

## Halogen Lamps

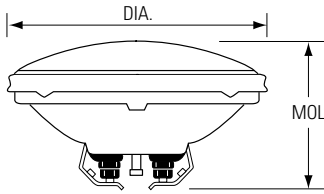
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### BULB IDENTIFICATION



DIA. in.: Diameter of bulb at widest point.

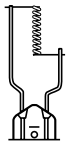
MOL in.: Maximum Overall Length including base or pins.

LCL in.: Distance between the center of the filament and the Light Center Length reference plane.

Note: Lamp drawings are not drawn to scale. Be sure to check size and dimension information when identifying each lamp.

To convert inches to millimeters, multiply the dimension (in inches) by 25.4 (i.e. 1.5" x 25.4 = 38.1 mm).

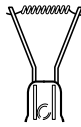
### FILAMENT IDENTIFICATION



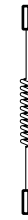
**C-8  
CC-8**



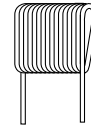
**C-2V  
CC-2V**



**C-6  
CC-6**



**CC-8**



**C-6  
Oval**

### BASE IDENTIFICATION



**2-Pin  
(Round)  
GX5.3**



**Can DC  
Bay**



**2-Pin  
GY6.35**



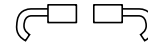
**Recessed  
Single  
Contact  
R7s**



**Screw  
Terminals**



**4" Leads**



**1" Ribbon  
Leads**



**6" Flex  
Leads**



**2-Pin  
GU-4**



**2-Pin  
GU-5.3**



**2-Pin  
G4**



**Turn & Lock  
GU-7**



**2-Pin Pf**



**Min  
Screw  
E-10**



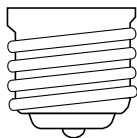
**DC Bay  
BA15d**



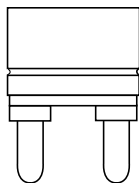
**Min Cand  
E11**



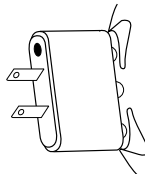
**Med  
Screw  
E26**



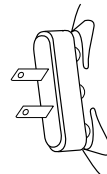
**Mog  
Screw  
E39**



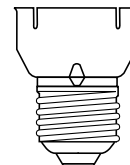
**Mogul  
BiPost  
G38**



**Ext. Mog  
End Pr  
GX16d**



**Mog End  
PR  
GX16d**



**Med  
Skirted  
E26/50x39**

**INTRODUCTION**

Halogen lamps provide a small, highly efficient white light source with excellent color rendering. Unlike standard incandescent lamps, halogen lamps use a halogen gas which allows the bulbs to burn more intensely without sacrificing life.

Compared to incandescent lamps, halogen lamps provide:

- Crisp, white light
- Excellent beam control
- High Lumen Maintenance
- Energy savings
- Compact size
- Long Life

**PRODUCT INFORMATION****PAR38*****HIR/XL™ Ultra Long Life PAR (PAR38)*** (pg 2-5, 2-6, and 2-8)

- Ultra long life – 6000 hours
- Up to 17% more energy efficient
- Available in: 45, 55, and 90 watt /SP12° and FL40°

***HIR™ PAR (PAR38)*** (pg 2-6, 2-7, and 2-8)

- Most efficient halogen lamps – 35% more lumens per watt
- Exclusive IR film recycles wasted energy
- 50% longer life – 3000 hours

***Halogen Long Life PAR (PAR38)*** (pg 2-5, 2-7, and 2-8)

- 25% longer life – 2500 hours
- Wide variety of wattages and beam spreads

***Standard Halogen PAR (PAR38)*** (pg 2-5 and 2-8)

- Crisp, white light
- Life – 2000 hours

***Quartzline® PAR (PAR38)*** (pg 2-9)

- High light output for long throws (250 watt)
- Long life – 4200 hours

**COMPACT PAR*****Compact HIR™ (PAR30)*** (pg 2-6)

- Most efficient PAR30 - 35% more lumens per watt
- Long life – 3000 hours

***Compact PAR Halogen (PAR20/PAR30)*** (pg 2-5, and 2-7)

- Small size for "low profile" fixture
- Energy efficient replacement for R20/R30 lamps
- Long life – 2500 to 3000 hours

***Long Neck PAR30 Halogen (PAR30L)*** (pg 2-6 and 2-7)

- Energy efficient replacement for R30 lamps
- Ideal for recessed fixtures

**MR*****Turn and Lock (TAL) ConstantColor® (MR16)*** (pg 2-9)

- User-friendly base... easy to install and remove
- Over 90% maintained light over life
- No color shift
- Suitable for use in open fixtures

***ConstantColor® Precise™ Cover Glass*** (pg 2-10)

- Cover glass lens protects bulb from dust and dirt
- Suitable for use in open fixtures

***ConstantColor® Precise™ (MR16)*** (pg 2-9)

- Precise beam control
- No color shift
- Over 90% maintained light output over life
- Long life – up to 6000 hours (50-watt)

***Standard MR (MR16/MR11)*** (pg 2-9)

- Small size for "low profile" look
- Crisp, white light

**LINEAR QUARTZ*****Linear Quartzline® HIR™*** (pg 2-11, 2-12, and 2-13)

- 30%-40% energy cost savings vs. standard quartz lamps
- 95% maintained light output over life
- Cooler operation increases fixture life

\* All products are compared to their standard counterpart

### HEADINGS IN THIS CATALOG SECTION

The following terms and descriptions can help you when checking Halogen lamp specifications and when ordering products. Within each product line, lamps are divided into families. Within families, lamps are listed by wattage. In each of these groups, lamps are listed alphabetically by bulb shape.

**Energy Used - Nominal Watts:**

Energy Used (as defined by FTC Lamp Label Rules). To estimate energy consumption (kWh), multiply watts x hours of use and divide by 1000.

**Case Quantity:**

Number of product units packed in a case.

**Approximate CBCP (Center Beam Candlepower):**

For reflector type lamps. Center Beam Candlepower is the intensity (candelas) at the center or maximum intensity of the beam.

**Reference Color Temperature Kelvins (K):**

"Warmth" or "Coolness" of the lamp, measured in Kelvins (K). The higher the temperature, the cooler the appearance of the light.

**LCL in.:**

Distance between the center of the filament and the Light Center Length reference plane, in inches.

**MOL in.:**

Maximum Overall Length in inches.

**Filament Design:**

Filaments are designated by a letter combination in which C is a coiled wire filament, CC is a coiled wire that is itself wound into a larger coil, and SR is a straight ribbon filament. Numbers represent the type of filament-support arrangement.

**Life - Hours:**

Life (as defined by FTC Lamp Label Rules) is rated average life in hours.

**Additional Information**

Typical application and/or other important information including footnotes (†)\*.

**Light Output - Lumens:**

Light output (as defined by FTC Lamp Label Rules) is rated average lumens.

**Bulb:**

Bulb shape followed by its size (the maximum diameter of the bulb expressed in eighths of an inch).

**Product Code:**

It is important to use this five-digit code when ordering to ensure that you receive the exact product you require.

**Volts:**


Lamp data is based on operation at rated voltage.

**Base:**

The type of base.

**Lamp Description:**

The lamp's identification code.

Watts	Bulb	Base	Product Code	Lamp Description	Case Qty.	Volts	Additional Information	Rated Avg. Life Hours	Filament Design	MOL in.	LCL in.	Color Temp. K	CBCP
<b>HALOGEN PAR36 LAMPS</b>													
<b>35 WATTS</b>													
	35	PAR36	Scrw Term	<b>19873</b> ⚡ <b>35PAR36/H/SP5°</b>	12	12	Spotlight (15)*	250	4000	C-6	2 <sup>3</sup> / <sub>4</sub>	3050	25000
				<b>19876</b> ⚡ <b>35PAR36/H/SP8°</b>	12	12	Spotlight (15)*	250	4000	C-6	2 <sup>3</sup> / <sub>4</sub>	3050	20000

## 35 PAR36 / H / SP 8°

Identifies the lamp's wattage.

Identifies the lamp shape and the bulb diameter in eighths of inches.

Identifies the lamp type.

Identifies as Spotlight.







Identifies beam angle, code may also include packaging information.

### WHEN YOU DON'T KNOW THE LAMP DESCRIPTION







1. Identify bulb shape next to lamp information.
2. Measure bulb diameter using ruler in Appendix section [page A-1](#) to determine width in eighths of an inch.
3. Identify base type using table on [page 2-2](#).
4. Find your lamp in the table containing the bulb shape, size and base, which are all listed by wattage.

