White Long Life	C, CC-6		4⅞	1125		

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BR30 Med.

BR40 Med.

A19 Med.

INCANDESCENT LAMPS

INCANDESCENT LAMPS (BY WATTAGE) CONTINUED

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP*	Lumens
75	A19	Med. ++	37472-8	▲ ✔	75A	120	48	Frost	C, CC-6		4 7/16	750		1220
		Med.	20195-4	▲ ✔	75A/TG	120	48	TuffGuard Coated Lamp	C, CC-6		4 7/16	750		1220
		Med.	15933-5	▲ ✔	75A/TG	130	48	TuffGuard Coated Lamp	C, CC-6		4 7/16	750		1220
		Med. ++	13997-1		75A 120/1 PRO	130	120	Frost ProPack Lamp	C, CC-6		4 7/16	750		1150
		Med. ++	16801-3	▲	75A/CL/LL 12/2	120	24	Clear Long Life	C, CC-6		4 7/16	1500		1080
		Med. ++	13996-3		75A/CL 120/1 PRO	130	120	Clear ProPack Lamp	C, CC-6		4 7/16	750		1195
		Med. ++	16879-9	▲	75A/WL 12/4	120	48	Soft White Long Life	C, CC-6		4 7/16	1500		1060
		Med. ++	16739-5	▲	75A/WL 24/4	120	96	Soft White Long Life	C, CC-6		4 7/16	1500		1060
		Med.	13560-8	▲	75A/NTL 12/4	120	48	Natural Light Standard	C, CC-6		4 7/16	750		950
		Med. ++	27083-5	▲ ✔	75A 12/4	120	48	Frost	C, CC-6		4 7/16	750		1220
		Med. ++	37473-6	▲	75A	130	48	Frost	C, CC-6		4 7/16	750		1150
								Ratings @ 120V =66W				2120		860
		Med. ++	37406-6	▲ ✔	75A/99	120–130	48	Frost Extended Svc.	C, CC-6		4 7/16	2500		1070
								Ratings @ 120V =70W				4250		930
		Med.	29360-5	▲	75A/RS/VS	120–130	12	Frost Rough & Vib. Svc.	R, C-9	2 1/2	3 15/16	1000		712
								Ratings @ 120V =70W				1700		660
		Med.	20192-1	▲	75A/RS/V/TG	120–130	12	TuffGuard Frost Rough & Vib. Svc.	R, C-9	2 1/2	3 15/16	1000		712
								Ratings @ 120V =70W				1700		660
		Med. ++	37525-3	▲	75A/CL	130	48	Clear	C, CC-6	3/8	4 7/16	750		1195
								Ratings @ 120V =66W				2140		885
		Med. ++	37485-0	▲ ✔	75A/W 12/4	120	48	Soft White	C, CC-6		4 7/16	750		1180
		Med. ++	14997-0	▲ ✔	75A/W 12/4	130	48	Soft White	C, CC-6		4 7/16	1000		1100
		Med. ++	37486-8	▲	75A/W/TP 24/4	120	96	Soft White Tra-Pak	C, CC-6		4 7/16	750		1180
	A21	Med. ++	31305-6	▲	75A21	120–130	120	Frost	C, C-9		5 5/16	1000		1110
								Ratings @ 120V =66W				2854		858
		Med.	20922-1	▲ (66)	75A/RH/TF 12/1	120–130	12	Frost Silicone Coated Tough Bulb	C, RC-9		5 5/16	1000		
		Med.	20470-1	▲	75A/RH 12/1	120–130	12	Frost Rough House	C, RC-9		5 5/16	1000		750
								Ratings @ 120V =70W				1700		730
		Med.	20018-8	▲	75A/RH/TG	120–130	12	TuffGuard Frost Rough House	C, RC-9		5 5/16	1000		750
								Ratings @ 120V =70W				1700		730
		Med.	14345-3	▲	75A21	12	60	Frost	C, C-6		5 5/16	1000		1100
	BR30	Med.	24903-7	▲ (66,87)	75BR30/FL/TF	120	12	Frost Silicone Coated Reflector	C, CC-6		5 5/16	2000		
			24905-2	▲ (87)	75BR30/AGRO 6/1	120	6	Agro-Lite Plant Light	C, CC-6		5 3/8	2000		700
			24902-9	▲ (87)	75BR30/PK 8/1	120	8	Pink	C, CC-6		5 3/8	2000		
	R20	Med.	16763-5	▲ X ☐ (87)	75R20/LL 12/1	120	12	Frost Long Life Reflector	C, CC-6		3 15/16	2500	800	570

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INCANDESCENT LAMPS

INCANDESCENT LAMPS (BY WATTAGE) CONTINUED

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
85	BR30	Med.	16766-8	▲ X(87)	85BR30/FL55/LL 6/1	120	6	Long Life Reflector Flood	C, CC-6		5⅜	2500	700	855
			16767-6	▲ X(87)	85BR30/SP20/LL 6/1	120	6	Long Life Reflector Spot	C, CC-6		5⅜	2500	3100	865
	BR40	Med.	22527-6	▲ X ✔ (87)	85BR/FL60	120	24	Reflector Flood	C, CC-6		6½	2000		925
			22528-4	▲ X ✔ (87)	85BR/FL60	130	24	Reflector Flood	C, CC-6		6½	2000		925
			16785-8	▲ X(87)	85BR/FL60/LL 8/1	120	8	Long Life Reflector Flood	C, CC-6		6½	2500	700	900
90	A19	Med.	22243-0	▲ ✔ $	100A-90A/EW	120	48	Frost Econ-o-watt	C, CC-6		4⅞	750		1445
			22244-8	▲ ✔ $	100A-90A/EW	130	48	Frost Econ-o-watt	C, CC-6		4⅞	750		1525
			15001-1	▲ $	100A-90A/99EW	120–130	48	Frost Econ-o-watt Extended Service Ratings @ 120V =84W	C, CC-6		4⅞	1500 2550		1400 1220
95	A19	Med. *	21459-3	▲ X	95A	120	48	Frost	C, CC-6		4⅞	750		1600
			21474-2	▲ X	95A	130	48	Frost	C, CC-6		4⅞	750		1600
			21473-4	▲ X	95A/CL	130	48	Frost	C, CC-6		4⅞	750		1600
			21504-6	▲ X	95A/W/TP 12/4	120	48	Soft White	C, CC-6		4⅞	750		1550
			21460-1	▲ X	95A/W 24/4	120	96	Soft White	C, CC-6		4⅞	750		1550
			21818-0	▲ X	95A/WL 12/4	120	48	Soft White Long Life	C, CC-6		4⅞	1125		1500
			21461-9	▲ X	95A/WL 24/4	120	96	Soft White Long Life	C, CC-6		4⅞	1125		1500
100	A19	Med. ++	37474-4	▲ ✔	100A	120	48	Frost	C, CC-6		4⅞	750		1600
		Med. ++	13684-6	▲ ✔	100A	120	48	Frost	C, CC-8		4⅞	750		1710
		Med. ++	37476-9	▲ ✔	100A	130	48	Frost Ratings @ 120V =88W	C, CC-6		4⅞	750 2120		1590 1205
			15934-3	▲ ✔	100A/TG	130	48	Frost	C, CC-6		4⅞	750		1590
		Med. ++	13999-7	✔	100A 120/1 PRO	130	120	Frost ProPack Lamp	C, CC-6		4⅞	750		1590
		Med. ++	22979-9	▲ ✔	100A/99	130	48	Frost Extended Service Ratings @ 120V =88W	C, CC-6		4⅞	2500 7075		1470 1110
		Med. ++ Med.	37527-9	▲	100A/CL	130	48	Clear Ratings @ 120V =88W	C, CC-6	3½	4⅞	750 2120		1590 1205
		Med. ++	13998-9		100A/CL 120/1 PRO	130	120	Clear ProPack Lamp	C, CC-6	3½	4⅞	750		1615
		Med. ++	13254-8	▲ ✔	100A/W 12/4	120	48	Soft White	C, CC-6		4⅞	750		1620
		Med.	13561-6	▲	100A/NTL 12/4	120	48	Natural Light Standard	C, CC-6		4⅞	750		1350
		Med.	15130-8		100A/NTL/2XL 12/4	120	48	Natural Light Standard	C,CC-6		4⅞	1500		1,210
		Med. ++	15008-6	▲	100A/CL/LL 12/2	120	24	Clear Long Life	C, CC-6		4⅞	1500		1440
		Med. ++	16740-3	▲	100A/WL 24/4	120	96	Soft White Long Life	C, CC-8		4⅞	1500		1440
		Med. ++	13255-5	▲	100A/W/TP 24/4	120	96	Soft White Tra-Pak	C, CC-6		4⅞	750		1620
		Med.	22581-3	▲ ✔ □	100A/YL 12/2	120	24	Bug-A-Way Yellow Longer Life	C, CC-6		4⅞	1350		
		Med. ++	16862-5	▲	100A/WL 12/4	120	48	Soft White Long Life	C, CC-6		4⅞	1500		1440

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BR30 Med.


BR40 Med.


A19 Med.

INCANDESCENT LAMPS

INCANDESCENT LAMPS (BY WATTAGE) CONTINUED

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP*	Lumens
100	A21	Med.	14346-1	▲	100A	12	60	Frost	C, C-6		5 3/16	1000		2050
		Med. ++	28171-7	▲	100A21	120–130	120	Frost Ratings @ 120V =94W	C, CC-8		5 3/16	750 1280		1680 1463
		Med.	20197-0	▲	100A21/TG 120/1	120–130	120	TuffGuard Coated Lamp	C, CC-8		5 3/16	750		1680
		Med.	14981-5	▲ (66)	100A21/TF	120	120	Frost Silicone Coated	C, CC-8		5 3/16	750		
		Med.	29955-2	▲	100A	250	120	Frost	C, C-9		5 3/16	1000		1180
		Med.	24661-1	▲	100A	277	120	Frost Mine	C, C-9		5 3/16	1000		1070
		Med. ++	37460-3	▲	100A21/99	120–130	60	Frost Extended Service Ratings @ 120V =94W	C, C-9		5 3/16	2500 4250		1410 1225
		Med.	20198-8	▲	100A21/99/TG 60/1	120–130	60	TuffGuard Coated Lamp	C, CC-8		5 3/16	2500		1475
		Med.	14340-4	▲	100A/D	120	60	Frost Daylight	C, C-9		5 3/16	750		900
		Med.	14400-6	▲ (43,64)	100A/1SBIF	120	120	Frost Silvered Bowl	C, C-9		5 3/16	1000		1150
		Med.	14971-6	▲ (66)	100A/RS/TF	120–130	60	Frost Silicone Coated Rough Service	C, RC-9		5 3/16	1000		
		Med.	27550-3	▲	100A/RS	250	60	Frost Rough Service	C, RC-9		5 3/16	1000		1030
		Med. ++	37411-6	▢	100A21/35	120–130	60	Frost Industrial Service Ratings @ 120V =94W	C, C-9		5 3/16	3500 5975		1175 1015
		Med.	14967-4	▢ (14, 66)	100A21/35/TF	120	60	Frost Silicone Coated Industrial Svc.	C, C-9		5 3/16	3500		
		Med.	15927-7		100A/RS/VS/BR/TG	120–130	60	TuffGuard Frost Rough & Vibration Svc. Ratings @ 120V =94W	C, RC-9		5 3/16	1000 1700		1230 945
		Med.	22390-9	(12)	100A21/TS	130	120	Clear Traffic Signal	C, C-9	2 7/16	4 7/16	2000		1180
	A23	Med. ++	22430-3	▲	100A23	120	120	Frost	C, CC-6		6 5/16	750		1730
	F20	Med.	16844-3		100F20/POSTLT/CL/LL 6/1	120	6	Clear Long Life PostLight	C, C-9		5 1/8	4000		1250
	BR38	Med.	38532-8	(29, 82)	100PAR/1/B 6/1	120	6	Blue PAR	C, CC-6		5 3/16	2000		
			38530-2	(29, 82)	100PAR/1/G 6/1	120	6	Green PAR	C, CC-6		5 3/16	2000		
			38529-4	(29, 82)	100PAR/1R 6/1	120	6	Red PAR	C, CC-6		5 3/16	2000		
			38766-2	(29, 82)	100PAR/1/Y 6/1	120	6	Yellow PAR	C, CC-6		5 3/16	2000		
			13127-6		100PAR/1/CL SRS 12/1	130	12	Clear PAR	C, CC-6		5 3/16	2000		
			15923-6		100PAR/1/CL/TG 12/1	130	12	TuffGuard Coated Lamp	C, CC-6		5 3/16	2000		
	PAR38	Med. Skt.	14550-8	(29, 82)	100PAR38/HEAT/CL	120	12	Clear PAR Infrared	C, C-9		5 3/16	5000		
	K19	Med.	22491-5	▲▢	100K19/DL 6/2	120	12	Director	C, CC-6		4 1/8	1150		1450
	R20	Med.	14174-7	■	100R20/FL/S	12	60	Clear Reflector Flood Swimming Pool	C, C-6		3 15/16	2000		1000
			16701-5	▲▢ **X** (82)	100R20/LL 12/1	120	12	Frost Long Life Reflector	C, CC-6		3 15/16	2500		935
100	PS25	3 Ct. Mog.	36734-2	▲ (8)	100/300/W 12/1	120	12	Soft White 3-Way	C, 2CC-6		6 13/16	1200		1320
200														3300
300														4620
116	A21	Med. +	22483-2	(12)	116A21/TS	120	120	Traffic Signal Clear	C, C-9	2 7/16	4 7/16	8000		1180
			22485-7	(12)	116A21/TS	130	120	Traffic Signal Clear	C, C-9	2 7/16	4 7/16	8000		1180

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INCANDESCENT LAMPS

INCANDESCENT LAMPS (BY WATTAGE) CONTINUED

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
120	BR40	Med.	22541-7	▲ X ✔ (87)	120BR/FL60	120	24	Reflector Flood	C, CC-6		6½	2000		1300
		Med.	22532-6	▲ X ✔ (87)	120BR/FL60	130	24	Reflector Flood	C, CC-6		6½	2000		1300
		Med.	20199-6	▲ ✔ (87)	120BR/FL60/TG 24/1	130	24	TuffGuard Coated Reflector Flood	C, CC-6		6½	2000		1300
		Med.	20200-2	▲ ✔ (87)	120BR/FL60/TG CDA 24/1	120	24	TuffGuard Coated Reflector Flood	C, CC-6		6½	2000		1300
		Med.	22544-1	▲ X (87)	120BR/SP20	120–130	24	Reflector Spot	C, CC-6		6½	2000		1300
		Med.	16779-1	▲ X (87)	120BR/FL60/LL 8/1	120	8	Long Life Reflector Flood	C, CC-6		6½	2500	1000	1285
		Med.	16781-7	▲ X (87)	120BR/SP20/LL 8/1	120	8	Long Life Reflector Spot	C, CC-6		6½	2500	4600	1225
		Med.	16715-5	▲ (87)	120BR/Agro 6/1	120	6	Agro-Lite Plant Light	C, CC-6		6½	2000		
		Med.	14012-9	X (87)	120BR/FL 12/1 PRO	130	12	ProPack Reflector	C, CC-6		6½	2000		1300
	ER40	Med.	13928-7	▲ X $	120ER40	120–130	24	Elliptical Reflector	C, CC-6		7⅜	2000		1190
125	BR40	Med.	15930-1	▲(27,87,89)	125BR40/1/TG 4/1	120	4	TuffGuard Coated Clear Reflector Infrared	C, C-9		6½	5000		
135	A21	Med.	28175-8	▲ $	150A-135A/EW	120–130	60	Frost Econ-o-watt Ratings @ 120V=127W	C, CC-8		5⅞	750 1280		2490 2169
			15002-9	▲ $	150A-135A/99/EW	120–130	60	Frost Econ-o-watt Ratings @ 120V=119W	C, CC-8		5⅞	1000 1700		2300 2000
			37616-0	(12)	K135A21/TS/EW	120–125	120	Clear Krypton Econ-o-watt Traffic Signal	C, C-11V	3	4¹⁄₁₆	8000		1750
	A25	Med.	26836-7	X $ ▢	135A25/35	130	60	Frost Econ-o-watt Industrial Svc. Ratings @ 120V=119W	C, C-9		6¹⁵⁄₁₆	3500 9987		1865 1423
150	A21	Med.	27003-3	▲ ✔	150A	120	48	Frost	C, C-9		5⅞	750		2700
		Med.	27069-4	▲ ✔	150A	130	48	Frost Ratings @120V=133W	C, CC-8		5⅞	750 2120		2700 2050
		Med.	37417-3	▲ ✔ X (82)	150A/99	120–130	60	Frost Extended Service Ratings @120V=141W	C, C-9		5⅞	2500 4250		2200 1930
		Med.	37418-1	▲ (82)	150A/CL	120–130	60	Clear Ratings @120V=141W	C, CC-8	3⅛	5⅞	750 1275		2700 2300
		Med.	14969-0	▲ (66)	150A21/RS/TF	120–130	60	High-Temp. Coating	C, RC-9		5⅞	1000		
		Med.	15009-4	▲	150A/CL/LL 12/1 TP	120	12	Clear Long Life	C, CC-8		5⅞	1500		2000
		Med.	16866-6	▲	150A/WL 12/1	120	12	Soft White Long Life	C, CC-8		5⅞	2000		2310
		Med.	27578-4	▲	150A21/RS/BR	120–130	60	Frost Rough & Vibration Service Ratings @120V=141W	C, RC-9		5⅞	1000 1700		2205 1915
		Med.	27586-7	▲	150A21/CL/RS/VS	120–130	60	Clear Rough & Vibration Service Ratings @120V=141W	C, RC-9	3⅛	5⅞	1000 1700		2200 1915
		Med.	27588-3	▲	150A/35/RS/BR	120–130	60	Frost Industrial Rough Service Ratings @120V=141W	C, RC-9	3¼	5¹⁵⁄₁₆	3500 5900		1640 1425
		Med.	15931-9	▲	150A/35RS/BR/TG	120–130	60	Frost Industrial Rough Service Ratings @120V=141W	C, RC-9	3¼	5¹⁵⁄₁₆	3500 5900		1640 1425

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BR40 Med.