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WEB site: [www.BiaGmbH.com](http://www.BiaGmbH.com)








Watts	Bulb	Base	Product Code	Lamp Description	Case Volts	Qty.	Additional Information	Rated Lumens	Avg. Life Hours	Filament Design	MOL in.	LCL in.	Temp. K	Color CBCP
<b>HALOGEN PAR36 LAMPS</b>														
<b>35 WATTS</b>														
	35	PAR36	Scrw Term	<b>19873</b>	<b>35PAR36/H/SP5°</b>	12	12	Spotlight (15)*	250	4000	C-6	2 <sup>3</sup> / <sub>4</sub>	3050	25000
				<b>19876</b>	<b>35PAR36/H/SP8°</b>	12	12	Spotlight (15)*	250	4000	C-6	2 <sup>3</sup> / <sub>4</sub>	3050	20000
				<b>19877</b>	<b>35PAR36/H/FL30°</b>	12	12	Floodlight (15)*	250	4000	C-6	2 <sup>3</sup> / <sub>4</sub>	3050	900
<b>HALOGEN LONG LIFE PAR38 LAMPS</b>														
<b>45 WATTS</b>														
	45	PAR38	Med Skirt	<b>17470</b>	<b>45PAR/H/SP10°</b>	120	6	Spotlight (15, 23, 56, 88, 96)*	510	2500	CC-8	5 <sup>5</sup> / <sub>16</sub>	2750	7000
	45			<b>16229</b>	<b>45PAR/H/SP10°</b>	130	12	Spotlight (15, 23, 56, 88, 96)* Ratings @120 Volts	510 390	2500 5000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2750	7000
	45			<b>17471</b>	<b>45PAR/H/FL25°</b>	120	6	Floodlight (15, 23, 56, 88, 96)*	510	2500	CC-8	5 <sup>5</sup> / <sub>16</sub>	2750	1800
	45			<b>16231</b>	<b>45PAR/H/FL25°</b>	130	12	Floodlight (15, 23, 56, 88, 96)* Ratings @ 120 Volts	510 390	2500 5000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2750	1800
<b>HIR/XL™ (ULTRA LONG LIFE) PAR38 LAMPS</b>														
<b>45 WATTS</b>														
	45	PAR38	Med Skirt	<b>40793</b>	<b>45PAR/HIR/SP12°/XL</b>	120	6	Spotlight (15, 23, 56, 80, 88, 96)*	600	6000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2680	4000
				<b>40790</b>	<b>45PAR/HIR/FL40°/XL</b>	120	6	Floodlight (15, 23, 56, 80, 88, 96)*	600	6000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2680	1100
<b>STANDARD HALOGEN PAR38 LAMPS</b>														
<b>50 WATTS</b>														
	50	PAR38	Med Skirt	<b>17980</b>	<b>50PAR/H/SP10°</b>	120	6	Spotlight (56, 88, 96)*	590	2000	CC-8		2750	9000
				<b>17979</b>	<b>50PAR/H/FL25°</b>	120	6	Floodlight (56, 88, 96)*	590	2000	CC-8		2750	2200
	50			<b>17926</b>	<b>50PAR/H/FL25°</b>	130	12	Floodlight (56, 88, 96)* Ratings @ 120 Volts	590 450	2000 4000	CC-8		2750	2200
<b>HALOGEN COMPACT PAR20 LAMPS</b>														
<b>50 WATTS</b>														
	50	PAR20	Med NP	<b>14927</b>	<b>50PAR20/H/SP10°</b>	120	6	Spotlight (15, 55, 56, 80, 88)*	570	2500	CC-8	3 <sup>3</sup> / <sub>8</sub>	2800	6000
	50			<b>17866</b>	<b>50PAR20/H/SP10°</b>	130	15	Spotlight (15, 55, 56, 80, 88)* Ratings @ 120 Volts	570 500	2500 5000	CC-8	3 <sup>3</sup> / <sub>8</sub>	2800	6000
	46			<b>14928</b>	<b>50PAR20H/FL25°</b>	120	6	Floodlight (15, 55, 56, 80, 88)*	570	2500	CC-8	3 <sup>3</sup> / <sub>8</sub>	2800	1500
	50			<b>17868</b>	<b>50PAR20/H/FL25°</b>	130	15	Floodlight (15, 55, 80, 88)* Ratings @ 120 Volts	570 500	2500 5000	CC-8	3 <sup>3</sup> / <sub>8</sub>	2800	1500
<b>HALOGEN COMPACT PAR30 LAMPS</b>														
<b>50 WATTS</b>														
	50	PAR30	Med NP	<b>14023</b>	<b>50PAR30/H/SP10°</b>	120	6	Spotlight (15, 55, 56, 80, 88)*	610	3000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2800	6900
	50			<b>17870</b>	<b>50PAR30/H/SP10°</b>	130	15	Spotlight (15, 55, 56, 80, 88)* Ratings @ 120 Volts	610 480	3000 6000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2800	6900
	46			<b>17871</b>	<b>50PAR30/H/FL25°</b>	120	15	Floodlight (15, 55, 56, 80, 88)*	610	3000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2800	2000
	50			<b>17872</b>	<b>50PAR30/H/FL25°</b>	130	15	Floodlight (15, 55, 56, 80, 88)* Ratings @ 120 Volts	610 480	3000 6000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2800	2000
	46			<b>14022</b>	<b>50PAR30/H/FL35°</b>	120	6	Floodlight (15, 55, 56, 80, 88)*	610	3000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2800	1400
	50			<b>17874</b>	<b>50PAR30/H/FL35°</b>	130	15	Floodlight (15, 55, 56, 80, 88)* Ratings @ 120 Volts	610 480	3000 6000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2800	1400

To save energy costs, find the bulbs with the light output you need, then choose the one with the lowest watts.  
 ( ) \* All footnote references found at the end of this section. ⚡ Reduced Wattage. To convert inches to millimeters, multiply by 25.4.








Watts	Bulb	Base	Product Code	Lamp Description	Case Volts	Qty.	Additional Information	Rated Lumens	Avg. Life Hours	Filament Design	MOL in.	LCL in.	Temp. K	Color CBCP
<b>HALOGEN COMPACT PAR30 LONG NECK LAMPS</b>														
<b>50 WATTS</b>														
	50	PAR30 Med NP	14940	50PAR30L/H/SP10°	120	6	Spotlight (15, 55)*	580 460	3000 6000	CC-8	4 <sup>3</sup> / <sub>4</sub>		2800	7000
	50		11117	50PAR30L/H/SP10°	130	15	Spotlight (15, 55)* Ratings @ 120 Volts	580 460	3000 6000	CC-8	4 <sup>3</sup> / <sub>4</sub>		2800	7000
	46		11116	50PAR30L/H/FL40°	120	15	Floodlight (15, 55)*	580	3000	CC-8	4 <sup>3</sup> / <sub>4</sub>		2800	1000
	50		11123	50PAR30L/H/FL40°	130	15	Floodlight (15, 55)* Ratings @ 120 Volts	580 460	3000 6000	CC-8	4 <sup>3</sup> / <sub>4</sub>		2800	1000
	46		14941	50PAR30L/H/WFL	120	6	Wide Flood (15, 55)*	630	3000	CC-8	4 <sup>3</sup> / <sub>4</sub>		2800	—
<b>COMPACT HIR™ PAR30 LAMPS</b>														
<b>50 WATTS</b>														
	50	PAR30 Med NP	19902	➤ 50PAR30/HIR/SP9°	120	15	Spotlight (15, 55, 56, 80, 88)*	770	3000	CC-8	3 <sup>5</sup> / <sub>8</sub>		2810	13000
	50		21534	➤ 50PAR30/HIR/SP9°	130	15	Spotlight (15, 55, 56, 80, 88)* Ratings @ 120 Volts	770 570	3000 6000	CC-8	3 <sup>5</sup> / <sub>8</sub>		2810	13000
	46		19901	➤ 50PAR30/HIR/FL25°	120	15	Floodlight (15, 55, 56, 80, 88)*	770	3000	CC-8	3 <sup>5</sup> / <sub>8</sub>		2810	2700
	50		21533	➤ 50PAR30/HIR/FL25°	130	15	Floodlight (15, 55, 56, 80, 88)* Ratings @ 120 Volts	770 570	3000 6000	CC-8	3 <sup>5</sup> / <sub>8</sub>		2810	2700
	46		19900	➤ 50PAR30/HIR/FL35°	120	15	Floodlight (15, 55, 56, 80, 88)*	770	3000	CC-8	3 <sup>5</sup> / <sub>8</sub>		2810	1500
	50		19903	➤ 50PAR30/HIR/FL35°	130	15	Floodlight (15, 55, 56, 80, 88)* Ratings @ 120 Volts	770 570	3000 6000	CC-8	3 <sup>5</sup> / <sub>8</sub>		2810	1500
	46													
<b>HALOGEN PAR36 LAMPS</b>														
	50	PAR36 Scrw Term	19878	50PAR36/H/SP5°	12	12	Spotlight (15)*	400	4000	C-6	2 <sup>3</sup> / <sub>4</sub>		3050	35000
			19879	50PAR36/H/SP8°	12	12	Spotlight (15)*	400	4000	C-6	2 <sup>3</sup> / <sub>4</sub>		3050	30000
			19880	50PAR36/H/FL30°	12	12	Floodlight (15)*	400	4000	C-6	2 <sup>3</sup> / <sub>4</sub>		3050	1300
<b>HIR™ PAR38 LAMPS</b>														
<b>50 WATTS</b>														
	50	PAR38 Med Skirt	12396	➤ 50PAR/HIR/SP10°	120	12	Spotlight (15, 23, 56, 80, 88, 96)*	850	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>		2810	14000
	50		22843	➤ 50PAR/HIR/SP10°	130	12	Spotlight (15, 23, 56, 80, 88, 96)* Ratings @ 120 Volts	850 600	3000 6000	CC-8	5 <sup>5</sup> / <sub>16</sub>		2810	14000
	46		12397	➤ 50PAR/HIR/FL25°	120	12	Floodlight (15, 23, 56, 80, 88, 96)*	850	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>		2810	3000
	50		22850	➤ 50PAR/HIR/FL25°	130	12	Floodlight (15, 23, 56, 80, 88, 96)* Ratings @ 120 Volts	850 600	3000 6000	CC-8	5 <sup>5</sup> / <sub>16</sub>		2810	3000
	46													
<b>HALOGEN A-LINE LAMPS</b>														
<b>50 WATTS</b>														
	50	TB19 Med	20647	50A/HAL 6PK	120	6	Frost, Brass Base (15, 23, 56, 83, 88)*	710	2000	CC-8	4 <sup>7</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>8</sub>	2800	
	50		16747	50A/HAL	130	60	Frost, Brass Base (15, 23, 56, 83, 88)* Ratings @ 120 Volts	710	2000	CC-8	4 <sup>7</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>8</sub>	2800	
	46							540	4000					
<b>HIR/XL™ (ULTRA LONG LIFE) PAR38 LAMPS</b>														
<b>55 WATTS</b>														
	55	PAR38 Med Skirt	40794	➤ 55PAR/HIR/SP12°/XL	120	6	Spotlight (15, 23, 56, 80, 88, 96)*	780	6000	CC-8	5 <sup>5</sup> / <sub>16</sub>		2680	9000
			40792	➤ 55PAR/HIR/FL40°/XL	120	6	Floodlight (15, 23, 56, 80, 88, 96)*	780	6000	CC-8	5 <sup>5</sup> / <sub>16</sub>		2680	2000

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( ) \* All footnote references found at the end of this section. ➤ Reduced Wattage. To convert inches to millimeters, multiply by 25.4.

Watts	Bulb	Base	Product Code	Lamp Description	Case Volts	Qty.	Additional Information	Rated Avg. Life Hours	Filament Design	MOL in.	LCL in.	Temp. K	Color CBCP	
<b>HALOGEN LONG LIFE PAR38 LAMPS</b>														
<b>60 WATTS</b>														
	60	PAR38 Med Skirt	25266	60PAR/H/SP10°	120	12	Spotlight (15, 23, 46, 56, 83, 88)*	800	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2800	13000	
			25270	60PAR/H/SP10°	130	12	Spotlight (15, 23, 46, 56, 83, 88)* Ratings @ 120 Volts	800 610	3000 6000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2800	13000	
			25269	60PAR/H/FL25°	120	12	Floodlight (15, 23, 56, 83, 88, 96)*	800	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2800	2800	
			25271	60PAR/H/FL25°	130	12	Floodlight (15, 23, 56, 83, 88, 96)* Ratings @ 120 Volts	800 610	3000 6000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2800	2800	
<b>HALOGEN COMPACT PAR30 LAMPS</b>														
	60	PAR30 Med	27212	60PAR30/H/SP10°	120	15	Spotlight (15, 55, 80, 88)*	800	3000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2800	10000	
			40167	60PAR30/H/FL25°	120	15	Floodlight (15, 55, 80, 88)*	800	3000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2800	2400	
			27214	60PAR30/H/FL35°	120	15	Floodlight (15, 55, 80, 88)*	800	3000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2800	1700	
<b>HIR™ PAR38 LAMPS</b>														
<b>60 WATTS</b>														
	60	PAR38 Med Skirt	18627	➤ 60PAR/HIR/SP10°	120	12	Spotlight (15, 23, 56, 88, 96)*	1110	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2875	20000	
	60		18629	➤ 60PAR/HIR/SP10°	130	12	Spotlight (15, 23, 56, 88, 96)* Ratings @ 120 Volts	1110 780	3000 6000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2875	20000	
	54	Med	23227	➤ 60PAR/HIR/SP12°	120	12	Spotlight (15, 23, 56, 88, 96)*	1110	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2875	12000	
	60	PAR38 Med Skirt	18626	➤ 60PAR/HIR/FL30°	120	12	Floodlight (15, 23, 56, 88, 96)*	1110	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2875	3600	
	60		18628	➤ 60PAR/HIR/FL30°	130	12	Floodlight (15, 23, 56, 88, 96)* Ratings @ 120 Volts	1110 780	3000 6000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2875	3600	
	60		10467	➤ 60PAR/HIR/FL40°	120	12	Floodlight (15, 23, 56, 88, 96)*	1110	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2875	2000	
	60		20947	➤ 60PAR/HIR/WFL	120	12	Wide Floodlight (15, 23, 56, 88, 96)*	1110	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2875	—	
	54		20948	➤ 60PAR/HIR/WFL	130	12	Wide Floodlight (15, 23, 56, 88, 96)* Ratings @ 120 Volts	1110 780	3000 6000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2875	—	
	<b>HALOGEN COMPACT PAR30 LAMPS</b>													
	<b>75 WATTS</b>													
	75	PAR30 Med NP	14802	75PAR30/H/SP10°	120	6	Spotlight (15, 55, 56, 80, 88)*	1030	3000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2830	13000	
	75		18056	75PAR30/H/SP10°	130	15	Spotlight (15, 55, 56, 80, 88)* Ratings @ 120 Volts	1030 790	3000 6000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2830	13000	
	66		18057	75PAR30/H/FL25°	120	15	Floodlight (15, 55, 56, 80, 88)*	1030	3000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2830	3100	
			14779	75PAR30/H/FL35°	120	6	Floodlight (15, 55, 56, 80, 88)*	1030	3000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2830	2000	
	75		18060	75PAR30/H/FL35°	130	15	Floodlight (15, 55, 56, 80, 88)* Ratings @ 120 Volts	1030 790	3000 6000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2830	2000	
	66													
<b>HALOGEN COMPACT PAR30 LONG NECK LAMPS</b>														
<b>75 WATTS</b>														
	75	PAR30 Med NP	11124	75PAR30L/H/SP10°	120	15	Spotlight (15, 55)*	940	3000	CC-8	4 <sup>3</sup> / <sub>4</sub>	2830	9000	
	75		11129	75PAR30L/H/SP10°	130	15	Spotlight (15, 55)* Ratings @ 120 Volts	940 750	3000 6000	CC-8	4 <sup>3</sup> / <sub>4</sub>	2830	9000	
	66		14943	75PAR30L/H/FL25°	120	6	Floodlight (15, 55)*	940	3000	CC-8	4 <sup>3</sup> / <sub>4</sub>	2830	3100	
	75		11131	75PAR30L/H/FL25°	130	15	Floodlight (15, 55)* Ratings @ 120 Volts	940 750	3000 6000	CC-8	4 <sup>3</sup> / <sub>4</sub>	2830	3100	
	66		16393	75PAR30L/H/WFL	120	6	Wide Floodlight (15, 55)*	1050	3000	CC-8	4 <sup>3</sup> / <sub>4</sub>	2830	—	






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
Watts	Bulb	Base	Product Code	Lamp Description	Case Volts	Qty.	Additional Information	Rated Lumens	Avg. Life Hours	Filament Design	MOL in.	LCL in.	Temp. K	Color CBCP
<b>HALOGEN LONG LIFE PAR38 LAMPS</b>														
<b>75 WATTS</b>														
	75	PAR38	Med Skirt	14751	75PAR/H/SP9°	120	6	Spotlight (15, 23, 46, 56, 88, 96)*	1030	2500	CC-8	5 <sup>5</sup> / <sub>16</sub>	2850	18000
				14748	75PAR/H/FL25°	120	6	Floodlight (15, 23, 46, 56, 88, 96)*	1030	2500	CC-8	5 <sup>5</sup> / <sub>16</sub>	2850	4000
	75 66			21389	75PAR/H/FL25°	130	12	Floodlight (15, 23, 46, 56, 88, 96)* Ratings @ 120 Volts	1030 800	2500 5000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2850	4000
<b>HIR™ PAR38 LAMPS</b>														
<b>80 WATTS</b>														
	80	PAR38	Med Skirt	27216	80PAR/HIR/SP10°	120	12	Spotlight (15, 23, 46, 56, 88, 96)*	1500	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2900	25000
				27217	80PAR/HIR/SP12°	120	12	Spotlight (15, 23, 46, 56, 88, 96)*	1500	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2900	19000
				27218	80PAR/HIR/FL25°	120	12	Floodlight (15, 23, 46, 56, 88, 96)*	1500	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2900	5500
<b>HALOGEN LONG LIFE PAR38 LAMPS</b>														
<b>90 WATTS</b>														
	90	PAR38	Med Skirt	17450	90PAR/H/SP10°	120	6	Spotlight (14, 15, 23, 56, 88, 96)*	1260	2500	CC-8	5 <sup>5</sup> / <sub>16</sub>	2870	16000
	90 79			13311	90PAR/H/SP10°	130	12	Spotlight (14, 15, 56, 88)* Ratings @ 120 Volts	1260 940	2000 5000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2870	16000
				17451	90PAR/H/FL25°	120	6	Floodlight (15, 23, 46, 56, 88, 96)*	1260	2500	CC-8	5 <sup>5</sup> / <sub>16</sub>	2870	4100
	90 79			13308	90PAR/H/FL25°	130	12	Floodlight (15, 23)* Ratings @ 120 Volts	1260 940	2500 5000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2870	4100
				25727	90PAR/H/WFL	120	12	Wide Floodlight (15, 23, 46, 56, 88, 96)*	1260	2500	CC-8	5 <sup>5</sup> / <sub>16</sub>	2870	—
<b>HIR/XL™ (ULTRA LONG LIFE) PAR38 LAMPS</b>														
<b>90 WATTS</b>														
	90	PAR38	Med Skirt	40795	90PAR/HIR/SP12°/XL	120	6	Spotlight (15, 23, 56, 80, 88, 96)*	1470	6000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2800	12000
				40791	90PAR/HIR/FL40°/XL	120	6	Floodlight (15, 23, 56, 80, 88, 96)*	1470	6000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2800	2800
<b>HALOGEN COOL BEAM PAR38 LAMPS</b>														
90	PAR38	Med Skirt	17691	90PAR/CB/H/FL25°	120	12	Cool Beam Flood (15, 23, 78)*	1260	2500	CC-8	5 <sup>5</sup> / <sub>16</sub>	2870	4100	
<b>HALOGEN A-LINE LAMPS</b>														
<b>90 WATTS</b>														
	90	TB19	Med	20648	90A/HAL 6PK	120	6	Frost, Brass Base (23, 83, 88)*	1580	2000	CC-8	4 <sup>7</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>8</sub>	2930
	90 81			16745	90A/HAL	130	60	Frost, Brass Base (23, 83, 88)* Ratings @ 120 Volts	1580 1220	2000 4000	CC-8	4 <sup>7</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>8</sub>	2930
<b>STANDARD HALOGEN PAR38 LAMPS</b>														
<b>100 WATTS</b>														
	100	PAR38	Med Skirt	17992	100PAR/H/SP10°	120	6	Spotlight (14, 15, 56, 88)*	1400	2000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2900	17000
				17986	100PAR/H/FL25°	120	6	Floodlight (14, 15, 56, 88)*	1400	2000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2900	4800
	100 88			17947	100PAR/H/FL25°	130	12	Floodlight (14, 15, 56, 88)* Ratings @ 120 Volts	1400 1100	2000 4000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2900	4800
<b>HIR™ PAR38 LAMPS</b>														
<b>100 WATTS</b>														
	100	PAR38	Med Skirt	18635	100PAR/HIR/SP10°	120	12	Spotlight (15, 23, 56, 88, 96)*	2070	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2900	29000
	100 88			18636	100PAR/HIR/SP10°	130	12	Spotlight (15, 23, 56, 88, 96)* Ratings @ 120 Volts	2070 1470	3000 6000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2900	29000
				18631	100PAR/HIR/FL25°	120	12	Floodlight (15, 23, 56, 88, 96)*	2070	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2900	6300
	100 88			18633	100PAR/HIR/FL25°	130	12	Floodlight (15, 23, 56, 88, 96)* Ratings @ 120 Volts	2070 1470	3000 6000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2900	6300
				10473	100PAR/HIR/FL40°	120	12	Floodlight (23, 56, 88, 96)*	2070	3000	CC-8	5 <sup>5</sup> / <sub>16</sub>	2900	3400