ER40 Med.


A21 Med.


A25 Med.

INCANDESCENT LAMPS

INCANDESCENT LAMPS (BY WATTAGE) CONTINUED

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP*	Lumens
150	A23	Med. LHT	28170-9	(18) **X**	150A23/LHT	120–130	60	Frost	C, CC-8		6 5/16	750		2700
	A23	Med.	28172-5	▲	150A23	120–130	60	Frost	C, CC-8	4 3/8	6 5/16	750		2700
			37419-9	▲	150A23/CL	120–130	60	Clear Ratings @120V=141W	C, CC-8	4 3/8	6 5/16	750 1275		2700 2300
	A25	Med.	37421-5	□	150A25/35	120–130	60	Frost Industrial Service Ratings @120V=141W	C, C-9		6 5/16	3500 5975		1715 1500
			14961-7	□ (14,66)	150A25/35/TF	120	60	Frost Silicone Coated Industrial Svc.	C, C-9		6 15/16	3500		
	BR40	Med.	22725-6	▲ (87)	150BR/AGRO 6/1	120	6	Agro-Lite Plant Light	C, CC-6		6 1/2	2000		
	BR38	Med.	38568-2		150BR38/5FL	130	12	Flood Anti-Vibration	C, C-11V		5 1/2	5000		
			20203-6		150BR38/FL/TG 6/1	130	6	TuffGuard Coated Lamp	C,CC-6		5 1/2	2000		1650
	PS25	Med.	28173-3	▲	150	120–130	60	Frost Ratings @120V=141W	C, C-9		6 15/16	750 1280		2460 2143
			28174-1	▲	150PS25/99	120–130	60	Frost Extended Service Ratings @120V=141W	C, C-9		6 15/16	2500 4250		1950 1690
			14983-1	▲ (66)	150PS25/TF	120	60	Frost Silicone Coated	C, C-9		6 15/16	1000		
			24684-3	▲	150PS25/99CL	250	60	Clear Extended Service	C, CC-9		6 15/16	2500		1840
175	PAR38	Med. Skt.	14551-6	(27,89)	175PAR38/HEAT/CL	120	12	Clear Infrared	C, C-9		5 5/16	5000		
			36403-4	(27,89)	IR175PAR	120	15	Clear Infrared	C, C-9		5 5/16	5000		
			20838-9	(27,89)	IR175PAR	120	12	Clear Infrared	C, C-9		5 5/16	5000		

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Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
INCANDESCENT LAMPS (BY WATTAGE) CONTINUED														
200	A21	Med.	16867-4	▲	200A/WL 6/1	120	6	Soft White Long Life	C, CC-2V		5 5/16	1500		3100
	A23	Med.	16798-0	▲	200A/CL/LL 6/1	120	6	Clear Long Life	C, CC-8		6 5/16	1500		3665
			36289-7	▲	200A	120	60	Frost	C, CC-8		6 5/16	750		3800
			36291-3	▲	200A	130	60	Frost	C, CC-2V		6 5/16	750		3600
								Ratings @120V=176W				2120		2700
			37427-2	▲	200A/CL	120–130	60	Clear	C, CC-2V	4 5/8	6 5/16	750		3600
								Ratings @120V=187W				1275		3130
			28176-6	▲	200A/99	120–130	60	Frost Extended Service	C, CC-2V		6 5/16	2500		3250
								Ratings @120V=187W				4250		2830
			20204-4	▲	200A/99/TG 60/1	120–130	60	TuffGuard Coated Lamp Frost	C, CC-8		6 5/16	2500		3500
			32383-2	▲	200A/99/CL	130	60	Clear	C, CC-8		6 5/16	2500		3100
	A25	Med.	39813-1	▯	200A25/35	130	60	Frost Industrial Service	C, C-9		6 15/16	3500		2690
								Ratings @120V=177W				9987		2052
	PAR56	Mog. End Prong	28956-1	(9,59,90)	200PAR56/MFL	120	8	PAR Med. Flood	C, CC-13		5	2000		
	PS25	Med.	34974-6	▲	200/IF	250	60	Frost	C, CC-9		6 15/16	1000		2900
			34976-1	▲	200	277	60	Clear—Mine	C, CC-9	5 1/4	6 15/16	1000		2540
	PS30	Med.	14301-6	▲	200	120–130	60	Clear	C, C-9		8 1/16	750		3250
								Ratings @120V=177W				2120		2470
			14299-1	▲	200/IF	120–130	12	Clear	C, C-9		8 1/16	750		3200
								Ratings @120V=177W				2120		2430
			14298-3	▲ (66)	200/TF	120	60	Frost Silicone Coated	C, C-9		8 1/16	750		2980
			14297-5	▲	200/99IF	120–130	60	Frost	C, C-9		8 1/16	750		2600
								Ratings @120V=177W				2140		1975
			14304-0	▲	200PS30/23	120–130	60	Frost	C, C-9		8 1/16	1000		2800
								Ratings @120V=177W				2830		2130
			14303-2	▲	200PS30/24	120–130	60	Clear Rough Service	C, C-9		8 1/16	1000		2900
								Ratings @120V=177W				2830		2205
			14305-7	▲ (66)	200PS30/RS/TF	120–130	60	Frost Rough Service	C, C-9		8 1/16	1000		2715
								Silicone Coated				2830		2065
			20472-7	▲ (66)	200PS30/RS/TG	120–130	60	TuffGuard Frost Rough Service	C, C-9		8 1/16	1000		
			14302-4	▲	200PS30/RS	250	60	Clear Rough Service	C, C-9		8 1/16	1000		2600
			14300-8		200/35/TF	120	60	Frost Silicone Coated Industrial Svc.	C, C-9		8 1/16	3500		2570
	PS30	Mog.	14296-7		200PS30/12	130	60	Clear	C, C-9	6 3/8	8 1/16	750		3250
								Ratings @120V=177W				2140		2785

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INCANDESCENT LAMPS

INCANDESCENT LAMPS (BY WATTAGE) CONTINUED

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP*	Lumens
250	BR40	Med.	38932-0	▲ (27, 87)	250BR40/1 4/1	120	4	Clear Reflector Infrared	C, C-9		6½	5000		
			20205-1	▲ (27, 87)	250BR40/1/TG 4/1	120	4	TuffGuard Coated Clr. Ref. Infrared	C, C-9		6½	5000		
			14011-1	▲ (27, 87)	250BR40/1 12/1 PRO	130	12	ProPack Clear Reflector Infrared	C, C-9		6½	5000		1600
	PAR38	Med. Skt.	37432-2	▢ (53, 82)	K250PAR38/FL	120–130	12	PAR Floodlight (Krypton)	C, CC-6		5⅜	4000	5000	3100
			37433-0	▢ (53, 82)	K250PAR38/SP	120–130	12	PAR Spotlight (Krypton)	C, CC-6		5⅜	4000		3100
	R40	Med.	38933-8	▲$(27,87,89)	250R40/HR 4/1	120	4	Red Bowl Heat Ray	C, C-9		6⅞	5000		
			15932-7	▲$(27,87,89)	250R40/HR/TG 4/1	120	4	TuffGuard Ctd. Red Bowl Heat Ray	C, C-9		6⅞	5000		
300	BR40	Med.	14343-8	▲ $ (87)	300BR/FL	120–130	24	Reflector Flood	C, CC-11		6½	2000		2480
	PAR56	Mog. End Prong	23382-5		300PAR56/MFL	120	8	PAR Med. Flood	C, CC-13		5	2000		
			23405-4	(9, 55)	300PAR56/MFL	130	8	PAR Med. Flood	C, CC-13		5	2000		
			23388-2	(9, 55)	300PAR56/WFL	120	8	PAR Wide Flood	C, CC-13		5	2000		
			23410-4	(9, 55)	300PAR56/WFL	130	8	PAR Wide Flood	C, CC-13		5	2000		
			23378-3	(9, 46, 55)	300PAR56/NSP	120	8	PAR Narrow Spotlight	C, CC-13		5	2000		
	PS25	Med.	28177-4	▲	300M/IF	120–130	60	Frost	C, CC-8		6 15/16	750		6230
								Ratings @120V=282W				1280		5471
			38941-1	▲	300M/IF	120	6	Frost	C, CC-8		6 15/16	750		6300
			20206-9	▲	300M/99IF/TG	120/130	60	TuffGuard Frost Coated Lamp	C, CC-8		6 15/16	2500		5060
			13391-8	▲	300M	120–130	12	Clear	C, CC-8	5¼	6 15/16	750		6280
								Ratings @120V=265W				2120		4625
			35008-2	▲	300M/99IF	120	60	Frost Extended Service	C, CC-8		6 15/16	2500		4044
			35009-0	▲	300M/99IF	130	60	Frost Extended Service	C, CC-8		6 15/16	2500		506
								Ratings @120V=265W				7130		4044
			35007-4	▲	300M/99	130	60	Clear Extended Service	C, CC-8	5¼	6 15/16	2500		5300
								Ratings @120V=265W				7134		4044
	PS30	Med.	14307-3	▲	300M/PS30IF	120–130	60	Frost	C, C-9		8 1/16	750		5000
								Ratings @120V=265W				2120		3800
			14306-5	▲	300M/PS30	120–130	60	Clear	C, C-9		8 1/16	750		5000
								Ratings @120V=265W				2120		3800
			20207-7	▲	300M/PS30/IF/TG	120–130	60	TuffGuard Coated Lamp Frost	C, C-9		8 1/16	750		5000
								Ratings @120V=265W				2120		3800
			14294-3		300M/PS30/35	120–130	60	Frost Industrial Service	C, C-9		8 1/16	3500		3800
								Ratings @120V=265W				9900		2885

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BR40
Med.


PAR38
Med. Skt.


R40
Med.


PAR56
Mog. End Prong


PS25
Med.


PS30
Med.

INCANDESCENT LAMPS

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
INCANDESCENT LAMPS (BY WATTAGE) CONTINUED														
300	PS35	Mog.	14320-6		300/RSIF	120	24	Frost Rough Service	C, C-9		9⅜	1000		5150
			14309-9		300/99IF	120–130	24	Frost Extended Service Ratings @120V=265W	C, C-9		9⅜	1000 2830		4500 3420
			14321-4		300/99	120–130	24	Clear Extended Service Ratings @120V=265W	C, C-9		9⅜	2500 7134		4600 3495
			14316-4		300/IF	120–130	12	Frost Ratings @120V=265W	C, C-9		9⅜	1000 2854		4,600 3495
			14314-9		300	120–130	24	Clear Ratings @120V=265W	C, C-9	7	9⅜	1000 2854		4600 3495
			14317-2		300	277	24	Clear	C, C-9	7	9⅜	1000		4000
			20474-3		300/IF/TG	120–130	12	TuffGuard Coated Lamp	C, C-9		9⅜	1000		
	R40	Med.	14432-9	■▲ (31,37,51,53)	300R/FL/1	12	24	Reflector Flood Frost—Swimming Pool	C, C-2V		6¾	2000		2960
			14429-5	■▲ (31,37,51,53)	300R/FL/1	120–130	24	Reflector Flood—Swimming Pool	C, CC-11		6¾	2000		2480
	R40	Mog.	14433-7	▲ (31,37,51,53)	300R/3FL	120–130	24	Reflector Flood	CC-11		7¼	2000		3600
375	BR40	Med. Skt.	14342-0	(19,31,37,87)	375BR40	120	24	Reflector Infrared Lt. Frost Industrial	C, C-7A		7⅜	5000		
	R40	Med. Skt.	14574-8	(19,31,37,87)	375R40/1	120	24	Clear Reflector Infrared Industrial	C, C-7A		7⅜	5000		

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PS35 Mog.


R40 Med.


R40 Mog.


BR40 Med. Skt.


R40 Med. Skt.

INCANDESCENT LAMPS

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP*	Lumens
INCANDESCENT LAMPS (BY WATTAGE) CONTINUED														
400	G30	Med.	14461-8	(12, 22)	400G/FL	120–130	60	Clear Floodlight	C, C-7A	3	5⅛	800		6645
500	PAR64	Ext. Mog. End Prong	23417-9	(9, 55)	500PAR64/MFL	120	8	PAR Med. Flood	C, CC-13		6	2000		
			23416-1		500PAR64/NSP	120	8	PAR Narrow Spot	C, CC-13		6	2000		
	PS35	Mog.	14407-1		500	120–130	24	Clear Ratings @120V=442W	C, C-9	7	9⅜	1000 2830		8900 6755
			14313-1		500/IF	120–130	24	Frost Ratings @120V=442W	C, C-9		9⅜	1000 2830		8700 6600
			14319-8		500/99	120–130	24	Clear Extended Service Ratings @120V=442W	C, C-9	7	9⅜	2500 7134		8100 6145
			14318-0		500/99IF	120–130	24	Frost Extended Service Ratings @120V=442W	C, C-9		9⅜	2500 7134		8000 6080
	PS40	Mog.	14327-1		500	277	24	Clear	C, C-9		9¾	1000		7000
	R40	Med.	14430-3	■▲X (31, 37,51,53,12)	500R/3FL/2S	130	24	Swimming Pool Ratings @120V=442W	C, C-7A		6¾	2000 5707		6120 4669
	R40	Mog.	14434-5	▲ (51, 53)	500R/3FL	120–130	24	Frost Reflector Flood	CC-11		7¼	2000		5000
			14435-2	▲ (51, 53)	500R/3FL	250	24	Frost Reflector Flood Special Svc.	C, C-7A		7¼	2000		4700

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INCANDESCENT LAMPS

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
INCANDESCENT LAMPS (BY WATTAGE) CONTINUED														
620	PS40	Mog. Pf.	14323-0		620PS40P	120	24	Code Beacon	C, C-7A	5 1/16	10 1/16	3000		9000
LAMPS LISTED BY LUMENS														
1950L	P25	Med. +	14572 2		1950L/P25/TS	120	60	Traffic Signal	C, C-9	3	4 3/4	8000		1950
SPECIAL LIGHTING														
Night Light Plug In			25139-7	(94)	BCPNL 4C7 12/1	120	12	Night Light Plug In	B, C-7A		2 1/8	3000		16
STREET LIGHTING LAMPS, SERIES														
6.6A	PS35	Mog.	14311-5		2500/66R	22.8	24	Clear Extended Service	C, C-2V	7	9 3/8	3000		
			14310-7		4M/66R	34	24	Clear Extended Service	C, C-2V	7	9 3/8	3000		