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(\*) \* All footnote references found at the end of this section. ⚡ Reduced Wattage. To convert inches to millimeters, multiply by 25.4.



Watts	Bulb	Base	Product Code	Lamp Description	Case Volts	Qty.	Additional Information	Rated Avg. Life Hours	Filament Design	MOL in.	LCL in.	Temp. K	Color CBCP
<b>QUARTZLINE® PAR38 LAMPS</b>													
	250	PAR38 Med Skirt	23719	Q250PAR/SP10°	120	12	Spotlight (96a, 96b, 112)*	3600	4200	CC-8	5 <sup>5</sup> / <sub>16</sub>	2880	40000
			23718	Q250PAR/FL30°	120	12	Floodlight (96a, 96b, 112, 120)*	3600	4200	CC-8	5 <sup>5</sup> / <sub>16</sub>	2880	9000
<b>TURN AND LOCK (TAL) CONSTANTCOLOR® LAMPS</b>													
<b>50 WATTS</b>													
	50	MR16 TAL	30901	50MR16/Q/10°/TL	12	10	Narrow Spot (132)*	3500		C-6	2	3000	10800
			30900	50MR16/Q/20°/TL	12	10	Narrow Flood (132)*	3500		C-6	2	3000	3330
			30899	50MR16/Q/40°/TL	12	10	Flood (132)*	3500		C-6	2	3000	1395
<b>STANDARD MR11 LAMPS</b>													
<b>20-35 WATTS</b>													
	20	MR11 2-Pin G4	30754	Q20MR11/SP15°-FTC	12	10	Spot (132)*	3500		C-6	1 <sup>3</sup> / <sub>8</sub>	2900	1760
			30773	Q20MR11/NFL30°-FTD	12	10	Narrow Flood (132)*	3500		C-6	1 <sup>3</sup> / <sub>8</sub>	2900	600
	35	MR11 2-Pin G4	30774	Q35MR11/SP20°-FTF	12	10	Spot (132)*	3500		C-6	1 <sup>3</sup> / <sub>8</sub>	2900	3000
			30890	Q35MR11/NFL30°-FTH	12	10	Narrow Flood (132)*	3500		C-6	1 <sup>3</sup> / <sub>8</sub>	2900	1300
<b>STANDARD MR16 LAMPS</b>													
	20	MR16 2-Pin GX5.3	25481	Q20MR16/SP	12	20	Spot, Replacement for ESX (132)*	2000		C-6	1 <sup>7</sup> / <sub>8</sub>	2900	3500
			25480	Q20MR16/FL	12	20	Flood, Replacement for BAB (132)*	2000		C-6	1 <sup>7</sup> / <sub>8</sub>	2900	500
	50	MR16 2-Pin GX5.3	25483	Q50MR16/SP	12	20	Spot, Replacement for EXT (132)*	2000		C-6	1 <sup>7</sup> / <sub>8</sub>	2900	9500
			25482	Q50MR16/FL	12	20	Flood, Replacement for EXN (132)*	2000		C-6	1 <sup>7</sup> / <sub>8</sub>	2900	1500
<b>CONSTANTCOLOR® PRECISE™ MR16 LAMPS</b>													
<b>20-71 WATTS</b>													
	20	MR16 2-Pin GX5.3	20816	Q20MR16/C/VNSP7°-EZX 10PK	12	20	Very Narrow Spot (132)*	3000		CC-6	1 <sup>7</sup> / <sub>8</sub>	2900	7400
			20815	Q20MR16/C/NSP15°-ESX 10PK	12	20	Narrow Spot (132)*	5000		C-6	1 <sup>7</sup> / <sub>8</sub>	2900	3750
			20814	Q20MR16/C/FL40°-BAB 10PK	12	20	Flood (132)*	5000		C-6	1 <sup>7</sup> / <sub>8</sub>	2900	525
	35	MR16 2-Pin GX5.3	20826	Q35MR16/C/SP20°-FRA 10PK	12	20	Spot (132)*	5000		C-6	1 <sup>7</sup> / <sub>8</sub>	3000	3900
			20825	Q35MR16/C/FL40°-FMW 10PK	12	20	Flood (132)*	5000		C-6	1 <sup>7</sup> / <sub>8</sub>	3000	1000
	42	MR16 2-Pin GX5.3	20830	Q42MR16/C/VNSP9°-EZY 10PK	12	20	Very Narrow Spot (132)*	3500		CC-6	1 <sup>7</sup> / <sub>8</sub>	3000	12300
	50	MR16 2-Pin GX5.3	20839	Q50MR16/C/NSP15°-EXT 10PK	12	20	Narrow Spot (132)*	6000		C-6	1 <sup>7</sup> / <sub>8</sub>	3050	9100
			20835	Q50MR16/C/NFL25°-EXZ 10PK	12	20	Narrow Flood (132)*	6000		C-6	1 <sup>7</sup> / <sub>8</sub>	3050	3200
			20834	Q50MR16/C/NFL30°-EXK 10PK	12	20	Narrow Flood (132)*	6000		C-6	1 <sup>7</sup> / <sub>8</sub>	3050	2500
			20833	Q50MR16/C/FL40°-EXN 10PK	12	20	Flood (132)*	6000		C-6	1 <sup>7</sup> / <sub>8</sub>	3050	1700
			20832	Q50MR16/C/WFL55°-FNV 10PK	12	20	Wide Flood (132)*	6000		C-6	1 <sup>7</sup> / <sub>8</sub>	3050	900
			71	MR16 2-Pin GX5.3	20843	Q71MR16/C/NSP15°-EYF 10PK	12	20	Narrow Spot (132)*	4000		C-6	1 <sup>7</sup> / <sub>8</sub>
			20841	Q71MR16/C/NFL25°-EYJ 10PK	12	20	Narrow Flood (132)*	4000		C-6	1 <sup>7</sup> / <sub>8</sub>	3050	5500
			20840	Q71MR16/C/FL40°-EYC 10PK	12	20	Flood (132)*	4000		C-6	1 <sup>7</sup> / <sub>8</sub>	3050	2200

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

Watts	Bulb	Base	Product Code	Lamp Description	Case Volts	Qty.	Additional Information	Rated Avg. Life Hours	Filament Design	MOL in.	LCL in.	Temp. K	Color CBCP
<b>CONSTANTCOLOR® PRECISE™ COVER GLASS MR16 LAMPS</b>													
<b>20-71 WATTS</b>													
20	MR16	2-Pin GX5.3	20858	Q20MR16/C/CG15°-ESX 10PK	12	20	Narrow Spot, Clear Glass Protective Lens, Suitable for Use in Open Fixtures (132)*	5000	C-6	1 <sup>7</sup> / <sub>8</sub>	2900	3150	
			20857	Q20MR16/C/CG40°-BAB 10PK	12	20	Flood, Clear Glass Protective Lens, Suitable for Use in Open Fixtures (132)*	5000	C-6	1 <sup>7</sup> / <sub>8</sub>	2900	475	
35	MR16	2-Pin GU5.3	20864	Q35MR16/C/CG12°-FRB	12	20	Narrow Spot, Clear Glass Protective Lens, Suitable for Use in Open Fixtures (132)*	5000	C-6	1 <sup>7</sup> / <sub>8</sub>	3000	7500	
35	MR16	2-Pin GX5.3	20860	Q35MR16/C/CG20°-FRA 10PK	12	20	Spot, Clear Glass Protective Lens, Suitable for Use in Open Fixtures (132)*	5000	C-6	1 <sup>7</sup> / <sub>8</sub>	3000	3200	
			20859	Q35MR16/C/CG40°-FMW 10PK	12	20	Flood, Clear Glass Protective Lens, Suitable for Use in Open Fixtures (132)*	5000	C-6	1 <sup>7</sup> / <sub>8</sub>	3000	900	
50	MR16	2-Pin GX5.3	20872	Q50MR16/C/CG15°-EXT 10PK	12	20	Narrow Spot, Clear Glass Protective Lens, Suitable for Use in Open Fixtures (132)*	6000	C-6	1 <sup>7</sup> / <sub>8</sub>	3050	8400	
			20871	Q50MR16/C/CG25°-EXZ 10PK	12	20	Narrow Flood, Clear Glass Protective Lens, Suitable for Use in Open Fixtures (132)*	6000	C-6	1 <sup>7</sup> / <sub>8</sub>	3050	2900	
			20867	Q50MR16/C/CG40°-EXN 10PK	12	20	Flood, Clear Glass Protective Lens, Suitable for Use in Open Fixtures (132)*	6000	C-6	1 <sup>7</sup> / <sub>8</sub>	3050	1500	
			20865	Q50MR16/C/CG55°-FNV 10PK	12	20	Wide Flood, Clear Glass Protective Lens, Suitable for Use in Open Fixtures (132)*	6000	C-6	1 <sup>7</sup> / <sub>8</sub>	3050	850	
71	MR16	2-Pin GX5.3	20876	Q71MR16/C/CG15°-EYF 10PK	12	20	Narrow Spot, Clear Glass Protective Lens, Suitable for Use in Open Fixtures (132)*	4000	C-6	1 <sup>7</sup> / <sub>8</sub>	3050	10800	
			20874	Q71MR16/C/CG25°-EYJ 10PK	12	20	Narrow Flood, Clear Glass Protective Lens, Suitable for Use in Open Fixtures (132)*	4000	C-6	1 <sup>7</sup> / <sub>8</sub>	3050	4550	
			20873	Q71MR16/C/CG40°-EYC 10PK	12	20	Flood, Clear Glass Protective Lens, Suitable for Use in Open Fixtures (132)*	4000	C-6	1 <sup>7</sup> / <sub>8</sub>	3050	2000	

### QUARTZ HALOGEN LAMPS

#### 5-100 WATTS

5	T3	2-Pin G4	42959	Q5T3/CL	12	100	Clear (132)*	60	2000	C-6	1 <sup>1</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	
			34674	Q10T3/CL	12	100	Clear (132)*	140	2000	C-6	1 <sup>1</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	
20	T3	2-Pin G4	19371	Q10T3/CL/CD 5PK	12	25	Clear. Carded (132)*	140	2000	C-6	1 <sup>1</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	
			34715	Q20T2.5/12V/CL	12	100	(132)*	350	2000	C-6	1 <sup>1</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	
20	T3	2-Pin G4	19375	Q20T3/CL/CD 5PK	12	25	Clear. Carded (132)*	350	2000	C-6	1 <sup>1</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	
35	T3	2-Pin GY6.35	34708	Q35T3/12V/CL	12	100	(132)*	550	2000	C-6	1 <sup>3</sup> / <sub>4</sub>		
50	T3	2-Pin GY6.35	34702	Q50T3/12V/CL	12	100	(132)*	850	2000	C-6	1 <sup>3</sup> / <sub>4</sub>		
50	T4	2-Pin GY6.35	19376	Q50T4/CL/CD 5PK	12	25	Clear. Carded (132)*	950	2000	C-6	1 <sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>8</sub>	
75	T4	2-Pin GY6.35	19377	Q75T4/CL/CD 5PK	12	25	Clear. Carded (132)*	1600	2000	C-6	1 <sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>8</sub>	
100	T3	2-Pin GY6.35	34676	Q100T3/12V/CL	12	100	(132)*	2350	2000	CC-6	1 <sup>3</sup> / <sub>4</sub>		
			34663	Q100T3/24V/CL	24	100	(132)*	2000	2000	CC-6	1 <sup>3</sup> / <sub>4</sub>		

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( ) \* All footnote references found at the end of this section. ⚡ Reduced Wattage. To convert inches to millimeters, multiply by 25.4.













Watts	Bulb	Base	Product Code	Lamp Description	Case Volts	Qty.	Additional Information	Rated Lumens	Avg. Life Hours	Filament Design	MOL in.	LCL in.	Temp. K	Color CBCP
<b>QUARTZLINE® HALOGEN LAMPS</b>														
<b>45-75 WATTS</b>														
	45 T2 1/2	R7S	23850	Q45T21/2/CL	7	12	Clear, Instrument (137)*	710	1000	C-8	2 1/16			
	45 T4	2-Pin PreFoc	41541	Q45T4/CL	6.6A	12	Clear, Airport, Base Down	835	500	C-6	2 1/2	1 17/32		
	75 T3	Mini-Cand	39574	Q75CL	28	20	Clear	1350	2000	CC-6	2 1/2	1 13/16		
			12715	Q75CL/MC/CD	120	25	Clear, Carded	1050	1000	CC-8	2 1/2	1 1/4	2850	
<b>100 WATTS</b>														
	100 T3	R7S	22489	Q100T3/CL/CD 5PK	120	60	Clear, Horizontal, Carded	1650	1500	C-8	3 1/8	1 1/4	2950	
	100 T4	Mini-Cand	15507	Q100CL/MC	120	6	Clear	1600	2000	CC-8	2 13/16	1 3/8	2950	
			19383	Q100CL/MC/CD 5PK	120	25	Clear, Carded	1600	2000	CC-8	2 13/16	1 3/8	2950	
			44385	Q100CL/MC/2V-ESN	120	6	Clear	1800	750	CC-2V	2 13/16	1 3/8	2950	
			16452	Q100MC	120	6	Frosted	1550	2000	CC-8	2 13/16	1 3/8	2950	
			44656	Q100MC/2V-ETE	120	6	Frosted	1750	750	CC-2V	2 13/16	1 3/8	2950	
	100 T4	D.C. Bay	15508	Q100CL/DC	120	6	Clear	1600	2000	CC-8	2 1/16	1 3/8	2950	
			44386	Q100CL/DC/2V-ESR	120	6	Clear	1800	750	CC-2V	2 1/16	1 3/8	2950	
			16451	Q100DC	120	6	Frosted	1550	2000	CC-8	2 1/16	1 3/8	2950	
			44657	Q100DC/2V-ETD	120	6	Frosted	1750	750	CC-2V	2 1/16	1 3/8	2950	
<b>150 WATTS</b>														
	150 T3	R7S	19378	Q150T3/CL/CD 5PK	120	60	Clear, Horizontal, Carded	2400	1500	C-8	3 1/8	1 1/4	2950	
			27449	Q150T3/117/CL/CD 5PK	120	60	Clear, Horizontal, Carded	2400	1500	C-8	3 1/8	1 1/4	2950	
	150 T4	R7S	23710	Q150T4/CL	25	12	Clear, Dental Spotlight (139)*	2760	3000	CC-8	2 9/16		2850	
	150 T4	D.C. Bay	43693	Q150CL/DC-ETC	120	6	Clear	2800	2000	CC-8	2 1/2	1 3/8	2950	
			44384	Q150CL/DC/2V-ESP	120	6	Clear	2800	1000	CC-2V	2 1/16	1 3/8	2950	
			44653	Q150DC-ETF	120	6	Frosted	2700	2000	CC-8	2 1/2	1 3/8	2950	
	150 T4	Mini-Cand	43694	Q150CL/MC-ETG	120	6	Clear	2800	2000	CC-8	3	1 3/8	2950	
			19386	Q150CL/MC/CD 5PK	120	25	Clear, Carded	2800	2000	CC-8	3	1 3/8	2950	
			44383	Q150CL/MC/2V-ESL	120	6	Clear	2800	1000	CC-2V	2 13/16	1 3/8	2950	
			44654	Q150MC-ETH	120	6	Frosted	2700	2000	CC-8	3	1 3/8	2950	
<b>200 WATTS</b>														
	200 T3	R7S	16580	Q200T3 6PK	120	6	Frosted (100)*	3350	1500	CC-8	3 1/8	1 1/4	2925	
			43713	Q200T3/CL 6PK	120	144	Clear	3460	1500	CC-8	3 1/8	1 1/4	2925	
	200 T4	2-Pin PreFoc	40702	Q200T4/CL	6.6A	12	Clear, Airport, Base Down	4500	500	CC-6	2 1/2	1 17/32		
<b>QUARTZLINE® HIR™ LAMPS</b>														
<b>225 WATTS</b>														
	225 T2	R7S	12282	Q225T2/CL/ULTRA 5PK	120	25	IR, Clear, Horizontal	5950	3000	C-8	4 11/16	2 1/2	2965	