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INCANDESCENT LAMPS

Decoratives

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP*	Lumens
DECORATIVES, BLISTER-CARDED (12)														
3	CA10	Cand.	16698-2	▲	BC3CA10C/CL/LL 6/1	120	6	Clear Long Life Flicker Flame	B, C-7A		4⅛	2000		
15	BA9	Cand.	16696-6	▲	BC15BA9C/CL/LL 6/4	120	24	Clear Long Life Bent Tip	B, CC-2V, C-7A		3¾	2000		110
			16811-2	▲	BC15BA9C/CL/LL 6/2	120	12	Clear Long Life Bent Tip	B, CC-2V, C-7A		4⅜	2000		110
	F10	Cand.	16830-2	▲	BC15F10C/CL/LL 6/2	120	12	Clear Long Life Flame	B, C-7A		3⅛	2000		95
			16831-0	▲	BC15F10C/A/LL 6/2	120	12	Amber Long Life Flame	B, C-7A		3⅛	2000		85
25	BA9	Cand.	16719-7	▲	BC25BA9C/CL/LL 6/4	120	24	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		150
			16806-2	▲	BC25BA9C/CL/LL 6/2	120	12	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		150
			16810-4	▲	BC25BA9C/F/LL 6/2	120	12	Frost Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		145
			13823-0	▲	BC25BA9C/CL 6/1 TP	120	6	Clear Bent Tip	C, CC-2V, C-7A		4⅜	2000		
	BA9½	Med.	16819-5	▲	BC25BA9½/CL/LL 6/2	120	12	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅛	2000		150
	B10½	Cand.	16824-5	▲	BC25B10½C/CL/LL 6/2	120	12	Clear Long Life Blunt Tip	C, CC-2V, C-7A		4⅛	2000		150
	B13	Med.	16827-8	▲	BC25B13/CL/LL 6/2	120	12	Clear Long Life Blunt Tip	C, C-7A		4⅛	2000		150
	CA8	Cand.	13568-1	▲	BC25CA8C/CL/LL 6/2	120	12	Clear Petite Long Life Bent Tip	C, CC-2V		3½	2000		220
	F10	Cand.	16832-8	▲	BC25F10C/CL/LL 6/2	120	12	Clear Long Life Flame	B, C-7A		3⅛	2000		105
	F15	Med.	16833-6	▲	BC25F15/CL/LL 6/2	120	12	Clear Long Life Flame	B, C-9		4½	2000		150
			16839-3	▲	BC25F15/IR/LL 6/2	120	12	Iridescent Long Life Flame	C, C-9		4½	2000		150
			16841-9	▲	BC25F15/A/LL 6/2	120	12	Amber Long Life Flame	B, C-9		4½	2000		130
	G16½	Cand.	16845-0	▲	BC25G16½C/CL/LL 6/2	120	12	Clear Long Life Globe	B, C-7A		3	2000		200
			16847-6	▲	BC25G16½C/W/LL 6/2	120	12	White Long Life Globe	B, C-7A		3	2000		165
		Med.	13535-0	▲	BC25G16½/CL/LL 6/2	120	12	Clear Long Life Globe	C, CC-2V		2¾	2000		180
			13534-3	▲	BC25G16½/W/LL 6/2	120	12	White Long Life Globe	C, CC-2V		2¾	2000		160
40	BA9	Cand.	16720-5	▲	BC40BA9C/CL/LL 6/4	120	24	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		300
			16807-0	▲	BC40BA9C/CL/LL 6/2	120	12	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		300
			16809-6	▲	BC40BA9C/F/LL 6/2	120	12	Frost Long Life Bent Tip	C, CC-2V, C-7A		4⅜	2000		295
	BA9½	Med.	16760-1	▲	BC40BA9½/CL/LL 6/4	120	24	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅛	2000		300
			16820-3	▲	BC40BA9½/CL/LL	120	12	Clear Long Life Bent Tip	C, CC-2V, C-7A		4⅛	2000		300
			16821-1	▲	BC40BA9½/F/	120	12	Frost Long Life Bent Tip	C, CC-2V, C-7A		4⅛	2000		295
	B10½	Cand.	16825-2	▲	BC40B10½C/CL/LL 6/2	120	12	Clear Long Life Blunt Tip	C, CC-2V		4⅛	2000		300
			14125-9	▲	BC40B10½C/NTL 6/2	120	12	Natural Light Blunt Tip	C, CC-2V, C-7A		4⅛	2000		270
	B13	Med.	16828-6	▲	BC40B13/CL/LL 6/2	120	12	Clear Long Life Blunt Tip	C, C-7A		4⅛	2000		300
			14127-5	▲	BC40B13/NTL 6/2	120	12	Natural Light Blunt Tip	C, CC-2V, C-7A		4⅛	2000		270

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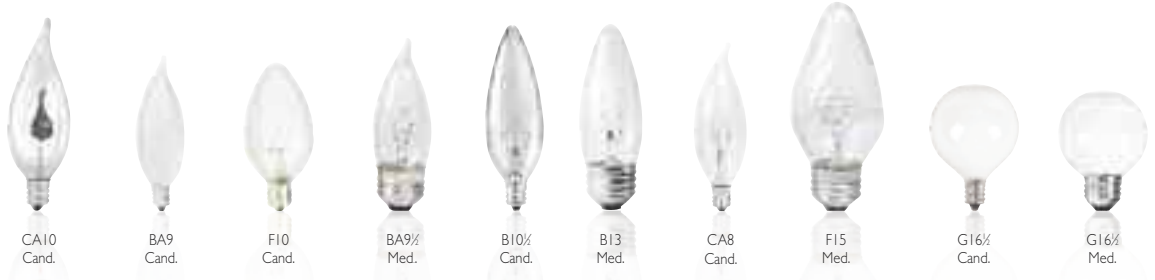

INCANDESCENT LAMPS

Decoratives

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
DECORATIVES, BLISTER-CARDED CONTINUED (12)														
40	F15	Med.	16835-1	▲	BC40F15/CL/LL 6/2	120	12	Clear Long Life Flame	C, C-9		4½	2000		385
			16837-7	▲	BC40F15/IR/LL 6/2	120	12	Iridescent Long Life Flame	C, C-9		4½	2000		370
			16838-5	▲	BC40F15/W/LL 6/2	120	12	White Long Life Flame	C, C-9		4½	2000		300
	G16½	Cand.	16846-8	▲	BC40G16½C/CL/LL 6/2	120	12	Clear Long Life Globe	C, CC-2V, C-7A		3	2000		300
			16848-4	▲	BC40G16½C/W/LL 6/2	120	12	White Long Life Globe	C, CC-2V, C-7A		3	2000		245
			14129-1	▲	BC40G16½C/NTL 6/2	120	12	Natural Light Globe	C, CC-2V, C-7A		3	2000		270
	G16½	Med.	13537-6	▲	BC40G16½/CL/LL 6/2	120	12	Clear Long Life Globe	C, CC-2V, C-7A		2¾	2000		300
			13536-8	▲	BC40G16½/W/LL 6/2	120	12	White Long Life Globe	C, CC-2V, C-7A		2¾	2000		270
			14876-7	▲	BC40G16½/IR/LL 6/2TP	120	12	Iridescent Long Life Globe	C, CC-2V, C-7A		2¾	2000		270
60	BA9	Cand.	16808-8	▲	BC60BA9C/CL/ 6/2	120	12	Clear Long Life Bent Tip	C, CC-2V, C-7A		4¾6	2000		550
			16721-3	▲	BC60BA9C/CL/LL 6/4	120	24	Clear Long Life Bent Tip	C, CC-2V, C-7A		4¾6	2000		550
			16805-4	▲	BC60BA9C/F/LL 6/2	120	12	Frost Long Life Bent Tip	C, CC-2V, C-7A		4¾6	2000		545
	BA9½	Med.	16822-9	▲	BC60BA9½/CL/LL 6/2	120	12	Clear Long Life Bent Tip	C, CC-2V, C-7A		4¼6	2000		550
			16823-7	▲	BC60BA9½/F/LL 6/2	120	12	Frost Long Life Bent Tip	C, CC-2V, C-7A		4¼6	2000		545
	B10½	Cand.	16826-0	▲	BC60B10½C/CL/LL 6/2	120	12	Clear Long Life Blunt Tip	C, CC-2V		4¼6	2000		550
	B13	Med.	16829-4	▲	BC60B13/CL/LL 6/2	120	12	Clear Long Life Blunt Tip	C, C-7A		4¼6	2000		550
			14006-1		60B13/CL PRO	130	25	ProPack Clear Blunt Tip	C, C-7A		4¼6	2000		550
	F15	Med.	16842-7	▲	BC60F15/CL/LL 6/2	120	12	Clear Long Life Flame	C, C-9		4½	2000		630
			20471-9	▲	60F15/CL/TG 24/1	120	24	TuffGuard Coated Flame	C, C-9		4½	2000		
	G16½	Cand.	16699-0	▲	BC60G16½C/CL/LL 6/2	120	12	Clear Long Life Globe	C, CC-2V		3	2000		540
			16700-7	▲	BC60G16½C/W/LL 6/2	120	12	White Long Life Globe	C, CC-2V		3	2000		450
	G16½	Med.	13538-4	▲	BC60G16½/CL/LL 6/2	120	12	Clear Long Life Globe	C, CC-2V		2¾	2000		540
			13530-1	▲	BC60G16½/W/LL 6/2	120	12	White Long Life Globe	C, CC-2V		2¾	2000		420
100	F20	Med.	16844-3	▲	100F20/POSTLT/CL/LL 6/1	120	6	Clear Long Life PostLight	C, C-9		5⅛	4000		1250

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INCANDESCENT LAMPS

Decoratives

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP*	Lumens
DECORATIVES, BOXED (12)														
25	B10½	Cand.	14000-4		25B10-½C/CL PRO	130	25	ProPack Clear Blunt Tip	C, C-7A, CC-2V		4 3/16	2000		150
	BA9	Cand.	14003-8		25BA9C/CL PRO	130	25	ProPack Clear Bent Tip	C, C-7A, CC-2V		4 3/16	2000		150
			31090-4	▲	25BA9C	120	25	Clear Bent Tip	C, C-7A, CC-2V		4 3/16	4000		135
	G16½	Cand.	31133-2	▲	25G16-½C/4M	120	25	Clear Globe	C, C-7A		3	4000		170
			14013-7		25G16-½C/CL PRO	130	25	ProPack Clear Globe	C, C-7A		3	2000		200
40	BA9	Cand.	31093-8	▲	40BA9C/4M	120	25	Clear Bent Tip	C, C-7A CC-2V		4 3/16	4000		270
			14004-6		40BA9C/CL PRO	130	25	ProPack Clear Bent Tip	C, C-7A, CC-2V		4 3/16	2000		300
	BA9½	Med.	14070-7		40BA9-½/CL PRO	130	25	ProPack Clear Bent Tip	C, C-7A, CC-2V		4 3/16	2000		300
	B10½	Cand.	31115-9	▲	40B10-½C/4M	120	25	Clear Blunt Tip	C, C-7A		4 1/16	4000		270
			14001-2		40B10-½C/CL PRO	130	25	ProPack Clear Blunt Tip	C, C-7A, CC-2V		4 3/16	2000		300
	G16½	Cand.	31134-0	▲	40G16-½C/4M	120	25	Clear Globe	C, C-7A, CC-2V		3	4000		250
			14068-1		40G16-½C/CL PRO	130	25	ProPack Clear Globe	C, C-7A		3	2000		300
60	BA9	Cand.	31095-3	▲	60BA9C/4M	120	25	Clear Bent Tip	C, C-7A, CC-2V		4 3/16	4000		530
			14005-3		60BA9C/CL PRO	120	25	ProPack Clear Bent Tip	C, C-7A, CC-2V		4 3/16	2000		550
	BA9½	Med.	31099-5	▲	60BA9-½/4M	120	25	Clear Bent Tip	C, C-7A		4 1/16	4000		530
	B10½	Cand.	31116-7	▲	60B10-½C/4M	120	25	Clear Blunt Tip	C, C-7A		4 1/16	4000		530
			14002-0		60B10-½C/CL PRO	130	25	ProPack Clear Blunt Tip	C, C-7A		4 3/16	2000		550
DECORATIVES, ALL OTHERS														
25	G25	Med.	16887-2	▲	25G25/CL/LL 12/1	120	12	Clear Long Life Globe	C, CC-6		4 7/16	2000		235
			16748-6	▲	25G25/W/LL 12/1	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		210
			16901-1	▲	25G25/CL/LL 4/3	120	12	Clear Long Life Globe	C, CC-6		4 7/16	2000		235
			16902-9	▲	25G25/W/LL 4/3	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		210
			14014-5		25G25/CL PRO	130	12	ProPack Clear Globe	C, CC-6		4 7/16	2000		200
40	G25	Med.	16702-3	▲	40G25/CT	120	6	Clear Chrome-Top Long Life Globe	C, C-9		4 7/16	2000		200
			16747-8	▲	40G25/CL/LL 12/1	120	12	Clear Long Life Globe	C, CC-6		4 7/16	2000		460
			25001-9	▲	40G25/W 120V 12/1	120	12	White Globe	C, CC-6		4 7/16	1500		370
			16746-0	▲	40G25/W/LL 12/1	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		415
			16903-7	▲	40G25/CL/LL 4/3	120	12	Clear Long Life Globe	C, CC-6		4 7/16	2000		460
			16904-5	▲	40G25/W/LL 4/3	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		415
			13563-3	▲	40G25/NTL 6/1	120	12	Natural Light Globe	C, CC-6		4 7/16	1500		320
			14016-0		40G25/W PRO	130	12	ProPack White Globe	C, CC-6		4 7/16	2000		420
			14015-2		40G25/CL PRO	130	12	ProPack Clear Globe	C, CC-6		4 7/16	2000		455
	G40	Med.	16857-5	▲	40G40/CL/LL 6/1	120	6	Clear Long Life Globe	C, C-9		6 15/16	3000		372
			16858-3	▲	40G40/W/LL 6/1	120	6	White Long Life Globe	C, C-9		6 15/16	3000		335

For the most current product information, go to the e-catalog on **www.philips.com**
Incandescent symbols and footnotes located on page 149

INCANDESCENT LAMPS

Decoratives

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	Volts	Pkg. Qty.‡	Description	Class Filament	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(93)	Approx. MBCP♦	Lumens
DECORATIVES, ALL OTHERS CONTINUED														
60	G25	Med.	16896-2	▲	60G25/CL/LL 12/1	120	12	Clear Long Life Globe	C, CC-6		4 7/16	2000		775
			16749-4	▲	60G25/W/LL 12/1	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		700
			16899-6	▲	60G25/CL/LL 4/3	120	12	Clear Long Life Globe	C, CC-6		4 7/16	2000		775
			16900-3	▲	60G25W/LL 4/3	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		700
			14018-6	▲	60G25/W PRO	130	12	ProPack White Globe	C, CC-6		4 7/16	2000		715
			14017-8		60G25/CL PRO	130	12	ProPack Clear Globe	C, CC-6		4 7/16	2000		780
	G30	Med.	16849-2	▲	60G30/W/LL 6/1	120	6	White Long Life Globe	C, C-9		5 1/2	3000		580
	G40	Med.	16851-8	▲	60G40/W/LL 6/1	120	6	White Long Life Globe	C, C-9		6 15/16	3000		595
			16852-6	▲	60G40/CL/LL 6/1	120	6	Clear Long Life Globe	C, C-9		6 15/16	3000		665
			14077-2		60G40/W 6/1 PRO	130	6	ProPack White Globe	C, C-9		6 15/16	1500		570
			14078-0		60G40/CL 6/1 PRO	130	6	ProPack Clear Globe	C, C-9		6 15/16	1500		610
100	G25	Med.	13423-9	▲	100G25/W/LL 12/1	120	12	White Long Life Globe	C, CC-6		4 7/16	2000		1180
	G30	Med.	16850-0	▲	100G30/W/LL 6/1	120	6	White Long Life Globe	C, C-9		5 1/2	3000		945
	G40	Med.	16853-4	▲	100G40/W/LL 6/1	120	6	White Long Life Globe	C, C-9		6 15/16	3000		985
			16859-1	▲	100G40/CL/LL 6/1	120	6	Clear Long Life Globe	C, C-9		6 15/16	3000		1100

For the most current product information, go to the e-catalog on **www.philips.com**

Incandescent symbols and footnotes located on page 149

INCANDESCENT LAMPS

Tuffguard

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Description	Volts	Pkg. Qty.‡	Rated Avg. Life (Hrs.)(93)	Availability
TUFFGUARD INCANDESCENT COATED LAMPS									
25	A19	Med.	20178-0	▲	25A/IF/TG 130V 24/2	130	24/2	2500	Made to Order
	T10	Med.	20179-8	▲	25T10/TG 120/130V 24/1	120	24	1000	Made to Order
30	R20	Med.	20181-4	▲ (87)	30R20/TG 120V 12/1	12		2000	Made to Order
40	A15	Med.	20182-2	▲	40A15/TG 120/130V 120/1	120	120	1000	Made to Order
	A19	Med.	20183-0	▲	40A/CL/TG 120/130V 48/1	120	48	1500	Made to Order
	T10	Med.	20184-8	▲	40T10/TG 120/130V 24/1	120	24	1000	Stocked
50	R20	Med.	20187-1	✕ ▲ (87)	50R20/TG 120V 12/1	120	12	2000	Made to Order
60	A19	Med.	20188-9		60A19/35/TG 120V 48/1	120	48	3500	Made to Order
			15925-1		60A/35/TG 130V 48/1	120	48	3500	Made to Order
65	BR30	Med.	20190-5	▲ (87)	65BR30/FL55/TG 120V 12/1	120	12	2000	Made to Order
	BR30	Med.	20191-3	▲ (87)	65BR30/FL55/TG 130V 12/1	130	12	2000	Made to Order
75	A19	Med.	20195-4	▲	75A/TG 120V 48/1	120	48	750	Made to Order
			15933-5	▲	75A/TG 130V 48/1	120	48	750	Stocked
	A21	Med.	20018-8	▲	75A/RH/TG 120/130V 12/1	120	12	1000	Stocked
100	A19	Med.	15934-3	▲	100A/TG 130V 48/1	130	48	750	Stocked
	A21	Med.	15927-7		100A/RS/VS/BR/TG 120/130V 60/1	120	60	1000	Stocked
	BR38	Med.	15923-6	(37, 51, 53)	100PAR/1/CL/TG 130V 12/1	130	12	2000	Stocked
	A21	Med.	20197-0	▲	100A21/TG 120/130V 120/1	120	120	750	Made to Order
			20198-8	▲	100A21/99/TG 120/130V 60/1	120	60	2500	Made to Order
120	BR40	Med.	20199-6	✕ ▲ (87)	120BR/FL60/TG 130V 24/1	130	24	2000	Stocked
			20200-2	✕ ▲ (87)	120BR/FL60/TG 120V 24/1	120	24	2000	Made to Order
125	BR40	Med.	15930-1	✕ (27, 87, 89)	125BR40/1/TG 120V 4/1	120	4	5000	Stocked
150	A21	Med.	15931-9		150A/35/RS/BR/TG 120/130V 60/1	120	60	3500	Stocked
	BR38	Med.	20203-6	✕ (37, 51, 53)	150BR38/FL/TG 130V 6/1	130	6	2000	Stocked

For the most current product information, go to the e-catalog on **www.philips.com**

Incandescent symbols and footnotes located on page 149

INCANDESCENT LAMPS

Tuffguard

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Description	Volts	Pkg. Qty.‡	Rated Avg. Life (Hrs.)(93)	Availability
TUFFGUARD INCANDESCENT COATED LAMPS CONTINUED									
200	A23	Med.	20204-4	▲	200A/99/TG A23 120/130 60/1	120	60	2500	Made to Order
	PS30	Med.	20472-7	▲	200PS30/RS/IF/TG 200	120–130	60	1000	Made to Order
250	R40	Med.	15932-7	(27, 87, 89)	250R40/HR/TG 120V 4/1	120	4	5000	Stocked
	BR40	Med.	20205-1	(27, 87)	250BR40/1/TG 120V 4/1	120	4	5000	Stocked
300	PS25	Med.	20206-9	▲	300M/99IF PS25 120V 60/1	120	60	2500	Made to Order
	PS30	Med.	20207-7	▲	300M/PS30/IF/TG 120/130V 60/1	120	60	750	Stocked
	PS35	Mog.	20474-3	▲	300/IF/TG	120–130	12	1000	Made to Order

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Incandescent symbols and footnotes located on page 149


A23 Med.


PS30 Med.


R40 Med.


BR40 Med.


PS25 Med.

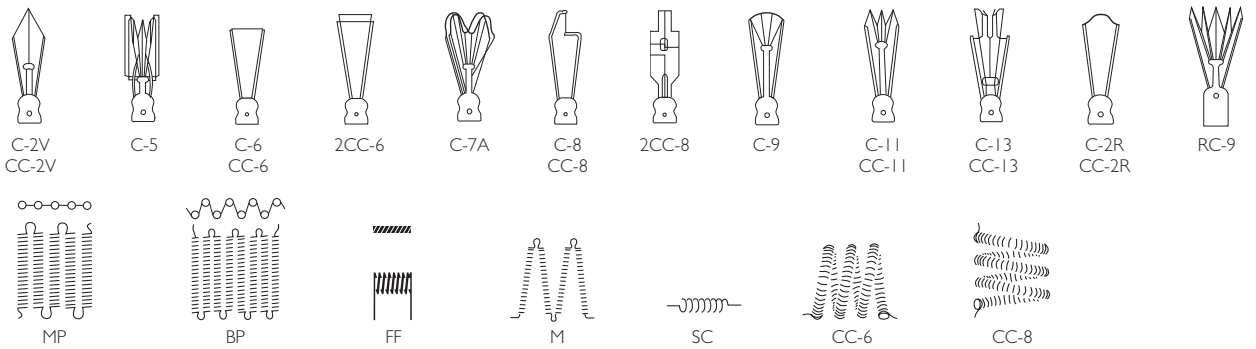

PS35 Mog.

INCANDESCENT LAMPS

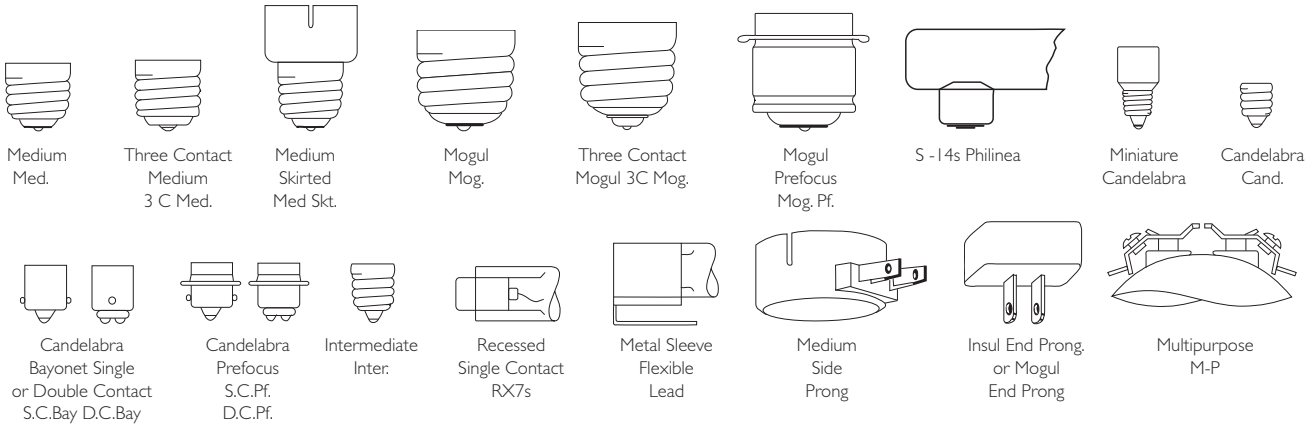
Filament Designations, Base Types and Bulb Shapes

Filament Designations (Not Actual Sizes)

Filament designations consist of a letter or letters to indicate how the wire is coiled and an arbitrary number sometimes followed by a letter to indicate the arrangement of the filament on the supports. Prefix letters include C (coil)—wire is wound into a helical coil or it may be deeply fluted; CC (coiled coil)—wire is wound into a helical coil and this coiled wire again wound into a helical coil. Some of the more commonly used types of filament arrangements are illustrated.

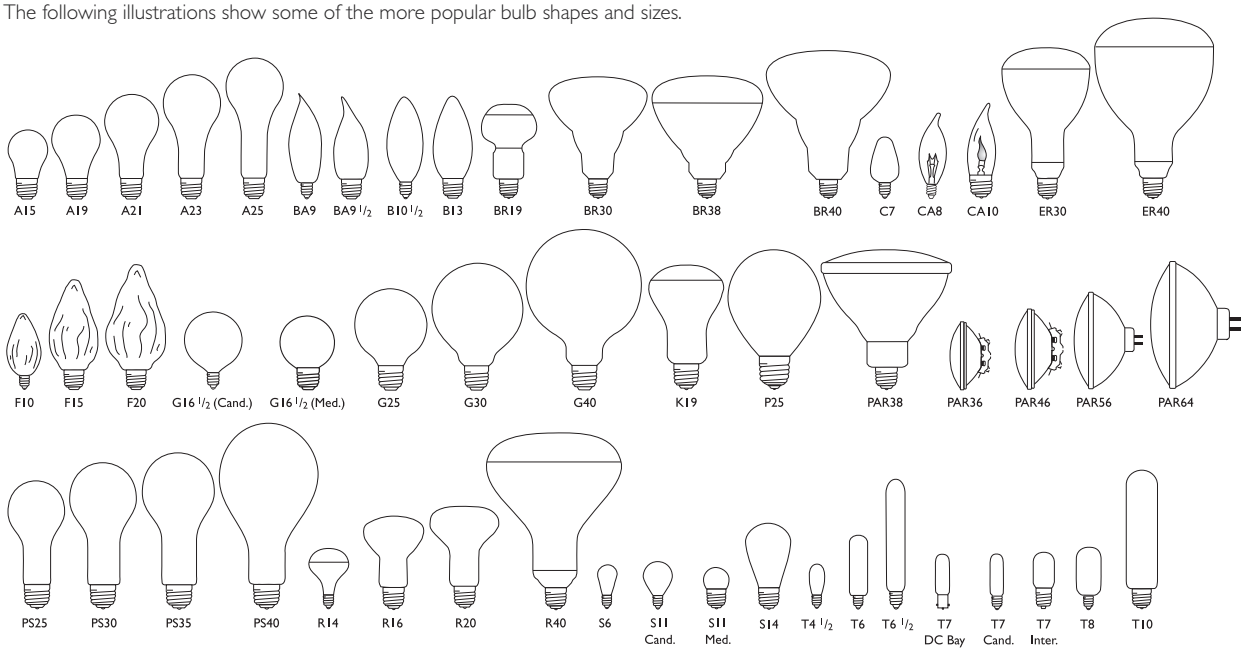


Base Types (Not Actual Sizes)



Bulb Shapes (Not Actual Sizes)

The size and shape of a bulb is designated by a letter or letters followed by a number. The letter indicates the shape of the bulb while the number indicates the diameter of the bulb in eighths of an inch. For example, "T10" indicates a tubular shaped bulb having a diameter of 1⅛ or 1¼ inches. The following illustrations show some of the more popular bulb shapes and sizes.



INCANDESCENT LAMPS

For the most current product information, go to the e-catalog on www.philips.com

▢ Exclusive to Philips Lighting Company

■ Nickel plated brass base

$ Energy Saving Product

▲ Aluminum base

★ Heat resisting glass bulb

♦ Maximum Beam Candlepower

✖ Orders will be shipped until inventory is depleted; no longer manufactured

Ⓔ This Bulb Meets US Federal Minimum Efficiency Standard

† New since last printing

* Two Lamp Carded Pack.

‡ Quantity shown is minimum shipping container—refer to Net Price Schedule for number of lamps to qualify as a standard case.

✔ Consider the compact fluorescent lamps listed on pages 52–69 or the energy saving halogen listed on pages 102–105 for energy savings

G = General Lighting

S = Street Lighting

▼ PAR38 (one piece)

+ Pursuant to California law, these incandescent lamps cannot be used or offered for sale for use in traffic signals in the State of California.

++ Pursuant to California law, these incandescent lamps cannot be used or offered for sale in the State of California.

(4) Average laboratory life is 200 hours for vacuum cleaner and 600 hours for sewing machine service. Design life 1000 hours.

(8) Operate base down.

(9) This lamp should be shielded from moisture to prevent breakage.

(10) Operating position—horizontal.

(12) Operate base down to horizontal.

(14) Operate base up.

(18) Base is medium left hand thread.

(19) May not give satisfactory performance if any accessory equipment is attached to or touches the glass bulb.

(22) Unsatisfactory lamp operation is likely to occur in operating positions between horizontal and base up, particularly between 45° from base up and base up.

(27) Average laboratory life in excess of 5000 hours. In-service life depends upon service conditions.

(29) Suitable for indoor and outdoor service.

(31) Operate only in porcelain sockets.

(37) Should not be used in equipment where the base temperature will exceed 500°F.

(43) Unless otherwise noted, may be operated in any position, but lumen maintenance is best when operated vertically base up.

(46) Stippled, rounded cover.

(51) Light output is maintained best when operated within 45° of vertically base up.

(53) The bulb, though made of heat-resistant glass, may break if moisture falls on it. Not recommended for use in enclosed, close-fitting housings.

(55) For use only with heat resistant connector and with lamp supported by bulb rim.

(59) Life dependent upon service conditions.

(63) Design volts 145.

(64) For use only in equipment specially designed to maintain bulb and base temperature within safe limits.

(66) Silicone Coating reduces lumen output from Standard Values less than 3%.

(82) CAUTION: To avoid deterioration of lampholder by heat, use only heat resistant lampholders or fixtures listed by a nationally recognized electrical testing organization for use with reflector or PAR lamps.

(87) Do not allow hot bulb to come in contact with liquid or metal parts of the fixture, as glass may shatter. Do not use outdoors. Do not operate in close proximity to flammable materials or those adversely affected by heat or drying. Operate only in heat resistant sockets.

(89) CAUTION: Do not operate in close proximity to flammable materials or those adversely affected by heat or drying. Operate only in heat resistant sockets.

WARNING: Use carefully. May cause serious burns. Do not use over insensitive skin areas or in the presence of poor circulation. The unattended use of infrared heat by children or incapacitated persons may be dangerous.

—Lamp should not be placed closer than 18" to the surface being irradiated.

—Do not use for therapeutic or topical applications unless recommended by a physician.

—For food warming, use only lamps with heat resisting glass.

(90) Since there is considerable heat radiation in the beam of this lamp, care should be taken against using it without suitable protection, in close proximity to combustible materials or those adversely affected by drying action.

(93) Rated average life is the length of operation (in hours) at which point an average of 50% of the lamps will still be operational and 50% will not.

(94) To prevent electrical shock, match wide blade of plug to wide slot of outlet, fully insert. Do not cover night light; overheating may occur. Do not plug in near radiator or source of heat.

WARNING: For indoor use only.

Specialty lighting

Reliable, high quality lamps provide ultimate performance

Philips HPL+ Lamps with P3 technology enable flexible burning positions to ensure accurate aiming and supply of light wherever it is needed. HPL+ lamps are now designed to last longer, making them ideal for theater, studio and event lighting.

Philips Fastfit Lamps feature a rear loading base system which enables easy lamp replacement.

Philips FastFit is a new lamp concept for Single Ended MSR Gold and Halogen Hi-Brite lamp types. The rear load base system enables easy lamp replacement and adjustments in seconds in difficult stage conditions. The overall lamp length is reduced making more compact and lighter fixture designs possible.

Philips Germicidal T5 Sterilamp featuring ALTO Lamp Technology uses UV technology, which allows for the emission of UVC† energy to disinfect water. The Philips Germicidal T5 Sterilamp is a cost effective and environmentally responsible disinfection alternative to chemical treatment of waste water.

† UVC is a band of ultraviolet radiation with wavelengths shorter than 280 nanometers.