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Watts	Bulb	Base	Product Code	Lamp Description	Case Volts	Qty.	Additional Information	Rated Lumens	Avg. Life Hours	Filament Design	MOL in.	LCL in.	Temp. K	CBCP
<b>QUARTZLINE® HALOGEN LAMPS</b>														
<b>235 WATTS</b>														
	235 T4	2-Pin GZ9.5	11548	Q235T4/3	33	12	Frosted, Instrument, Prefocus (103)*	6000	150	CC-6	2 <sup>5</sup> / <sub>8</sub>	1 <sup>17</sup> / <sub>32</sub>		
<b>250 WATTS</b>														
	250 T3	R7S	22865	Q250T3/CL 6PK	120	144	Clear, Horizontal	4000	1500	C-8	3 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>4</sub>	2950	
	250 T2 <sup>1</sup> / <sub>2</sub>	R7S	22121	Q250T3/CL/CD 5PK CARD	120	60	Clear, Carded	4000	1500	C-8	3 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>8</sub>	2950	
	250 T4	D. C. Bay	43701	Q250DC-ETB	120	6	Frosted	4850	2000	CC-8	3	1 <sup>5</sup> / <sub>8</sub>	2950	
			43702	Q250DC	130	6	Frosted	4850	2000	CC-8	3	1 <sup>5</sup> / <sub>8</sub>	2950	
	250 T4	Mini-Cand	43695	Q250MC-ESM	120	6	Frosted	4850	2000	CC-8	3 <sup>5</sup> / <sub>32</sub>	1 <sup>5</sup> / <sub>8</sub>	2950	
			43696	Q250MC	130	6	Frosted	4850	2000	CC-8	3 <sup>5</sup> / <sub>32</sub>	1 <sup>5</sup> / <sub>8</sub>	2950	
	250 T4	D.C. Bay	43697	Q250CL/DC-ESS	120	6	Clear	5000	2000	CC-8	3	1 <sup>5</sup> / <sub>8</sub>	2950	
			43698	Q250CL/DC	130	6	Clear	5000	2000	CC-8	3	1 <sup>5</sup> / <sub>8</sub>	2950	
	250 T4	Mini-Cand	43699	Q250CL/MC-EHT	120	6	Clear	5000	2000	CC-8	3 <sup>5</sup> / <sub>32</sub>	1 <sup>5</sup> / <sub>8</sub>	2950	
			19387	Q250CL/MC/CD 5PK	120	25	Clear, Carded	5000	2000	CC-8	3 <sup>5</sup> / <sub>32</sub>	1 <sup>5</sup> / <sub>8</sub>	2950	
			43700	Q250CL/MC	130	6	Clear	5000	2000	CC-8	3 <sup>5</sup> / <sub>32</sub>	1 <sup>5</sup> / <sub>8</sub>	2950	
<b>300 WATTS</b>														
	300 T3	R7S	43704	Q300T3-EHZ 6PK	120	144	Frosted, Horizontal	5900	2000	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	2950	
	300 T2 <sup>1</sup> / <sub>2</sub>	R7S	19379	Q300T3/CL/CD 5PK CARD	120	60	Clear, Horizontal, Carded	5950	2000	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	2950	
			27447	Q300T3/CL/CD2 5PK	120	60	Clear, Horizontal, Carded	5950	2000	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	2950	
	300 T3	R7S	43703	Q300T3/CL-EHM 6PK	120	144	Clear, Horizontal	5950	2000	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	2950	
	300 T4	R7S	43705	Q300T4/CL-EHP	120	6	Clear	5650	2000	CC-8	3 <sup>1</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>4</sub>	2900	
<b>QUARTZLINE® HIR™ LAMPS</b>														
<b>350</b>														
	350 T3	R7S	13894	➤ Q350T3/CL/HIR	120	6	IR, Clear, Horizontal	10000	2000	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	3075	
			14311	➤ Q350T3/CL/HIR	130	6	IR, Clear, Horizontal	9600	2000	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	3000	
			12283	➤ Q350T3/CL/ULTRA 5PK	120	25	IR, Clear, Horizontal, Carded	10000	2000	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	3075	
<b>QUARTZLINE® HALOGEN LAMPS</b>														
<b>400-425 WATTS</b>														
	400 T4	Mini-Cand	43706	Q400MC	120	6	Frosted	7850	2000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2	2950	
			43707	Q400CL/MC	120	6	Clear	8250	2000	CC-8	3 <sup>5</sup> / <sub>8</sub>	2	2950	
	400 T4	R7S	43708	Q400T4/CL-EHR	120	6	Clear	7750	2000	CC-8	3 <sup>1</sup> / <sub>8</sub>	1 <sup>13</sup> / <sub>16</sub>	2900	
	425 T3	R7S	11178	Q425T3/CL	120	12	Clear, Horizontal	8900	2000	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>7</sup> / <sub>32</sub>	3000	
<b>500 WATTS</b>														
	500 PAR56	Mog End Pr	43494	Q500PAR56NSP	120	6	Narrow Spot (106, 131)*	8000	4000	CC-6	5		2950	96000
			43495	Q500PAR56MFL	120	6	Medium Flood (106, 131)*	8000	4000	CC-6	5		2950	43000
			43496	Q500PAR56WFL	120	6	Wide Flood (106, 131)*	8000	4000	CC-6	5		2950	19000
	500 T3	R7S	23717	Q500T3 12PK	130	144	Frosted, Horizontal	10300	2000	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	3000	
			23731	Q500T3/CL-FCL	120	12	Clear, Horizontal	11100	2000	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	3000	
	500 T2 <sup>1</sup> / <sub>2</sub>	R7S	19382	Q500T3/CL/CD 5PK CARD	120	60	Clear, Horizontal, Carded	11100	2000	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	3000	
			27448	Q500T3/CL/CD2 5PK	120	60	Clear, Horizontal, Carded	11100	2000	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	3000	
	500 T3	R7S	23733	Q500T3/CL-DVS	130	12	Clear, Horizontal	10550	2000	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	3000	
			23744	Q500T3/CL/6 12PK	120	144	Clear, 6 Filament Support, Rough Service, Horizontal (103, 133)*	10950	1500	C-8	4 <sup>11</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	3000	
	500 T4	D.C. Bay	43709	Q500DC	120	6	Frosted	10100	2000	CC-8	3 <sup>7</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>8</sub>	2950	
	500 T4	D.C. Bay	43710	Q500CL/DC	120	6	Clear	10450	2000	CC-8	3 <sup>7</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>8</sub>	2950	
	500 T8FL	Approx. 6" Flexible Leads	39071	Q500T8/1CL	20A	20	Clear, Airport, Special bulb (134)*	13400	500	CC-8	4 <sup>1</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>		


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(1) \* All footnote references found at the end of this section. ➤ Reduced Wattage. To convert inches to millimeters, multiply by 25.4.