FEATURED PRODUCTS

HPL+ LAMPS

PAGE 154

MSR HOT RESTRIKE LAMPS

PAGE 155

FASTFIT LAMPS

PAGE 156

TUV AMALGAM XPT SYSTEM

PAGE 160

GERMICIDAL T5 STERILAMP

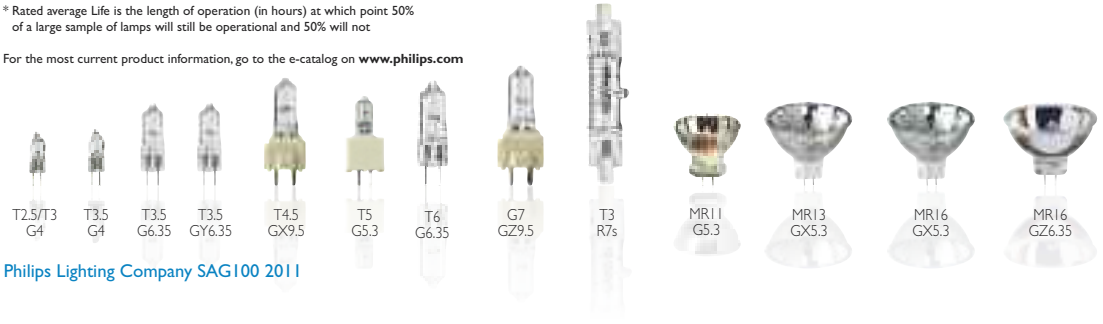
PAGE 160

SPECIALTY LAMPS

ANSI Code	Product Number	Pkg. Qty.	Volts	Avg. Watts (Amps)	Bulb	Base	Rated Avg. Life (Hrs.)*	Coil Type	LCL (In.)	LCL (mm.)	MOL (In.)	MOL (mm.)	Rated Approx. Lumens	Color Temp (K)	Operating Position
PHOTO PROJECTION LAMPS															
BRL	31627-3	24	12	50	T3.5	G6.35	50	C-6	1 9/50	30	1 73/100	44	1500	3400	BDTH
DDL	31509-3	24	20	150	MR16	GX5.3	500	CC-6	—	—	1 3/4	44.5	—	3150	BDTH
DZA	28117-0	100	10.8	30	T5	G5.3	1000	—	—	—	1 17/20	47	570	3100	BDTH
EFN	31502-8	50	12	75	MR16	GZ6.35	50	C-6	—	—	1 13/20	42	—	3350	BDTH
EFP	31488-0	50	12	100	MR16	GZ6.35	50	C-6	—	—	1 13/20	42	—	3350	BDTH
EFP/8H	13657-2	50	12	100	MR16	GZ6.35	800	C-6	—	—	1 13/20	42	—	3100	BDTH
EFR	31490-6	50	15	150	MR16	GZ6.35	50	C-6	—	—	1 13/20	42	—	3350	BDTH
EHJ	31758-6	100	24	250	T4	G6.35	50	C-6F	1 3/10	33	2 17/100	55	9400	3400	BD
EHJ-5H	14169-7	100	24	250	T4	G6.35	500	C-6F	1 3/10	33	2 17/100	55	9400	3200	BD
EHJ-X	23175-3	200	24	250	T4	G6.35	50	C-6F	1 3/10	33	2 17/100	55	10,000	3400	BD
EJA	44142-8	24	21	150	MR16	GX5.3	40	CC-6	—	—	1 17/20	44.5	—	3350	BDTH
EJL	31508-5	24	24	200	MR16	GX5.3	50	CC-6	—	—	1 17/20	44.5	—	3400	BDTH
EJM	23942-6	24	21	150	MR16	GX5.3	40	CC-6	—	—	1 3/4	44.5	—	3400	BDTH
EKE	31592-9	24	21	150	MR16	GX5.3	200	CC-6	—	—	1 3/4	44.5	—	3400	BDTH
ELC	23103-5	24	24	250	MR16	GX5.3	50	CC-6	—	—	1 3/4	44.5	—	3200	BDTH
ELC-5	38166-5	24	24	250	MR16	GX5.3	500	CC-6	—	—	1 3/4	44.5	—	3200	BDTH
ELD	31618-2	24	21	150	MR16	GX5.3	40	CC-6	—	—	1 17/20	44.5	—	3350	BDTH
ELH	31619-0	24	120	300	MR16	GY5.3	35	CC-8	—	—	1 17/20	44.5	—	3350	BDTH
ENH	31621-6	24	120	250	MR16	GV5.3	175	CC-8	—	—	1 3/4	44.5	—	3250	BDTH
ENX	31927-7	24	82	360	MR16	GY5.3	75	CC-8	—	—	1 3/4	44.5	—	3300	BDTH
ESA/EHD	26126-3	100	6	10	T2.5	G4	100	C-6	7/8	19.6	1 9/50	30	200	3200	ANY
ESB	25678-4	100	6	20	T3	G4	100	C-6	7/8	19.5	1 3/8	31	420	3200	ANY
EVA	25676-8	100	12	100	T3.5	GY6.35	1000	C-6F	1 9/50	30	1 73/100	44	2500	3200	ANY
EVC	31884-0	24	24	250	T5	G6.35	300	C-6F	1 3/10	33	2 9/25	57	8400	3200	ANY
EVC 10H	20982-5	100	24	250	T5	G6.35	1000	C-6F	1 3/10	33	2 9/25	57	8400	3200	ANY
EVD-X	23177-9	24	36	400	T6	G6.35	50	C-6F	1 21/50	36.1	2 9/25	59.9	16,625	3400	BDTH
EXR	25286-6	24	82	300	MR13	GX5.3	35	CC-8	—	—	1 3/4	44.45	—	3350	BDTH
EYB	23257-9	24	82	360	T5	G5.3	75	CC-8	1 1/4	31	2 1/4	57	10,000	3250	BDTH
FCM	33269-2	12	120	1000	T3	R7s	300	C-8	—	—	4 18/25	119.9	27,000	3200	HORIZ.
FCR	26101-6	100	12	100	T3.5	GY6.35	50	C-6F	1 9/50	30	1 73/100	44	3400	3400	BDTH
FCS	20607-8	200	24	150	T4	G6.35	50	C-6F	1 9/50	30	2	50.8	5200	3400	BDTH
FCS-X	23174-6	100	24	150	T4	G6.35	50	C-6F	1 9/50	30	2	50.8	6000	3400	BDTH
FHS	25305-4	24	82	300	MR13	GX5.3	70	CC-8	—	—	1 3/4	44.45	—	3300	BDTH
FJX	31499-7	50	13.8	30	MR16	GX5.3	500	C-8	—	—	1 7/8	44.9	—	3150	ANY
FLW	20492-5	24	24	300	T6	GY6.3	50	C-6F	1 3/10	33	2 17/10	55	10,450	3400	BD±15°
GDA	38684-7	100	120	500	T3.5	R7s	75	CC-8	—	—	5 1/4	133.3	11,000	3200	ANY
JCR 15v 150W	24923-5	24	15	150	MR16	GZ6.35	500	C-8	—	—	1 13/20	42	—	—	BDTH
5761	25713-9	100	6	30	T3.5	G4	100	C-6F	7/8	19.6	1 3/8	31	765	3200	ANY
6605	25684-2	100	6	10	T3	G4	2000	C-6	7/8	19.5	1 3/8	30	150	2700	ANY
6982P	13421-3	10	230	800	T6	G 9.5	300	Bi-Plane	2 3/8	60.5	4 3/100	104	20,000	3200	ANY
7010	14664-7	20	120	300	T6	GX6.35	150	C-6	1 17/25	32.5			7500	3200	ANY
13117	37614-5	50	17	150	MR16	GX5.3	1000	CC-6	—	—	1 17/20	47	—	3200	ANY
13139	33545-5	50	12	75	MR16	GZ6.35	25	C-8	—	—	1 13/20	42	—	3400	BD±105°
13165	44295-4	50	14	35	MR11	GZ4	50	—	—	—	1 1/2	38	—	—	BD±130°
13298	16094-5	50	10	52	MR11	GZ4	20	CC-8	—	—	1 7/8	44.9	—	—	HORIZ.±40°
13477R	31349-4	150	220	800	T3.5	R7s	150	—	—	—	4 18/25	120	21,600	3200	HORIZ.
13528	31504-4	360	6	15	MR11	GZ4	500	C-6	—	—	1 1/2	38	—	—	BD±105°
13865	26423-4	50	12	75	MR11	G5.3	50	—	—	—	1 57/100	40	—	—	BD±105°
14553	26391-3	230	10	52	MR11	GZ4	20	—	—	—	1 57/100	40	—	—	BD±105°
14623	15881-6	100	17	95	T4	GY6.35	2000	C-8	—	—	1 97/100	50	2150	3000	ANY

* Rated average Life is the length of operation (in hours) at which point 50% of a large sample of lamps will still be operational and 50% will not

For the most current product information, go to the e-catalog on **www.philips.com**



SPECIALTY LAMPS

ANSI Code	Product Number	Watts	Description	Volts	Base	MOL (In.)	LCL (In.)	Mean Lumens	Rated Avg. Life (Hrs.)*	Filament	Color Temp (K)	Envelope Finish
STAGE/STUDIO/TV LAMPS												
BTL	31891-5	500		120	Med. Pf.	4½	2⁹⁄₃₂	11,000	500	C-13D	3050	Clear
BTN	20481-8	750		120	Med. Pf.	4½	2³⁄₁₆	17,600	500	C-13D	3050	Clear
BTP	30514-4	750	750T7Q/4CL/2P	120	Med. Pf.	4½	2⅜	21,000	200	C-13D	3200	Clear
BTR	30533-4	1000	1000T7Q/4CL/2P	120	Med Pf.	4½	2³⁄₁₆	28,500	250	C-13D	3200	Clear
CYV	31892-3	1000		120	Mog. Bipost	7¾	5	28,500	200	C-13D	3200	Clear
CYX	31893-1	2000		120	Mog. Bipost	8½	5	59,000	300	C-13D	3200	Clear
DWT	38295-2	1000	1000T6Q/CL	120	R7s	5⅝		23,400	2000	CC-8	3000	Clear
EGE	39069-0	500		120	Med. Pf.	5½	3½	10,450	2000	CC-8	3000	Clear
EGR	22563-1	750		120	Med. Bipost	5½	2½	21,000	150	C-13D	3200	Clear
EGT	31896-4	1000		120	Med. Bipost	5½	2½	28,500	250	C-13D	3200	Clear
EHG	26972-0	750	750Q/CL	120	Med. 2-Pin	4¼	2⅜	15,000	2000	CC-8	3000	Clear
EHT	14668-8	250	250Q/CL	120	Mini-Can	3⁵⁄₃₂	1⅝	5000	2000	CC-8	3000	Clear
ESN	20350-5	100	100Q/CL	120	Mini-Can	2¾	1⅜	1900	1000	CC-2V	3000	Clear
ESS	14666-2	250	250Q/CL/DC	120	D.C. Bay	3	1⅝	5000	2000	CC-8	3000	Clear
ETC	26676-7	150	150QCL/DC	120	D.C. Bay	2⅝	1½	2800	200	CC-8	2900	Clear
ETG	20354-7	150	150Q/CL	120	Mini-Can	3	1½	2800	2000	CC-8	2900	Clear
ETH	29856-2	150	150Q	120	Mini-Can	3	1½	2700	2000	C-8	2900	Frosted
EVR	38079-0	500	500Q/CL	120	Mini-Can	3¾	2	10,000	2000	CC-8	3000	Clear
FCL	20010-5	500	500T3Q/CL	120	R7s	4¹¹⁄₁₆		10,500	2600	C-8	3000	Clear
FEL	26979-5	1000	1000Q/CL	120	Med. 2-Pin	4	2⅜	27,500	300	CC-8	3200	Clear
FEV	13925-3	200	200Q/CL/DC	120	D.C. Bay	2½	1⅜	5500	50	CC-2V	3200	Clear
FEY	13926-1	2000	2000T8Q/CL	120	RX7s	5⅝		57,000	400	CC-8	3200	Clear
FFT	39070-8	1000	1000T4Q	120	R7s	6⅝	2¹³⁄₂₅	27,000	300	C-8	3200	Clear
FHM	26130-5	1000	1000T3Q	120	R7s	4¹¹⁄₁₆		27,300	400	C-8	3200	Frosted
FLK	24861-7	575		115	G9.5	4	2⅜	16,500	300	CC-8	3200	Clear
FRK	14952-6	650	6638P	120	GY9.5	1⅞		17,500	200	C-13D	3200	Clear
GAC	23667-9	1000	6995I/BP	120	2-Pin Pf.	3¾	1⅘	27,000	250	C-13D	3200	Clear
GKV	36372-1	600	6986P	230	G9.5	4⅓	2⅜	15,000	400	C-13D	3200	Clear
GLA	29432-2	575	6992P	115	G9.5	4	2⅜	13,000	1500	C-13D	3100	Clear
GLB	36373-9	575	6991P	230	G9.5	4	2⅜	13,000	1500	C-13D	3100	Clear
GLC	28739-1	575	6989P	115	G9.5	4	2⅜	15,500	400	C-13D	3200	Clear
GLD	13420-5	750	6981P	115	G9.5	4	2⅜	18,600	300	C-13D	3200	Clear
250Q/CL 130v	14667-0	250	250Q/CL	130	Mini-Can	3⁵⁄₃₂	1⅝	5000	2000	CC-8	3000	Clear
6980Z	38296-0	1200	6980Z	80	G22	5½	2½	37,500	300	C-13D	3300	Clear
6982P	13421-3	800	6982P	230	G9.5	4	2⅜	20,000	250	C-13D	3200	Clear
7002Y 115v	382978	1000	7002Y 115v	115	G22	6	2½	29,000	250	Bi-Plane	3200	Clear
7010	14664-7	300	7010	120	GX6.35	2¹¹⁄₃₂	1⁹⁄₃₂	7500	150	M	3200	Clear
7015 TXO	15179-5	750	7015 TXO	100	GX9.5	3¾	1⅘	18,600	300	C-13	3200	Clear

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SPECIALTY LAMPS

HIGH VOLT SSTV HALOGEN LAMPS

Single-Ended

ANSI Code	Product Number	Watts	Description	Volts	Base	MOL (In.)	LCL (In.)	Mean Lumens	Rated Avg. Life (Hrs.)*	Filament (2)	Color Temp (K)	Burning Position	Pkg. Qty.	Monoplane Equiv. LIF	LIF
FSL	25813-7	300	6872P	230	GY9.5	3½	1⅝	7800	180	M	3200	ANY	10	CP/81	
GCV/GVH	25796-4	500	6820P	230	GY9.5	3½	1⅝	11,000	360	Bi-Plane	3000	BDTH	10	T/25	T/18
FRH	25806-1	500	6873P	230	GY9.5	3½	1⅝	13,500	180	M	3200	ANY	10	CP/82	
7389	14104-4	500	7389	230	GY9.5	3	1 15/32	14,000	75	Bi-Plane	3200	BDTH	10	A1/224	
GKV	36372-1	600	6986P	230	G9.5	4	2⅜	15,000	300	Bi-Plane	3200	ANY	10		
6998P	14103-6	650	6998P	230	GX9.5	4⅜	2⅛	13,000	750	Bi-Plane	3000	ANY	10	T 21	
GCK/GCT	25794-9	650	6823P	230	GY9.5	3½	1⅝	14,500	600	Bi-Plane	3050	BDTH	10	T/27	T/26
FKH	25820-2	650	6993Z	230	G22	5½	2½	16,500	120	Bi-Plane	3200	BDTH	10	CP/68	CP/39
6982P	13421-3	800	6982P	230	G9.5	4⅛	2⅜	20,000	300	Bi-Plane	3200	ANY	10		
FEP	14107-7	1000	6983P	230	G9.5	4	2⅜	26,000	250	Bi-Plane	3200	ANY	10	CP/77	
FVA	14108-5	1000	6995P	230	GX9.5	4½	2⅛	25,000	240	Bi-Plane	3200	BDTH	10	CP/70	CP/24
FKD	25803-8	1000	6996C	230	P28s	5	2⅛	21,000	900	Bi-Plane	3050	BDTH	10	T/20	T/14
7002Y 230v	13041-9	1000	7002Y	230	G22	5½	2½	29,000	250	Bi-Plane	3200	ANY	10		
FKJ	14247-1	1000	6995Z	230	G22	5½	2⅛	25,000	240	Bi-Plane	3200	ANY	10	T/20	
FWP	25804-6	1000	6996P	230	GX9.5	4	2⅛	21,000	750	Bi-Plane	3050	ANY	10	T/19	
FWS	14105-1	1200	6897P	230	GX9.5	4¾	2⅝	27,600	400	Bi-Plane	3000	ANY	10	T/29	
6894Y	14106-9	2500	6894Y	230	G22	6⅞	3½	67,500	350	Bi-Plane	3200	ANY	10	CP/91	
6963Z	29093-2	5000	6963Z	230	G38	11	6½	132,500	400	Bi-Plane	3200	ANY	1	CP/85	CP/29
7009Z	22399-0	1200	7009Z	80	G22	6	72½	36,000	200	Bi-Plane	3250	BDTH	10	—	—
6893P	14107-7	1000	6893P	230	GX9.5	4	2⅜	26,000	250	CC-8	3200	ANY	10	—	—
6897P	14105-1	1200	6897P	230	GX9.5	4¾	2⅝	27,600	400	C-13D	3000	ANY	10	—	—

ANSI Code	Product Number	Watts	Description	Volts	Base	MOL (In.)	LCL (In.)	Mean Lumens	Rated Avg. Life (Hrs.)*	Filament (2)	Color Temp (K)	Envelope Finish
HPL												
HPL 575 115v	39170-6	575	7007	115	Heat Sink	4	2⅜	16,520	300	Bi-Plane	3250	Clear
HPL 575 230v	14564-9	575	7007	230	Heat Sink	4	2⅜	14,900	400	Bi-Plane	3200	Clear
HPL 575LL 115v	39167-2	575	7007 LL	115	Heat Sink	4	2⅜	12,360	2,000	Bi-Plane	3050	Clear
HPL 575LL 230v	14565-6	575	7007 LL	230	Heat Sink	4	2⅜	11,760	1,500	Bi-Plane	3050	Clear
HPL 750 115v	391714	750	7008	115	Heat Sink	4	2⅜	21,900	300	Bi-Plane	3250	Clear
HPL 750 230v	14566-4	750	7008	230	Heat Sink	4	2⅜	19,750	300	Bi-Plane	3200	Clear

ANSI Code	Product Number	Watts	Description	Volts	Base	MOL (In.)	LL (In.)	LCL (In.)	Mean Lumens	Rated Avg. Life (Hrs.)*	Filament (2)	Color Temp (K)	Burning Position	Pkg. Qty.	LIF	Monoplane Equiv. LIF
Double-Ended																
13477R(1)	31349-4	800	13477 R	230	R7s	4⅝	2½	—	24,000	150	C-8	3200	HORIZ. ±15°	10	P2/11	
13704R	27085-0	1000	13704R	230	R7s	3⅝	1⅛	—	26,500	120	C-8	3200	ANY	10	P 2/35	
7786R	27072-8	1000	7786R	230	R7s	4⅝	2⅜	—	27,000	300	C-8	3200	HORIZ. ±15°			

1) These lamp types must be operated with a separate rapid acting High Breaking-Capacity fuse, either 415V AC or 500V DC working in accordance with the supply in use as per end of table.
2) C.C.=coiled coil, S.C.=single coil
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SPECIALTY LAMPS

Description	Product Number	Watts	Volts	Lamp Current (Amps)	Initial Lumens	Rated Avg. Life (Hrs.)*	Arc Length (mm)	CRI	Color Temp (K)	Base
MSR LAMPS SINGLE-ENDED GAS DISCHARGE										
Hot Restrike[1,2]										
MSR 125 HR	24497-0	125	80	1.90	9400	200	4	92	6000	GZX9.5
MSR 200 HR	24499-6	200	70	3.30	15,000	200	5	92	6000	GZY9.5
MSR 250 HR	24518-3	250	96	2.60	20,000	750	5	90	6000	GZY9.5
MSR 400 HR	24504-3	400	70	6.90	32,000	1000	6	92	6000	GZZ9.5
MSR 575 HR	24544-9	575	95	6.95	49,000	1000	7	90	6000	G22
MSR 575 HR UV Block	24548-0	575	95	6.95	46,000	1000	7	90	6000	G22
MSR 1200 HR	24582-9	1200	100	13.80	110,000	1000	10	95	6000	G38
MSR 2500 HR	24581-1	2500	115	25.60	240,000	500	14	95	6000	G38
MSR 4000 HR	24589-4	4000	200	27.50	380,000	500	20	95	6000	G38
MSR 6000 HR	36042-0	6000	125	55.00	570,000	500	24	95	6000	GY38
MSR 12,000 HR	39071-6	12,000	160	84.00	1,200,000	300	30	95	6000	GY38
MSR 18,000 HR	21823-0	18,000	225	77.60	1,650,000	300	35	90	6000	GX51
Standard[1]										
MSR 400	24507-6	400	70	6.90	32,000	1000	6	95	5900	GX9.5
MSR 575/2 10H	24520-9	575	95	6.95	49,000	1000	7	70	7200	GX9.5
MSR 700	24542-3	700	72	12.00	55,000	1000	7	75	5900	G22
MSR 700/2	24543-1	700	72	11.00	55,000	1000	8	80	7200	G22
MSR 1200	24551-4	1200	100	13.80	110,000	800	10	80	5900	G22
MSR 1200/2	24556-3	1200	90	13.80	110,000	800	10	85	7200	G22
Short Arc[1]										
MSR 400 SA	24500-1	400	54	8.40	30,000	750	3	92	5600	GY9.5
MSR 700 SA	24502-7	700	72	11.00	55,000	750	4	80	5600	GY9.5
MSR 1200 SA	24540-7	1200	100	13.80	96,000	750	7	80	6000	GY22
MSR 1200 SA/SE Gold	24576-1	1200	93	12.90	93,000	750	7	80	6000	PGJ41
MSR 2000 SA	24541-5	2000	110	20.00	174,000	750	7	89	6000	GY22
MSR LAMPS DOUBLE-ENDED GAS DISCHARGE										
MSR 1800 DE	22058-2	1800		20	145,000	750	10	85	6000	SFC 15.5-6

1) Based on cycle 3.5 hours on/0.5 hour off, nominal wattage. Shorter life at short cycle operation.

2) Lamps must be used in fixtures designed for hot restrike.

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MSR 125 HR
MSR 200 HR
MSR 250 HR
MSR 400 HR

MSR 575 HR

MSR 1200 HR

MSR 2500 HR
MSR 4000 HR

MSR 6000 HR
MSR 12,000 HR

MSR 18,000 HR

MSR 400 SA
MSR 700 SA

MSR 1200 SA
MSR 2000 SA

MSR 1800DE

SPECIALTY LAMPS

Description	Product Number	Watts	Volts	Lamp Current (Amps)	Initial Lumens	Rated Avg. Life (Hrs.)*	Arc Length (mm.)	CRI	Color Temp (K)	Base	MOL (mm)
MSR SA/DE GOLD (DOUBLE-ENDED) LAMPS											
MSR Gold 400 SA/2 DE	24522-5	400	48	8.4	27,000	750	3	70	7500	SFC 10-4	136
MSR Gold 575 SA/2 DE	24501-9	575	94	7.1	42,000	750	5	75	7500	SFC 11	92
MSR Gold 700 SA/2 DE	24523-3	700	70	10.2	56,000	1000	4	75	7500	SFC 10-4	136
MSR Gold 1200 SA/DE	24521-7	1200	100	13.6	110,000	1000	7	85	6000	SFC 10-4	136
MSR Gold 1200 SA/2 DE	24524-1	1200	207	13.6	103,000	750	7	80	7500	SFC 10-4	136
MSR Gold 1510 SA/DE	24525-8	1500	207	15	140,000	750	7	88	6000	SFC 10-4	136
MSR Gold 1510 SA/2 DE	24526-6	1500	207	15	126,000	750	7	86	7500	SFC 10-4	136
MSD LAMPS (1)											
MSD 150/2	24516-7	150	96	1.80	10,200	3000	5	62	8500	G12	—
MSD 200	24511-8	200	70	3.40	13,500	2000	5	80	6000	GY9.5	—
MSD 250	24514-2	250	90	3.00	18,000	3000	5	75	6700	GY9.5	—
MSD 250/2 30H	24515-9	250	90	3.00	18,000	3000	5	70	8500	GY9.5	—
MSD 575	24519-1	575	95	6.95	45,000	3000	8	75	6000	GX9.5	—
MSD 575 HR (2)	39168-9	575	95	6.95	46,000	1000	8	75	6000	G22	—
MSD 700	24553-0	700	72	11.00	55,000	3000	10	75	6000	G22	—
MSD 1200	24558-9	1200	115	13.80	92,000	3000	14	95	6000	G22	—
MHD LAMPS (1)											
MHD 1800	31360-1	1800	120	17.3	155,000	4000	25	90	5600	SFC20-6	—
FASTFIT LAMPS											
Gas Discharge											
MSR Gold 300/2 Mini FastFit	24530-8	300	96	3.80	23,000	750	5	80	9300	PGJX28	126
MSR Gold 700/2 Mini FastFit	24539-9	700	69	10.20	47,000	750	5	75	7200	PGJX28	112
MSR Gold 700 FastFit	24559-7	700	207	14.00	50,000	750	4	75	6000	PGJX50	111
MSR Gold 700/2 FastFit	24562-1	700	72	11.00	50,000	750	4	80	7500	PGJX50	111
MSR Gold 1200 FastFit	24568-8	1200	207	13.00	95,000	750	5	75	6300	PGJX50	128
MSR Gold 2000/2 FastFit	24560-5	2000	110	19.00	150,000	750	8	80	7500	PGJX50	134
MSR Gold 2000 SA FastFit	24573-8	2000	110	19.00	165,000	750	8	80	6000	PGJX50	134
Hi-Brite											
Hi-Brite 750 FastFit	20161-6	750	80	9.50	22,500	300		100	3250	PGJX50	125
Hi-Brite 1200 FastFit	20162-4	1200	80	15.00	36,000	200		100	3250	PGJX50	140
Hi-Brite 1200/115 FastFit	20171-5	1200	115	10.40	33,600	300		100	3200	PGJX50	140
Hi-Brite 1200/230 FastFit	20172-3	1200	230	5.20	29,000	300		100	3200	PGJX50	140
Hi-Brite 1200/240 FastFit	20173-1	1200	240	5.00	29,000	300		100	3200	PGJX50	140
7019G 750W PGJ X50	22907-0	750	115	6.52	20,500	250	9.5 x 9.0	100	3200	PGJX50	140
7018G 800W PGJ X50	22909-6	800	230	3.48	20,000	250	9.0 x 12.5	100	3200	PGJX50	140
7021G 575W/115	27165-0	575	115	5.11	15,500	300	9.0 x 7.5	100	3200	PGJX50	140
7021G/LL 575W/115	27166-8	575	115	5.11	12,500	1,500	9.0 x 9.5	100	3100	PGJX50	140

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MSR SA/DE GOLD Lamps SFC 10-4 Base


MSD Lamp GY9.5 Base


MSD Lamp GX9.5 Base


MSD Lamp G22 Base


MSR Gold Fastfit Lamp PGJX28 Base


MSR Gold Fastfit Lamp PGJX50 Base


Hi-Brite Fastfit Lamp PGJX50 Base

SPECIALTY LAMPS

Product Number	Watts	Description	Volts	Base	Diam. (In.)	Diam. (mm)	MOL (In.)	MOL (mm)	Lumens	Rated Avg. Life (Hrs.)*	Color Temp. (K)	Burning Position	Beam Shape
SEALED BEAM													
35619-6	500	500PAR56Q/NSP	120	Mog. End	7	179	5	127	88,000	4000	2950	Universal	Narrow Spot
35621-2	500	500PAR56Q/MFL	120	Mog. End	7	179	5	127	43,000	4000	2950	Universal	Med. Flood
35620-4	500	500PAR56Q/WFL	120	Mog. End	7	179	5	127	22,500	4000	2950	Universal	Wide Flood

Description	Product Number	Watts	Volts	Lamp Current (Amps)	Initial Lumens	Rated Avg. Life (Hrs.)*	Arc Length (mm)	CRI	Color Temp (K)	Base
CERAMIC ST LAMPS										
Ceramic ST 250HR	24517-5	250	100	2.6	23,000	4000	8	90	3200	GZY9.5
Ceramic ST 250 Mini FastFit	24531-6	250		2.6	23,000	4000		90	3200	PGJX28

Product Number	Description	Watts	Volts	Lumens	Base	LCL (In.)	MOL (In.)
SHORT ARC LAMPS[1]							
31644-8	SAH250B	250	42	10,000	Med. Pf.	3	6

1) DC operation only—should be operated on a control circuit which supplies direct current to the lamp.

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PAR56
Mog. End Base

Ceramic ST 250 HR
GZY9.5 Base

Ceramic ST 250
Mini FastFit
PGJX28 Base

SAH 250 B

SPECIALTY LAMPS

Product Number	Description	Watts	Volts	Nom. Length (mm)	Diameter (mm)
MEDIUM PRESSURE METAL HALIDE LAMPS					
30832-0	HPM 12	460	120	98	21
44440-6	HPM 13	1000	125	147	27
30831-2	HPM 15	1950	240	203	32
30829-6	HPM 17	2000	243	175	27

Product Number	Description	Watts	Volts	Max. Length (mm)	Width or Diameter (mm)
LOW PRESSURE PULSED XENON DISCHARGE LAMPS					
30750-4	XOP 7 O/F	750	52	241	16.2
30749-6	XOP 15 O/F	1500	105	395	16.2

Product Number	Description	Watts	Current Amps	Bulb	Nom. Length (mm)	(In.)
FLUORESCENT LAMPS WITH SUPER ACTINIC RADIATION—MEDIUM BIPIN BASE						
30808-0	TL140W/03	140	1.46	T12	1514	60

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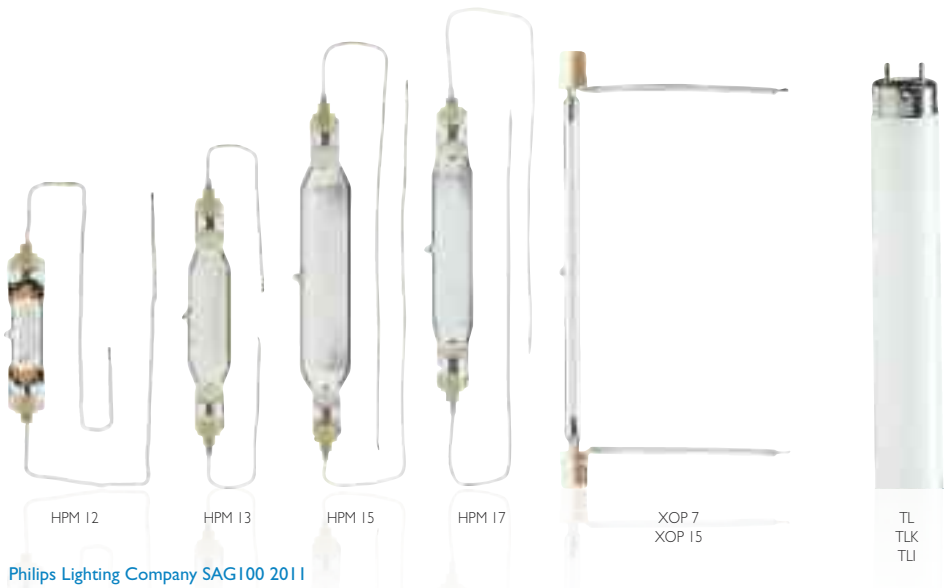


SPECIALTY LAMPS

Product Number	Ordering Code	Watts	Description	Nom. Length (In.)	Bulb	Base	Rated Avg. Life (Hrs.)*	UVA Watts
UVA 365NM PEAK LAMPS(1)								
15752-9	PL-S 9W/08 (Lead Free)	9	UVA Lamp	6½	PL-S	G23	3000	
15766-9	PL-S 9W/10 (Lead Free)	9	UVA Lamp	6½	PL-S	G23	2000	1.9
15765-1	PL-S 9W/10/2P (Lead Free)	9	UVA Lamp	6½	PL-S	G23	9000	
13036-9	F15T8/BL	15	Black Light	18	T8	Med. Bipin	5000	3.1
13034-4	PL-L 18W/10	18	UVA Lamp	9	PL-L	2G11	5000	3.4
23293-4	PL-L 36W/10/4P	36		15⅛	PL-L	2G11	2000	
39153-2	Actinic BL 40W/10	40	Black Light	48	T12	Med. Bipin	9000	9
24675-1	TLK 40W/10R	40	UVA Reflector Lamp	24	T12	Med. Bipin	3000	7.4
26169-3	TL 60W/10R	60	UVA Reflector Lamp	48	T12	Med. Bipin	1000	15.8
26885-4	TL 80W/10R	80	UVA Reflector Lamp	60	T12	Med. Bipin	1000	20.5
24694-2	TL 100W/10R	100	UVA Reflector Lamp	70	T12	Med. Bipin	1000	26.6
21513-7	Actinic BL 8W/10	8	UVA Lamp	20	T5	Min. Bipin	3000	
21517-8	Actinic BL 30W/10	30	UVA Lamp	24	T8	Med. Bipin	2000	
21514-5	Actinic BL TL-K 40W/10	40	UVA Lamp	24	T12	Med. Bipin	2000	

* Rated average Life is the length of operation (in hours) at which point 50% of a large sample of lamps will still be operational and 50% will not

1) For graphic arts, lacquer curing and insect trap applications

For the most current product information, go to the e-catalog on **www.philips.com**

PL-S UVA Lamp | F15T8/BL | PL-L UVA Lamp | T12 Black Light Med. Base | TLK UVA Reflector Lamp | TL UVA Lamp | TL UVA Reflector Lamp | T8 Actinic UVA Lamp Med. Bipin | T12 Actinic UVA Lamp Med. Bipin

SPECIALTY LAMPS

Product Number	Description	Watts (1)	UV-C Watts (2)(5)	Bulb	Base	Rated Avg. Life (Hrs.)*	Nom. Length (In.)	Volts
GERMICIDAL STERILAMP 254NM LAMPS								
Hot Cathode								
36371-3	TUV 4T5	4	0.9	T5	Min. Bipin	6000	6	
24485-5	TUV 6T5	6	1.5	T5	Min. Bipin	8000	9	
29930-5	TUV 8T5	8	2.1	T5	Min. Bipin	8000	12(3)	
30864-3	TUV 15T8	15	4.7	T8	Med. Bipin	8000	18(3)	
13340-5	TUV 17T8	17		T8	Med. Bipin	9000	25(3)	
29268-0	TUV 25T8	25	7.0	T8	Med. Bipin	8000	18(3)	
36016-4	TUV 30T8	30	11.2	T8	Med. Bipin	8000	36(3)	
26269-1	TUV 36W	36	15.3	T8	Med. Bipin	8000	48(3)	
37634-3	TUV 55W HO	55		T12	Med. Bipin	8000	48(3)	
29090-8	TUV 75W HO	75	26.0	T8	Med. Bipin	8000	48(3)	
Amalgam								
21256-3	TUV 230W XPT	230		T10	4-Pin	12,000		
21258-9	TUV 335W XPT	335		T10	4-Pin	12,000		
15792-5	TUV 260W XPT DIM	260		T10	4-Pin	12,000		
Amalgam XPT System								
24262-8	TUV 130W XPT	140	48(5)	T6	4PSE	12,000	33.14	70
24261-0	TUV 180W XPT	180	60(5)	T6	4PSE	12,000	40.63	90
24260-2	TUV 200W XPT	200	66(5)	T6	4PSE	12,000	45.16	100
24258-6	TUV 325W XPT HO	325	110(5)	T6	4PSE	12,000	62.28	158
Twin Tube PL-S / PL-L Hot Cathode								
38186-3	PL-S 5W/TUV	5	1.0	PL-S	G23	8000	4	
32512-6	PL-S 9W/TUV	9	2.4	PL-S	G23	9000	6½	
21064-1	PL-L 18W/TUV	18	5.5	PL-L	2G11	9000	8 15/16	
13726-5	PL-L 35W/TUV	35	11.0	PL-L	2G11	9000	8 15/16	
26585-0	PL-L 36W/TUV	36	12.0	PL-L	2G11	9000	16 7/16	
29464-5	PL-L 55W/TUV	55	17.0	PL-L	2G11	9000	22½	
13035-1	PL-L 60W/TUV	60	18.0	PL-L	2G11	9000	16 7/16	
13725-7	PL-L 95W/TUV	95	32.0	PL-L	2G11	9000	22½	

Product Number	Description
DRIVERS	
24266-9	TUV 130W XPT driver
24264-4	TUV 200W XPT driver
24263-6	TUV 325W XPT HO driver

* Rated average Life is the length of operation (in hours) at which point 50% of a large sample of lamps will still be operational and 50% will not

1) Wattages shown are for operation from a transformer or ballast, currently standard, under specified test conditions.