Watts	Bulb	Base	Product Code	Lamp Description	Case Volts	Qty.	Additional Information	Rated Lumens	Avg. Life Hours	Filament Design	MOL in.	LCL in.	Temp. K	Color CBCP
<b>QUARTZLINE® HIR™ LAMPS</b>														
<b>900 WATTS</b>														
	900 T3	R7S	13642	Q900T3/CL/HIR	240	6	IR, Clear, Horizontal	32000	2000	C-8	10 <sup>1</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>8</sub>	3160	
			14335	Q900T3/CL/HIR	277	6	IR, Clear, Horizontal	31000	2000	C-8	10 <sup>1</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>8</sub>	3160	
<b>QUARTZLINE® HALOGEN LAMPS</b>														
<b>1000 WATTS</b>														
	1000 PAR64	ExMogEndPr	43497	Q1000PAR64/NSP	120	6	Narrow Spot (106, 131)*	19400	4000	CC-6	6	3000	200000	
			43498	Q1000PAR64/MFL	120	6	Medium Flood (106, 131)*	19400	4000	CC-6	6	3000	80000	
			43499	Q1000PAR64/WFL	120	6	Wide Flood (106, 131)*	19400	4000	CC-6	6	3000	33000	
	1000 R60	Mog	23781	Q1000R60FL	120	6	Reflector, Flood I.F. (55, 108, 114, 172)*	18300	3000	CC-8	10 <sup>1</sup> / <sub>8</sub>			
		1000 T3	R7S	43711	Q1000T3/CL 6PK	220	144	Clear, Horizontal	21500	2000	C-8	10 <sup>1</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>8</sub>	3050
			43712	Q1000T3/CL 6PK	240	144	Clear, Horizontal	21500	2000	C-8	10 <sup>1</sup> / <sub>16</sub>	6 <sup>7</sup> / <sub>16</sub>	3050	
	1000 T2	R7S	23800	Q1000T6/CL-DWT	120	6	Clear	23400	2000	CC-8	5 <sup>5</sup> / <sub>8</sub>	1	3200	
	1000 T20	Mog BiPost	41734	Q1000T20BP	120	6	Clear, Lighthouse, Base Down	22400	3000	CC-8	9 <sup>1</sup> / <sub>2</sub>	4	3050	
<b>1500 WATTS</b>														
	1500 T3	R7S	23828	Q1500T3/CL 12PK	208	144	Clear, Horizontal	35800	2000	C-8	10 <sup>1</sup> / <sub>16</sub>	6 <sup>9</sup> / <sub>16</sub>	3050	
			23826	Q1500T3/CL 12PK	220	144	Clear, Horizontal	35800	2000	C-8	10 <sup>1</sup> / <sub>16</sub>	6 <sup>13</sup> / <sub>16</sub>	3050	
			23830	Q1500T3/CL	240	12	Clear, Horizontal	35800	2000	C-8	10 <sup>1</sup> / <sub>16</sub>	6 <sup>5</sup> / <sub>16</sub>	3050	
			23836	Q1500T3/CL/6 12PK	240	144	Clear, 14 Filament Support, Rough Service, Horizontal (100, 133)*	35800	1000	C-8	10 <sup>1</sup> / <sub>16</sub>	6 <sup>3</sup> / <sub>4</sub>	3050	
			23832	Q1500T3/CL	277	12	Clear, Horizontal	34400	2000	C-8	10 <sup>1</sup> / <sub>16</sub>	6 <sup>9</sup> / <sub>16</sub>	3050	
<b>6000-6600 WATTS</b>														
	6000 T3	Wire Lead	23843	Q6M/T3/CL/HT	480	12	Clear, Infrared, High Temp, Constr. (103, 111, 122, 125)*		100	C-8	11 <sup>15</sup> / <sub>16</sub>	9 <sup>3</sup> / <sub>4</sub>	3250	
	6600 T3	Slv	13511	Q6000T3/CL	480	6	Clear, Infrared, Horizontal (100, 103, 111, 122, 125)*		150	C-8	11 <sup>15</sup> / <sub>16</sub>	9 <sup>3</sup> / <sub>4</sub>		
<b>AIRPORT LAMPS LISTED BY AMPERES</b>														
	200 PAR56	Mog End Pr	38271	Q6.6A/PAR56/2	200W	12	PAR, Airport, BDTH	1000		CC-6	5		16000	
	200 PAR56	Mog End Pr	18309	Q6.6A/PAR56/4	200W	12	PAR, Airport, Prismatic Lens, BDTH	600		CC-6	5			
	200 PAR56	Scrw Term	33279	Q6.6A/PAR56/3	200W	12	PAR, Airport, BDTH	1000		CC-6	4 <sup>1</sup> / <sub>2</sub>		200000	
	200 PAR64	Mog End Pr	13224	Q6.6A/PAR64/2P 6PK	200W	6	PAR, Airport, BDTH	2000		CC-6	4 <sup>1</sup> / <sub>2</sub>			
	300 PAR64	Mog End Pr	13223	Q6.6A/PAR64/3P 6PK	300W	6	PAR, Airport, BDTH	2000		CC-6	4 <sup>1</sup> / <sub>2</sub>			
	45 T2 <sup>1</sup> / <sub>2</sub>	Special	23847	Q6.6A/T21/2/1CL	45W	12	Clear, Airport (134, 137, 151, 161)*	710	1000	C-8	1 <sup>3</sup> / <sub>4</sub>			
	200 T4	Special 1'' Ribbon Leads	23857	Q6.6A/T4/5CL	200W	12	Clear, Airport (134, 135, 175)*	5000	500	CC-8		3		
	200 T4	D.C. Bay	23860	Q6.6A/T4/DCR	200W	12	Clear, Airport, Ringed (129)*	5150	500	CC-6	2 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>16</sub>		
	300 PAR56	Mog End Pr	15482	Q20A/PAR56/C	300W	12	PAR, Airport, Teflon® Coated, Burn Position: Any (113)*		500	CC-6		5		
300 PAR56	Scrw Term	32861	Q20A/PAR56/2	300W	12	PAR, Airport, Burn Position: Any		500	CC-6		4 <sup>1</sup> / <sub>2</sub>		200000	
499 PAR56	Scrw Term	23863	Q20A/PAR56/3	499W	12	PAR, Airport, BDTH		500	CC-6		4 <sup>1</sup> / <sub>2</sub>		330000	
500 PAR56	Mog End Pr	15485	Q20A/PAR56/1/C	500W	12	PAR, Airport, Teflon® Coated, Burn Position: Any (113)*		500	CC-6		5			

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Watts	Bulb	Base	Product Code	Lamp Description	Case Volts	Qty.	Additional Information	Rated Avg. Life Hours	Filament Design	MOL in.	LCL in.	Color Temp. K	CBCP
<b>TUBULAR QUARTZ HEAT LAMPS</b>													
<b>300-375 WATTS</b>													
300	T3	Slv	39019	QH300T3/CL	120	12	Infrared (100)*	5000	C-8	8 <sup>15</sup> / <sub>32</sub>	4 <sup>3</sup> / <sub>16</sub>	2400	
375	T3	Slv	21337	QH375T3/CL	115/5	12	Infrared (100)*	5000	C-8	8 <sup>13</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>16</sub>	2400	
375	T3	R7S	38893	QH375T3/CL/7	120	12	Infrared (100)*	5000	C-8	8 <sup>11</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>16</sub>	2400	
<b>500 WATTS</b>													
500	T3	Slv	21788	QH500T3/CL	120	12	Infrared, Clear (100)*	5000	C-8	8 <sup>13</sup> / <sub>16</sub>	4 <sup>13</sup> / <sub>16</sub>	2400	
500	T3	R7S	21787	QH500T3/CL/7	120	12	Infrared (100)*	5000	C-8	8 <sup>11</sup> / <sub>16</sub>	4 <sup>13</sup> / <sub>16</sub>	2400	
<b>1000 WATTS</b>													
1000	T3	Slv	22355	QH1000T3/CL	200/0	12	Infrared (100)*	5000	C-8	13 <sup>13</sup> / <sub>16</sub>	10	2400	
			22357	QH1000T3/CL	230/0	12	Infrared (100)*	5000	C-8	13 <sup>13</sup> / <sub>16</sub>	10	2400	
			22358	QH1000T3/CL/1	230/0	12	Infrared, Clear, Horizontal (100, 125)*	5000	C-8	11 <sup>7</sup> / <sub>8</sub>	10	2400	
			22365	QH1000T3/2CL/HT	230/0	12	Infrared, Clear, High Temp, Constr., Horizontal (125)*	5000	C-8	13 <sup>13</sup> / <sub>16</sub>	10	2400	
<b>1200-1600 WATTS</b>													
1200	T3	Slv	22531	QH1200T3/CL	144	12	Infrared, Clear, Horizontal (100, 123, 125)*	5000	C-8	8 <sup>13</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>8</sub>	2450	
			22532	QH1200T3/CL/HT	144	12	Infrared, Clear, High Temp, Constr., Horizontal (125)*	5000	C-8	8 <sup>13</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>8</sub>	2450	
1600	T3	Slv	22686	QH1600T3/CL	200/0	12	Infrared, Horizontal (100)*	5000	C-8	19 <sup>13</sup> / <sub>16</sub>	15 <sup>7</sup> / <sub>8</sub>	2350	
1600	T3	R7S	22699	QH1600T3/CL/7	200/0	12	Infrared, Horizontal (100)*	5000	C-8	19 <sup>5</sup> / <sub>8</sub>	15 <sup>7</sup> / <sub>8</sub>	2350	
			22691	QH1600T3/CL/7	230/0	12	Infrared, Horizontal (100)*	5000	C-8	19 <sup>5</sup> / <sub>8</sub>	15 <sup>7</sup> / <sub>8</sub>	2400	
1600	T3	Slv	22688	QH1600T3/CL	230/0	12	Infrared, Clear, Horizontal (100)*	5000	C-8	19 <sup>13</sup> / <sub>16</sub>	15 <sup>7</sup> / <sub>8</sub>	2400	
			22695	QH1600T3/CL	277	12	Infrared, Horizontal (100)*	5000	C-8	19 <sup>13</sup> / <sub>16</sub>	15 <sup>7</sup> / <sub>8</sub>	2400	
<b>2000 WATTS</b>													
2000	T3	Slv	22789	QH2M/T3/1CL/HT	230/0	12	Infrared, Clear, High Temp, Constr.	5000	C-8	11 <sup>15</sup> / <sub>16</sub>	9 <sup>11</sup> / <sub>16</sub>	2450	
			15551	QH2M/T3/1CL/HT/VB	230/0	12	Infrared, Clear, High Temp, Constr., Universal (123, 125)*	500	C-8	11 <sup>15</sup> / <sub>16</sub>	9 <sup>11</sup> / <sub>16</sub>	2450	
			18668	QH2MT3/CL/VB	220/0	12	Infrared, Clear, Universal (123)*	5000	C-8	13 <sup>13</sup> / <sub>16</sub>	11 <sup>1</sup> / <sub>16</sub>	2450	
			22790	QH2M/T3/CL/HT	230/0	12	Infrared, Clear, High Temp, Constr., Horizontal (125)*	5000	C-8	13 <sup>13</sup> / <sub>16</sub>	10	2450	
2000	T3	CER	12716	QH2MT3/CL/HT/R	230/0	12	Infrared, Clear, High Temp, Horizontal, Reflector 170° (125)*	5000	C-8	13 <sup>29</sup> / <sub>32</sub>	11 <sup>1</sup> / <sub>16</sub>	2450	
<b>2500 WATTS</b>													
2500	T3	Slv	22838	QH2500T3/CL	460/0	12	Infrared, Clear, Horizontal (100)*	5000	C-8	28 <sup>13</sup> / <sub>16</sub>	24 <sup>7</sup> / <sub>8</sub>	2400	
2500	T3	R7S	22837	QH2500T3/CL/7	460	12	Infrared, Clear, Horizontal (100)*	5000	C-8	28 <sup>5</sup> / <sub>8</sub>	24 <sup>7</sup> / <sub>8</sub>	2400	
<b>3650-5000 WATTS</b>													
3650	T3	Slv	10872	QH3650T3/CL/5	480	6	Infrared, Horizontal (100)*	5000	C-8	41 <sup>5</sup> / <sub>8</sub>	38	2500	
3800	T3	Slv	22875	QH3800T3/CL	550/0	6	Infrared, Horizontal (100)*	5000	C-8	41 <sup>13</sup> / <sub>16</sub>	38	2500	
			22878	QH3800T3/CL/VB	550/0	6	Infrared, Clear, Universal (100, 123)*	5000	C-8	41 <sup>13</sup> / <sub>16</sub>	38	2500	
5000	T3	Slv	22900	QH5M/T3/1CL/HT	575/5	12	Infrared, Clear, High Temp, Constr., Horizontal (100, 125)*	5000	C-8	28 <sup>13</sup> / <sub>16</sub>	25 <sup>1</sup> / <sub>4</sub>	2500	

To save energy costs, find the bulbs with the light output you need, then choose the one with the lowest watts.