2) 100 Hour

3) Approximate overall length including two standard lamp holders.

4) Wattage shown is for lamp operating current of 420 ma. Wattage will vary at other operating currents as follows: 120 ma. — 17 watts; 200 ma. — 25 watts; 300 ma. — 32 watts.

5) UVC 100 Hour on HF gear

For the most current product information, go to the e-catalog on **www.philips.com**


T5 Hot Cathode Lamp Min. Bipin


T8 Hot Cathode Lamp Med. Bipin


T12 Hot Cathode Lamp Med. Bipin


T10 4-Pin Amalgam Lamp


PL-S Twin Tube G23 Base


PL-L Hot Cathode 2G11 Base


TUV Amalgam XPT System

SPECIALTY LAMPS

Product Number	Description	Watts (1)	UV-C Watts (2)(5)	Bulb	Base	Rated Avg. Life (Hrs.)*	Nom. Length (In.)
SLIMLINE T5							
38542-7	TUV 11W 4P SE	11	2.2	T5	4-Pin	8000	10
38541-9	TUV 16W 4P SE	16	3.9	T5	4-Pin	8000	13
13341-3	TUV 25W 4P SE	16	7.2	T5	4-Pin	8000	20
29267-2	TUV 36T5 SP	39(4)	15	T5	Single Pin	9000	34
36209-5	TUV 36T5 4P SE	39(4)	15	T5	4-Pin	9000	34
13389-2	TUV 36T5 HO 4P SE	75	25	T5	4-Pin	9000	34
29269-8	TUV 64T5 SP	75	31	T5	Single Pin	9000	62
15782-6	TUV 64T5 2P SE ALTO	75	31	T5	Bipin	9000	62
38303-4	TUV 64T5 4P SE IS	75	31	T5	4-Pin	9000	62
36217-8	TUV 64T5 4P SE	75	31	T5	4-Pin	9000	62
39200-1	TUV 64T5 HO 4P SE	145	48	T5	4-Pin	9000	62

Product Number	Description	Watts (1)	UV-C Watts (2)(5)	Bulb	Base	Rated Avg. Life (Hrs.)*	Nom. Length (In.)	Volts
TUV T8 XTRA								
24968-0	TUV 15 Xtra	15	5.1	T8	Med. Bipin	18,000	17.77	54
24971-4	TUV 30 Xtra	30	13.1	T8	Med. Bipin	18,000	35.77	102
24972-2	TUV 36 Xtra	36	14.7	T8	Med. Bipin	18,000	47.77	103
24973-0	TUV 55 Xtra HO	55	19.6	T8	Med. Bipin	18,000	—	86
24977-1	TUV 75 Xtra HO	75	28.1	T8	Med. Bipin	18,000	—	110

* Rated average Life is the length of operation (in hours) at which point 50% of a large sample of lamps will still be operational and 50% will not

1) Wattages shown are for operation from a transformer or ballast, currently standard, under specified test conditions.

2) 100 Hour

4) Wattage shown is for lamp operating current of 420 ma. Wattage will vary at other operating currents as follows: 120 ma. — 17 watts; 200 ma. — 25 watts; 300 ma. — 32 watts.

5) UVC 100 Hour on HF gear

For the most current product information, go to the e-catalog on **www.philips.com**

Slimline T5 TUV 4-Pin | Slimline T5 TUV Single Pin | Slimline T5 TUV Bipin | TUV T8 Xtra

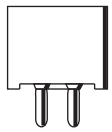
SPECIALTY LAMPS

Base Types and Bulb Shapes

Base Types (Not Actual Sizes)

PG22-6.35
DIN: 49751
iec: 7004-48

RX7s
DIN: 49750
IEC: 7004-92
ANSI: Recessed single contact base
C8.61-1990
sheet 1-770-1



G5.3
IEC: 7004-73-2
ANSI: Miniature 2-pin
C81.61-1990
sheet 1-20-1

BA 15s
DIN: 49720
IEC: 7004-11A
ANSI: Single contact candelabra bayonet base
C81.61-1990
sheet 1-20-1

BA15d
DIN: 49720
IEC: 7004-11A
ANSI: Candelabra bayonet base double contact
C81.61-1990
sheet 1-20-1

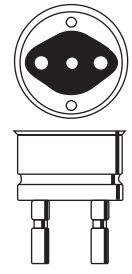
B15d
DIN: 49721
IEC: 7004-11

B22d/22
IEC: 7004-10

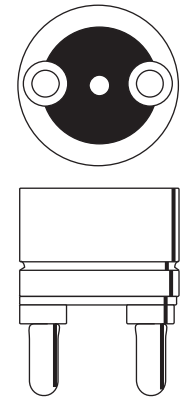
G3.9
ANSI:
C81.61-1990
sheet 1-300-1

G4
IEC: 7004-72

GX5.3
(Round pin)
IEC: 7004-73
ANSI:
C61.61-1990
sheet 1-321-1



G22
IEC: 7004-75
ANSI: Medium bipost
C81.61-1990
sheet 1-466-1

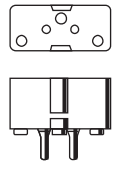


G38
IEC: 7004-76
ANSI: Mogul bipost
C81.61-1990
sheet 1-519-1

G6.35
GX6.35
GY6.35
IEC: 7004-59
ANSI: C81.61-1990
sheet 1-340-1

GZ6.35
DIN: 49754
IEC: 7004-59A

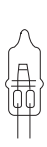
GZ4
IEC: 7004-67



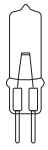
GX9.5
DIN: 49638
IEC: 7004-70A

GY9.5
IEC: 7004-70B
ANSI: C81.61-1990
sheet 1-369-1

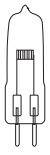
Bulb Shapes (Not Actual Sizes)



T-2.5
T-3

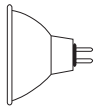


T-3.5
T-4
T-4.5

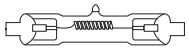


T-5
T-6

G-7



MR-11
MR-13
MR-16



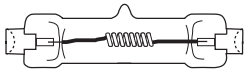
R7s

RX7s

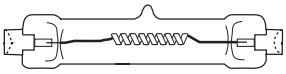
SPECIALTY LAMPS
Base Types and Bulb Shapes

Base Types and Bulb Shapes (Not Actual Sizes)

Double-Ended Tungsten Halogen lamps
3⅛, 3¾, 4⅜, 4$^{11}/_{16}$, 5⅝ and 6⅝ MOL
RX7s Base



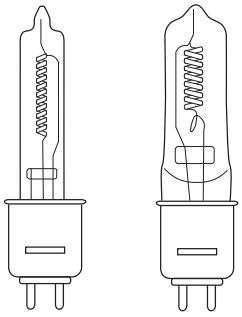
DWY, DWZ, DXN, DXW, FBY



DWT, FER/EHS, FEY

EHM, EHZ, EJG, FCL, FCM, FFT, FHM

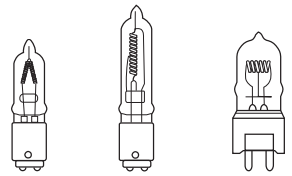
Medium 2-Pin
Tungsten Halogen Lamps (G9.5)



EHD
500Q/CL

EHG
FEL

Double Contact Bayonet Bases (BA15d)
Tungsten Halogen-Miniature 2-Pin Base (G5.3)
Tungsten Halogen-2-Pin Prefocus Base (GZ9.5)

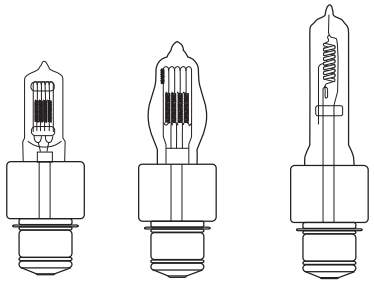


FEV
150/DC

ESS
500Q/CL/DC

DYS/DYV/BHC
(GZ9.5)

Medium Prefocus Lamps with 2⅞" L.C.L. (P28s)
Medium Prefocus Lamps with 3½" L.C.L. (P28s)

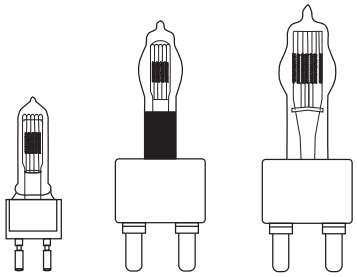


BTL

BTP
BTR

EGE, EGF,
EGG, EGJ

Medium Bipost Lamps with 2½" L.C.L. (G22)
Medium Bipost Lamps with 5" and 6½" L.C.L. (G38)

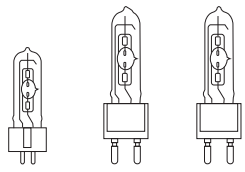


EGR
EGT

CYV

CYX
FKK (5" LCL)

MSR Lamps
(Medium Source Rare Earth Lamps)

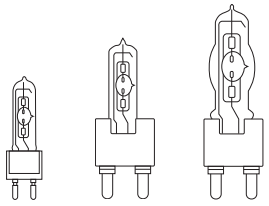


MSR 400

MSR 700

MSR 1200

MSR/HR Lamps (Medium Source Rare Earth
Lamps Hot Restrike Version)

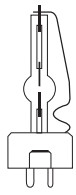


MSR
575/HR

MSR
1200/HR

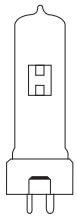
MSR
2500/HR

MSR Short
Arc Lamps



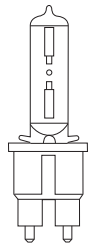
MSR
400W SA

MSD Lamps

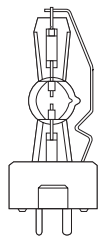


MSD
200W/2

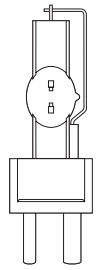
MHD Lamps



MHD
200



MSR 400 SA/MSR 700 SA



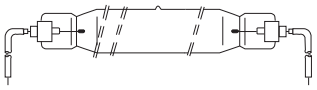
MSR 1200 SA/MSR 2000 SA

SPECIALTY LAMPS

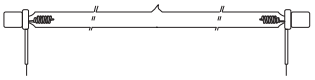
Base Types and Bulb Shapes

Specialty Bulb Shapes (Not Actual Sizes)

HPM 10/B, 13, 19, 20



HPM 12,14, 15, 17, 19, 20C,



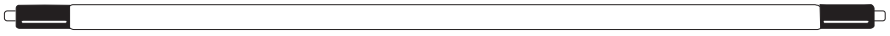
XOP 7, 15, 25, O/F

T12 Medium Bipin

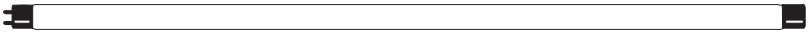
T8 Medium Bipin

T5 Miniature Bipin

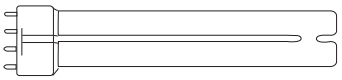
Hot Cathode Sterilamp



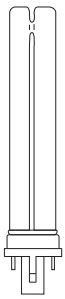
Cold Cathode and Slimline Sterilamp



Slimline Sterilamp



PL-L



PL-S

XPT

Xtra

ADDITIONAL INFORMATION

Glossary

Accent Lighting
Concentrated light on a subject which highlights it and causes it to stand out from its surrounding. Depending on degree of drama desired, accent light should minimally be 10x the general light or ambient light.

Accommodation
The involuntary muscular process by which the eye changes focus from one distance to another.

Adaptation
The involuntary process by which the visual system changes its sensitivity, depending on the luminances prevailing in the visual field. The process involves both the iris and the light sensitive cells of the retina.

AlInGaP
The preferred LED (Light Emitting Diode) chip technology containing Aluminum, Indium, Gallium, and Phosphorous to produce red, orange and amber-colors.

ALTO Lamp Technology
Philips ALTO Lamp Technology is widely recognized as a leading low-mercury solution for fluorescent lighting. This technology uses capsule dosing to precisely control the amount of mercury in each ALTO lamp. Long-life ALTO lamps further reduce the need to replace lamps and, as a result, decrease the amount of mercury used over life of any lighting installation.

Ballast
The ballast is an electrical device that performs two basic functions: 1) provides the starting voltage and 2) limits the current to sustain lamp operation.

Ballast types for fluorescent lamps:

Instant Start: Instant start electronic ballasts are the most popular type of electronic ballast today because they provide maximum energy savings and they start lamps without delay or flashing. Since they do not provide lamp electrode heating, instant start ballasts consume less energy than comparable rapid start, program rapid start or programmed start ballasts. As a result, they provide the most energy efficient solution to fluorescent lamp ballasting. The instant start ballast uses 1.5 to 2 watts less energy per lamp than the rapid start alternative.

Instant-start electronic ballasts provide a high initial voltage (typically 600V for F32T8 lamps) to start the lamp. This high voltage is required to initiate discharge between the unheated electrodes of the lamp. However, the cold electrodes of lamps operated by an instant start ballast may deteriorate more quickly than the warmed electrodes of lamps operated by a rapid start, program rapid start or programmed start ballast. Lamps operated by instant start ballasts will typically withstand 10–15K switch cycles. Instant start ballasts are typically wired in *parallel*. This means that if one lamp fails, the other lamps in the circuit will remain lit.

Rapid Start: Rapid start ballasts have a separate set of windings which provide a low voltage (approx. 3.5 volts) to the electrodes for one second prior to lamp ignition. A starting voltage somewhat lower than that of instant ballast (typically 450–550V for F32T8 lamps) is applied, striking an electrical arc inside the lamp. Most rapid start electronic ballasts continue to heat the electrode even after the lamp has started, which results in a power loss of 1.5 to 2 watts per lamp. Lamps operated by a rapid start electronic ballast will typically withstand 15–20K switch cycles. Rapid start ballasts are typically wired in *series*. This means that if one lamp fails, all other lamps in the circuit will extinguish.

Programmed Start: Programmed start (PS) electronic ballasts provide maximum lamp life in frequent starting conditions (up to 50,000 starts). PS ballasts use a custom integrated circuit (IC) which monitors lamp and ballast conditions to ensure optimal system lighting performance. Like Program rapid start ballasts, PS ballasts also precisely heat the lamp cathodes. However, PS ballasts heat the lamp cathodes to 700°C prior to lamp ignition. This puts the least amount of stress on the lamp electrodes, resulting in maximum lamp life regardless of the number of lamp starts. Programmed start ballasts are typically wired in *series*.

Ballast types for HID lamps:

Reactor: Single coil, very efficient, but poor voltage regulation to the lamp.

Constant Wattage Autotransformer (CWA): Employing two coils, the ballast is less efficient then reactor types, but have better voltage regulation. Most popular type in use.

Magnetically Regulated (Mag Reg) or Regulated Lag (Reg Lag): Three coils make for very effective voltage regulation but also not very efficient.

Electronic: Allows for both high efficiency and the best voltage regulation.

Beam Angle
The beam angle defines the light pattern around the beam's central axis for which the luminous intensity is half that of the maximum luminous intensity.

Bin
In LEDs, the systematic dividing of distribution of performance parameters (Flux, Color or CCT, and Vf) in to smaller groups that meet aesthetic requirements of the assembly.

Binning
The separation of LEDs subsequent to a production run for full manufactured, distribution in terms of color, flux and forward voltage.

Candela (cd) (Luminous Intensity)
The intensity base unit for light. Intensity is the luminous flux emitted from a point per unit solid angle into a particular direction, regardless of distance.

Candlepower (cp)
Luminous intensity expressed in candelas.

Chip
A very small square of semi-conducting material. Also known as a die, it is the active light-emitting component of an LED.

Color Rendering Index (CRI)
A method for describing the effect of a light source on the color appearance of objects, compared to a reference source of the same color temperature (CCT). The highest CRI attainable is 100. Originally based on an eight standardized color comparisons, it was later extended to fourteen colors.

Color Temperature or Correlated Color Temperature (CCT)
The color temperature of a light emitter refers to the temperature to which one would have to heat a "blackbody" source (Planckian radiator) to produce light of similar overall appearance or chromaticity. A low color temperature implies warmer color (more yellow/red) light while high color temperature implies a cooler light (more blue). The standard unit for color temperature measurement is expressed in Kelvin (K).

Die–Chip
heart of the LED

Diode
A two-electrode device with an anode and a cathode that passes current in only one direction. It may be designed as an electron tube or as a semiconductor device.

Driver
Electronics used to power illumination sources. Ballast.

Field Angle
The field angle defines the light pattern around the beam's central axis for which the luminous intensity is 10% that of the maximum luminous intensity.

Footcandle
The unit of measure for the density of light on a surface unique to the USA. One footcandle is equal to one lumen per foot (lm/ft^2). One footcandle = 10.674 lux.

General Lighting (Ambient Lighting)
Lighting designed to deliver a predominately uniform level of light throughout an area.

Glare
Glare is an interference with visual perception caused by an uncomfortably bright light source or reflection within one's field of view; a form of visual noise. In its simplest form, glare (unwanted light) is a consequence of the human eye to adapt to different light levels. In the case of glare, the eye adapts to the high level of the glare source, which makes it difficult to perceive details in the now too dark work area.

Direct Glare: Glare resulting from high luminances in the visual environment that are directly visible from a viewers position; such as an insufficiently shielded luminaire.

Reflected Glare or Veiling Reflection: A reflection of incident light that partially or totally obscures the details to be seen on a surface by reducing the contrast.

Discomfort Glare: Glare which is distracting or uncomfortable (subjective), which interferes with the perception of visual information, but which does not significantly reduce visual performance.

Disability Glare: The effect of light which significantly reduces visual performance and perception; such as car high beams in your face on a dark country road.

Illuminance
The total density of visible light—from all directions — illuminating, falling on or incident to, a surface. Standard unit of measure for illuminance is LUX (lx) which is lumens per square meter (lm/m^2). See Footcandle.

ADDITIONAL INFORMATION

Glossary

InGaN
The preferred LED (Light Emitting Diode) semiconductor technology containing Indium, Gallium, and Nitrogen to produce green, blue and white-colored LED light sources.

Initial vs. Mean Lumens
The measured luminous output of a new light source versus the output at 40% of lamp life.

Inverse Square Law
This law says that the measured flux density from a light source decreases along any line from the source. It falls off in proportion to the square of the relative distance traversed. Thus the illuminance measurement 2 feet from the light source will be ¼ of the measurement 1 foot from the source—not ½.

Kelvin
The Kelvin unit is the basis of all temperature measurement. In lighting, Kelvin is the unit of measure for Color Temperature used to indicate the overall color of the light produced from a source.
See Color Temperature.

Kilowatt Hour (kWh)
The measure of electrical energy from which electricity billing is determined. For example, at the rate of $0.11 per kWh, a 100 watt lamp operating for 2000 hours will cost $22.00 (100 x 2000/1000 = 200 kWh x .11 = $22.00)

LED Driver
See 'Driver'

Light
Radiant energy that stimulates the sense of sight. The "visible" part of the electromagnetic spectrum from 380–770 nm. Light is the energy which allows us to see.

Light Emitting Diode (LED)
A solid-state semiconductor device that converts electrical energy directly into light. On its most basic level, the semiconductor is comprised of two regions. The p-region contains positive electrical charges while the n-region contains negative electrical charges. When voltage is applied and current begins to flow, the electrons move across the n region into the p region. The process of an electron moving through the p-n junction releases energy. The dispersion of this energy produces photons with visible wavelengths.

Lumen (lm)
SI unit of luminous flux. Photometrically, it is the luminous flux emitted within a unit solid angle (lsr) by a point source having a uniform luminous intensity of 1 cd. —or— The SI unit for measuring the flux of light being produced by a light source or received by a surface.

Luminaire (light fixture)
A complete lighting unit which consists of lamp(s), ballast(s)—if applicable—as well as mechanism for light distribution, lamp protection and alignment and connection to power.

Luminaire Efficacy
The ratio of luminous flux emitted by the fixture to that emitted by the lamp(s) within the fixture. Expressed as a percentage.

Luminance (The physical measure of brightness)
Luminance is the amount of visible light leaving a point on a surface in a given direction. The light leaving the surface can be due to reflection, transmission and/or emission. Standard unit of luminance is candela per square meter (cd/m^2).

Luminous Efficacy
The expression of efficiency in converting power (watts) into light (lumens). Expressed as lumens per watt or l/w.

Luminous Exitance
Refers to the total amount of visible light leaving a surface in all directions. Unit for luminous exitance is lumens per square meter (lm/m^2)

Packaged LED
Consists of the die, a lead frame, which houses the die, the encapsulation epoxy that protectively surrounds the die, and also disperses the light.

Parallel (LED)
Electrical condition where LEDs operate under the same voltage being provided by a driver.

Photocell
A transducer used to detect and measure light and other radiations.

Photometry
Photometry is the science of measuring visible light in units that are weighted according to the sensitivity of the human eye known as the Visual Wavelength ($V\lambda$) factor. Photometric theory does not address how we perceive colors.

Radiometry
Radiometry is the science of quantifying the phenomena of electromagnetic radiation. In our context, we are interested in light, the limited range of electromagnetic radiation that is visible to the human eye, sometimes extended to the areas of infrared and ultraviolet.

Rated Average Life
The length of operation (in hours) at which point an average of 50% of a large sample of lamps will still be operational and 50% will not.

Series (LED)
Electrical condition where LEDs operate under the same current being provided by a driver.

Task Lighting
Lighting designed for a specific visible operation which requires higher light levels; most often characterized by proximity to that task.

Transformer
An electrical device by which alternating current of one voltage is changed to another voltage

Voltage
A measure of electromotive force or simply said, the pressure of electricity. This is analogous to pressure in a water line. In this catalog, voltage refers to supply voltage required by the lamp (incandescent) or operating voltage required by the arc tube (discharge lamps).

Watt
Unit used to measure electric power consumed by a lamp or any electrical device.

ADDITIONAL INFORMATION

TECHNICAL DESCRIPTIONS

Lamp Listing Sequence
Lamps are listed in wattage sequence except for special groupings such as Street Lighting, Tungsten Halogen, High Intensity and Silicone Coated Lamps.

Ordering Code
The complete information shown in the ordering code column together with the voltage, if applicable, should be used when placing orders. In a number of instances a lamp type may be available in different kinds of packaging such as 2 or 4 lamp wrappers. Some small lamp types which are generally multiple packed on a platform with an overwrap are also packaged as a blister-carded item for the retail market. Each of these items is shown as a separate listing. To identify them, additional information is included with the ordering code. The following examples illustrate this:

Ordering Code	BC-7T7/W 12/2
Pkg. Qty.*	12cds
Explanation	Carded pack—2 lamps per card. The number shown under "Pkg. Qty" is the number of cards per min. shipping case.

Ordering Code	60T/SW 12/4
Pkg. Qty.	48
Explanation	12-4 lamp wrappers = 48 lamps per min. shipping case.

Ordering Code	50/150T/WL/TP 96/1
Pkg. Qty.	96
Explanation	96-1 lamp wrappers = 96 lamps per min. shipping case.

* Quantity shown is minimum shipping container. Refer to Net Price Schedule for number of lamps required for qualification as a standard case.

Voltage
Lamps listed are available only in the voltage shown. Lamps listed in range voltages such as 115–125 or 230–250 are intended for use on circuits normally varying within these voltage limits and are designed for an average voltage suitable for operation on such circuits. Lamps intended for operation in range voltages have a design volt center as follows, unless otherwise noted by a footnote:

Range Voltage	Design Voltage
115–125	120
120–125	120
120–130	125
125–130	130
230–250	240

Class of Lamp
Incandescent lamps are classified as type B or type C. The type B lamp is one in which the filament operates in a vacuum. The type C lamp is one in which the filament operates in an atmosphere of inert gas. For gas-filled lamps which can be operated in any position, the lumen maintenance is best when lamps are operated base up. For the vacuum type lamps which have no restrictions on operating position, the lumen maintenance is the same in all operating positions.

Lamp Dimensions
Bulb designations consist of a letter or letters to indicate shape and a number to indicate the approximate diameter in eighths of an inch.

Maximum Overall Length (MOL)
Maximum Overall Length is measured from the top of the bulb to bottom of the base.

Nominal Length
A measurement of fluorescent lamp length based on the length of the lamp plus the proper allowance for standard lamp holders.

Light Center Length (LCL)
Light Center Length is the distance from a reference point on a lamp base (usually the eyelet) to the center of the light source. For high intensity discharge lamps, it is the distance from the center of the filament or center of the arc to the point shown below for the base indicated.

All Screw Bases: Bottom base contact

Medium and Mogul Prefocus: Top of base pin

Medium Bipost: Bottom of bulb

Bayonet Candelabra and Medium Bayonet: Top of base pins

SC or DC Prefocus: Plane of locating bosses of prefocusing collar

Mini-Can: Intersection of 45° taper with max. diameter of base

Inches to Metric Conversion
To calculate the metric equivalent of inches in millimeters (mm) use the following formula: inches x 25.4001 = millimeters

Operating Position
Lamps may be operated in any position unless otherwise indicated.

Base Pin Position for Bayonet Candelabra-Based Lamps
When lamps are based with a bayonet candelabra base, the plane of the base pins will be approximately at right angles to the plane of the filament, unless otherwise indicated.

SC or DC Prefocus Based Lamps
The plane containing the base axis and the major locking eyelet, which is the eyelet equidistant from the two other eyelets, will be at right angles to the plane of the filament or lead wires unless otherwise indicated. The letter (A) shown in the Base column after SC or DC Pref. based lamps indicates that the distance from the bottom of base contact or contacts to the bottom of the collar is .406". In the case of DC Pref. based lamps, the letter (A) also indicates that the plane containing the base axis and contacts is at right angles to the plane containing the base axis and the major locking eyelet.

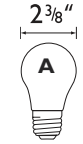
ADDITIONAL INFORMATION

MEASURING LAMPS

Measuring Incandescent, Halogen, CFL and HID Lamps

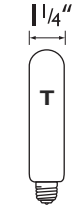
Letters designate the shape of the glass bulb and numbers indicate the diameter of the bulb in eighths of an inch. For example:

"A19" indicates a standard bulb having a diameter of 19/8 or 2 3/8 inches.



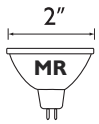
A19 Lamp

"T10" indicates a tubular shaped having a diameter of 10/8 or 1 1/4 inches.



T10 Lamp

"MR16" indicates mini reflector having a diameter of 16/8 or 2 inches.



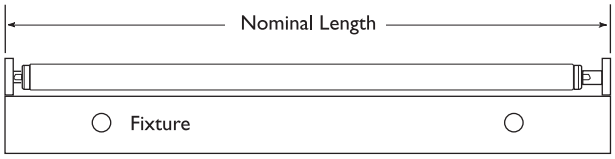
MR16 Lamp

"ED37" indicates a large HID bulb having a diameter of 37/8 or 4 5/8 inches.

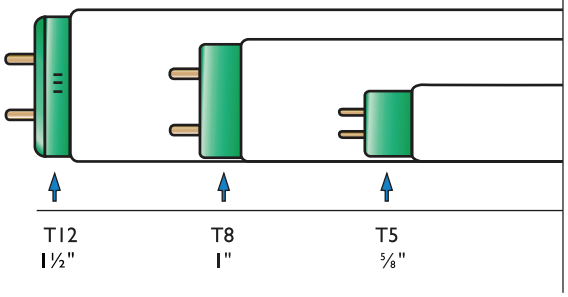
ED37 Lamp

Measuring Fluorescent Lamps

To determine the length of a fluorescent lamp, you do not measure the bulb. The Nominal Length of the bulb is the measurement from back of socket to back of socket on the fixture.



To determine the type of lamp you need, measure the endcap and use the illustration below as a guide.



UNDERSTANDING ORDERING CODES

Typical ordering codes can be understood with the examples below:

Incandescent ordering code: BC15BA9C/CL/LL

BC = Blister Carded Package
15 = Lamp Wattage
BA9 = Lamp Type
C = Candelabra Base (Blank = Medium)
CL = Clear (W = White, etc.)
LL = Long Life (Blank = Standard)

Halogen ordering code: 45PAR38/HAL/SP10

45 = Lamp Wattage
PAR38 = Lamp Type
Hal = Halogen
SP = Spot Lamp
10 = Beam Spread in Degrees

CFL ordering code: PL-C 13W/827/4P/ALTO

PL-C = Lamp Type
13W = Lamp Wattage
827 = Lamp Color
4P = Base has 4-Pins
ALTO = Low Mercury Content

Fluorescent ordering code: F32T8/ADV841/ALTO

F = Fluorescent
32 = Nominal Lamp Wattage
T8 = 1" Diameter Tube
ADV = Advantage
841 = CRI of 80+ and Color Temp. of 4100K
ALTO = Low Mercury Content

HID ordering code: MS320/C/U/PS

MS = High Output Arc Tube
320 = Lamp Wattage
C = Coated
U = Universal Burning Position
PS = Pulse Start

ADDITIONAL INFORMATION

Philips Lighting Company U.S. Trademarks and U.S. Registered Trademarks

LED:
EnduraLED™
AmbientLED™
DecoLED™

Fluorescent:
TuffGuard™
ALTO®
(green end caps)®
Hi-Vision®

Compact Fluorescent:
PL-H®
DecoTwist®
Bug-A-Way®

High Intensity Discharge:
AllStart™
Cosmopolis™
CosmoWhite™
MasterColor®
White SON®
Ceramalux®
LifeGuard®

Halogen:
EcoVantage™
Halogena®
MasterLine®

Incandescent:
DuraMax®
Softone Pastels®
Econ-o-watt®
ColorTone®
PartyTone®
Director®

PHILIPS LIGHTING COMPANY HEADQUARTERS

City	Address	Telephone No	Fax No.
Somerset, NJ	200 Franklin Square Drive, Somerset, NJ 08873	(732) 563-3000	(732) 563-3641
Markham, ON	281 Hillmount Road, Markham, ON, Canada L6C 2S3	(905) 201-4100	(905) 887-7938

SALES OFFICES—USA

Region	Telephone No	Fax No.
Northeast Zone	1(800) 888-0163	(508) 966-5120
Mid-Atlantic Zone	1(800) 888-0163	(508) 966-5120
Southeast Zone	(770) 439-2494	(770) 439-2496
Midwest Zone	(918) 806-1728	(918) 806-2643
Rocky Mountain Zone	(732) 563-3422	(732) 563-3428
Western Zone	(480) 419-9185	(480) 419-9951

SALES OFFICES—CANADA

City	Telephone No.	Fax No.
Aurora, ON (GTA West region)	(416) 500-4874	(866) 902-7660
Brossard, QC	(450) 812-3987	(450) 812-4081
Calgary, AB	(403) 995-9557	(403) 398-1682
Edmonton, AB	(780) 443-0731	(800) 798-5637
Gatineau, ON (Ottawa, East ON region)	(819) 682-0215	(819) 682-5893
Halifax, NS	(902) 455-9009	(902) 455-9865
London, ON (SW ON region)	(519) 433-7553	(519) 433-7637
Montreal, QC	(514) 439-6238	(514) 439-6238
Newmarket, ON (GTA)	(416) 624-7974	(866) 391-7924
Northern ON Sales Agent	(705) 918-2655	(705) 589-2019
Ontario Region	(905) 201-4120	(519) 657-1342
Oshawa, ON (GTA East)	(905) 448-2877	(416) 915-6185
Prairies Sales Agent	(780) 433-4848	(780) 433-4533
Quebec / Atlantic Region	(514) 832-7586	(514) 956-2108
Quebec City, QC	(418) 761-1239	(418) 761-1248
St Jean Sur Richelieu, QC	(450) 741-1148	(450) 741-1149
Vancouver, BC (Western region)	(604) 468-0517	(604) 676-7202
Winnipeg, MB	(204) 669-3346	(204) 669-3350

EXPORT BUSINESS GROUP—EXPORT SALES

City	Address	Telephone No	Fax No.
Somerset, NJ	200 Franklin Square Drive, Somerset, NJ 08873	(732) 563-3033	(732) 563-3155

CUSTOMER SERVICE/ORDER ENTRY LOCATIONS—USA

City	Address	Telephone No	Fax No.
Somerset, NJ	200 Franklin Square Drive, Somerset, NJ 08873		
	Industrial Commercial	1(800) 937-5483	1(800) 635-3818
	Consumer	1(800) 805-2517	1(800) 808-4899
	OEM	1(866) 915-5886	1(888) 347-6102
	Special Lighting	1(800) 437-2205	1(800) 616-0435
TradeLink℠ (www.tradelink.philips.com)		1(800) 238-0483	

CUSTOMER SERVICE/ORDER ENTRY LOCATIONS—CANADA

City	Address	Telephone No	Fax No.
Markham, ON	281 Hillmount Road, Markham, ON, Canada L6C 2S3		
	Professional/Consumer/OEM	(905) 201-4100	(905) 887-9313
		1(800) 668-9020	
	TradeLink℠ (www.tradelink.philips.com)	1(800) 387-5393	
		1(800) 668-9009	

CUSTOMER HOTLINE/TECHNICAL INFORMATION

City	Address	End-users	Distributors
Somerset, NJ	200 Franklin Square Drive, Somerset, NJ 08873	1(800) 555-0050	1(800) 752-2852

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