( ) \* All footnote references found at the end of this section.  Reduced Wattage. To convert inches to millimeters, multiply by 25.4.

**GENERAL INFORMATION****HALOGEN LAMP OPERATING PRECAUTIONS**

The lamps listed in this catalog are filled to high internal gas pressures to maximize lamp efficacy (lumens per watt). Some general cautions are given below.

**HIGH OPERATING TEMPERATURES**

Since operating temperatures are critical to the effective self-cleaning properties of halogen lamps, filament tube wall temperatures should not go below 482°F (250°C). Hot spots on the bulb wall itself can go as high as 1230°F (700°C) in normal operation.

Substantial heat is generated in all halogen lamps, so equipment design should make allowance for the dissipation of excessive heat. Certain lamps and extremely confined fixtures may require additional ventilation or heat sinking to ensure proper operation of the halogen cycle and to prevent damage to the fixture. It is a good practice to test the lamp in the operating environment early in the design cycle to ensure adequate performance. Precautions must be taken in the selection of materials for lampholders, reflectors and lamp housings because the 1230°F (700°C) bulb wall temperature is greater than the kindling temperature of many materials. Lamp base temperatures should not exceed 662°F (350°C) because, above that point, lead wires may deteriorate and the basing cement loosen, causing premature lamp failure.

**DISTRIBUTION OF SPECTRAL RADIATION**

Halogen lamps offer large amounts of visible and infrared energy from a small light source, with about 90% of the energy in the infrared. Some halogen lamps can be used for special applications where small amounts of ultraviolet energy are required. The slight ultraviolet radiation that comes from unprotected sources could cause skin and eye irritation following extended direct exposure. Passing the light through ordinary glass or plastic provides adequate protection. The lenses of the PAR, TAL or Cover Glass Precise™ lamps provide this protection.

**QUARTZ HEAT LAMPS**

standard quartz heat products are primarily pressurized halogen lamps. Many standard tungsten coil filaments have been converted to a deflection coil winding design that eliminates the need for filament supports through an integral coil/support construction. These changes will improve lamp life as well as keep the bulb wall cleaner during operation and throughout the life of the lamp.

In general, halogen lamps are more efficient than ordinary incandescent lamps. HIR™ lamps are the most efficient halogen lamps we offer. For each application, check life, lumens, wattage, beam spread and lamp dimensions to determine proper bulb selection.

We added a reflectorized heat lamp with a patented design that directs the infrared to a surface rather than in 360° angle.

**HALOGEN CAUTION NOTICE – GENERAL**

Halogen lamps are constructed of a glass bulb with a pressurized internal filament tube that operates at high temperatures and could unexpectedly shatter. Should the outer bulb break, particles of extremely hot glass could be discharged into the fixture enclosure and/or surrounding environment, thereby creating a risk of personal injury or fire.

To learn more about B-I-A please visit us at our  
WEB site: [www.BiaGmbH.com](http://www.BiaGmbH.com)



### OPERATING NOTES

- Turn power off and let lamp cool before removal to avoid potential burn and electrical shock during lamp replacement
- Do not use lamp if outer glass is scratched or broken because it may break during installation or later during operation
- Do not use lamp in close proximity to combustible materials or those adversely affected by drying or fading action because of heat radiation in the lamp beam
- Dispose of removed lamp with care such as placing in used lamp carton or other closed container

#### COMPACT PAR LAMPS (PAR20/30)

- Use outdoors in enclosed fixtures or where protected from exposure to water

#### QUARTZLINE™ PAR (250W)

- Avoid use where subjected to exposure to moisture which may cause lamp to break or shatter
- Do not operated lamp over 110% rated voltage. Overvoltage operation increases pressure and tendency to break.
- Use this lamp only in fixtures designed for Q250PAR38 lamps

#### HALOGEN A-LINE (TB/H)

Caution: Cracked or broken bulbs that still light should be replaced immediately. The inner tube of the Halogen lamp is pressurized, operates at high temperature and could unexpectedly shatter with the possibility of property damage or personal injury. Avoid use in unstable table lamps, Dispose of with care. To avoid burns, electricity should be switched off and the lamp allowed to cool for several minutes before removing from socket. Use outdoors only in enclosed fixtures or where protected from exposure to water.

#### OPERATING NOTES – LOW VOLTAGE LAMPS

Low voltage tungsten-halogen lamps are sensitive to voltage variations. Even a small change in voltage can have a considerable impact on lamp life. Designers should match fixture transformer ratings to actual line voltages to ensure that the lamps operate at as close to 12 volts as possible.

Rapid cycling can also shorten lamp life, and designers should take advice from their Lighting representative before using these lamps in flashing or blinking applications.

The lamps may be dimmed by reducing voltage. However, this may cause the bulbs to blacken. If this occurs the lamp should be run at full voltage for fifteen minutes, thereby clearing the problem. Note that the nature of low voltage lighting systems requires the use of fluorescent-type dimmers. Lamp can be operated on AC or DC currents.

### FOOTNOTES

#### # Footnote

- 14 In "base up" use, heat eventually may deteriorate paper-lined or plastic sockets.  
 15 Lamp is made of heat resistant glass (HRG).  
 23 Lamp base is a brass base (BB).  
 46 This lamp produces base temperatures which may deteriorate paper-lined or plastic sockets. Use only in fixtures approved for this type and wattage bulb.  
 55 Lamp base is a nickel plated brass base (NPBB).  
 56 Avoid use at short distances on materials that are inflammable or susceptible to heat damage.  
 78 Use only in fixtures rated for Cool Beam lamp operation.  
 80 Do not use lamp in application where it may be exposed to direct water splash. If lamp is used outdoors, it must be protected by an enclosed fixture or an overhang. Failure to properly protect the lamp can result in premature failure of the lamp.  
 83 Will operate in any burning position, but fixed-socket usage other than base up or continuous burning in any position in ambient temperatures above 150°F, may result in some loss of protective coating.  
 88 If lamp is cracked or broken, replace immediately. The lamp may continue to light, but the inner bulb is pressurized and could unexpectedly shatter. Dispose of with care.  
 96 Under moist conditions, metal parts of lamp and lampholder may become a shock hazard. Therefore, disconnect from circuit before touching.  
 96a Do not operate lamp over 110% rated voltage. Over voltage operation increases pressure and tendency to break.  
 96b Use this lamp only in fixtures designed for Q250PAR38 lamps.  
 100 For use only where seal temperature does not exceed 650°F. For satisfactory lamp operation a minimum bulb wall temperature of 500°F is required.  
 103 Life dependent on service conditions.  
 105 For a more uniform lighting pattern in display applications calling for ENL, use Precise lamp (Q50MR16/NFL30 (EXK).  
 106 Although made of heat-resistant glass, the bulb and lens should be protected from moisture or breakage may result. The lens or bulb may break during usage under certain other conditions beyond the control of the manufacturer. Therefore screening is recommended.  
 108 The bulb, although made of heat-resistant glass, may break if moisture falls on it. Lamp not recommended for use in enclosed close-fitting housings.  
 111 Flexible leads not included in maximum overall length.

#### # Footnote

- 113 Continuous operation of the lamp at full amperage for extended periods (longer than 100 hours), or high duty cycle at high temperature may cause coating to delaminate (peel) near the center of the lamp lens.  
 114 Nickel plated brass base (NPBB).  
 120 Initial Avg. Max. Candlepower (Average over a 5 cone for SP and NSP and over a 10 cone for FL and NFL).  
 122 36mm stranded leads with lug terminals.  
 123 Can be operated in any position, even vertically; however, when burned other than horizontally, the end marked "This End Up" on the sleeve base must be higher than other end of lamp.  
 125 Generally limited to intermittent burning in special equipment.  
 129 D.C. Bayonet (Ba15d) base with ring collar added. Light Center Length measured from plane of the three bosses on ring collar.  
 131 For use only with heat-resistant connector and with lamp supported by bulb rim.  
 132 For use only in equipment designed for lamps of this type and wattage, having ventilation adequate to maintain bulb and base temperatures within safe limits.  
 133 Lamp provides maximum filament straightness under severe operating conditions.  
 134 MOL dimension includes only length of quartz.  
 135 Filament: diameter, 3.6mm; length, 5.5mm (10%).  
 137 Filament: diameter, 1.5mm; length, 4.5mm (10%).  
 138 Filament: diameter, 1.5mm; length, 10mm (10%).  
 139 Filament: diameter, 3mm; length, 10mm (10%).  
 150 Filament dimension: diameter, 1.9mm; length, 6.4mm (10%).  
 151 Filament offset 0.0359 from center axis of lamp.  
 161 Approx. 1" (25mm) ribbon leads extending along axis of the lamp.  
 172 Initial average beam candlepower within cone is 15,500.  
 175 Approx. 1" ribbon leads extending normal to lamp axis in same plane as seals.  
 176 Recessed Single Contact base with metal ferrule. Designed for use only in special equipment, not for general use. The non-insulated ferrules are exposed and may be energized.