

HIGH INTENSITY DISCHARGE LAMPS

METAL HALIDE

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PHILIPS

Let's make things better.

MasterColor Ceramic Metal Halide Lamps

featuring ALTO® Lamp Technology

The latest breakthrough in the field of metal halide technology, MasterColor lamps provide unparalleled uniformity and consistency in lamp-to-lamp color—both initial and throughout life—as well as higher efficacy than any other low-wattage metal halide source available. The secret to MasterColor's unequalled performance is its ceramic discharge tube, which combines the white light and high efficacy of metal halide lamps with the color stability and reliable, long life of polycrystalline alumina (PCA) technology.

- **Excellent color rendition** (up to 92 CRI)
- **Superior Color Stability over life of lamp** ±200K vs. up to ±600K for standard metal halide lamps
- **Increased efficacy**—up to 93 LPW—results in reduced energy consumption
- **Universal operation**—can operate in any position
- Lamps operate on standard metal halide ballasts offers simple retrofit options
- **FadeBlock™**—Lamps feature integrated UV blocking medium for reduced fading of photo sensitive materials

Explanation of suffix in ordering code (no suffix = clear):

- /C Coated
- /M Medium Base
- /SP Spot 10°
- /FL Flood 30°
- /WFL Wide Flood 60°
- /MP Protected
- Operating Position—Universal, unless otherwise noted

Descriptive symbols for MasterColor:

- CDM Ceramic Discharge Metal Halide
- MHC Metal Halide Ceramic
- G General Lighting

MasterColor Ceramic Metal Halide Lamps Single-Ended T-4 Style. Enclosed Luminaires Only.

- G8.5 Bi-pin Based Low Wattage Ceramic Metal Halide Lamps Lifetime Color Stability Within ±200K.
- Approved for electronic ballast only
- FadeBlock UV Filtering

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated) (401)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
39	T-4	G8.5 †	37372-0	CDM35/TC/830	M130/E	12	*G, Clear, FadeBlock (391, 392, 396, 397)	2	3 11/32	9000	3300	2805	81	3000
70	T-4	G8.5 †	37373-8	CDM70/TC/830	M139/E	12	*G, Clear, FadeBlock (391, 392, 396, 397)	2	3 11/32	6000	6400	5440	83	3000

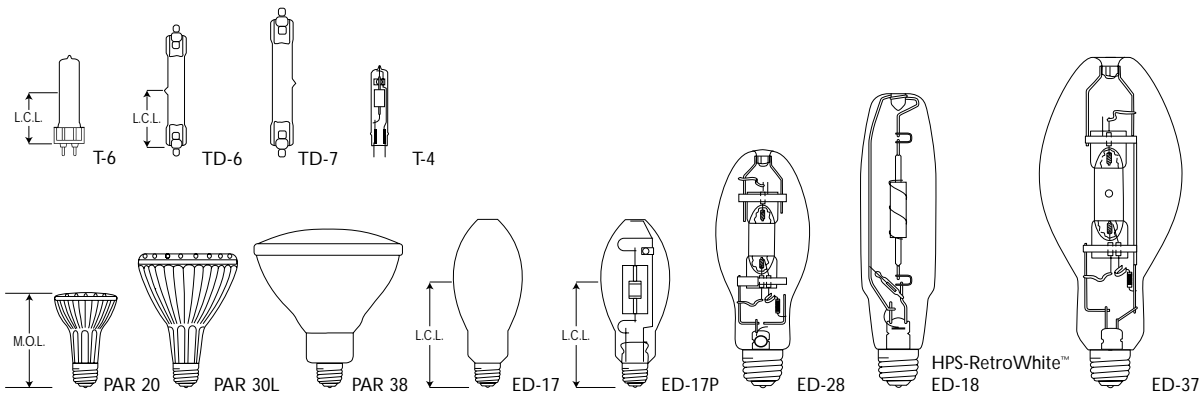
MasterColor Ceramic Metal Halide Lamps Single-Ended T-6 Style. Enclosed Luminaires Only.

- G12 Bi-pin Based Low Wattage Ceramic Metal Halide Lamps Lifetime Color Stability Within ±200K.
- FadeBlock UV Filtering

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated) (401)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
39	T-6	G12 □	22328-9	CDM35/T6/830	M130PO-REM/J/E	12	*G, Clear, FadeBlock (391, 392, 396, 397)	2 7/32	3 15/16	12,000	3400	2600	81	3000
70	T-6	G12 □	22337-0	CDM70/T6/830	M139PO-REM/J/E	12	*G, Clear, FadeBlock (391, 392, 396, 397, 398)	2 7/32	3 15/16	12,000	6600	5200	82	3000
			28137-8	CDM70/T6/942	M139PO-REM/J/E	12	*G, Clear, FadeBlock (391, 392, 396, 397, 398)	2 7/32	3 15/16	12,000	6600	5280	92	4000
150	T-6	G12 □	23272-8	CDM150/T6/830	M142PP-REN/J/E	12	*G, Clear, FadeBlock, also ANSI M102 (391, 392, 396, 397, 398)	2 7/32	4 11/32	12,000	14,000	10,800	85	3000
			37369-6	CDM150/T6/942	M142PP-REN/J/E	12	*G, Clear, FadeBlock, also ANSI M102 (391, 392, 396, 397, 398)	2 7/32	4 11/32	6000	12,700	10,160	95	4000

- — Exclusive Philips Product
- † — New Since Last Printing

■ — High Color Rendering Lamps
 ANSI Code: E — Enclosed Fixture Rated
 Footnotes located on page 99



MasterColor® Ceramic Metal Halide Lamps

MasterColor Ceramic Metal Halide Lamps

Double-Ended TD-6 & TD-7 Style. Enclosed Luminaires Only.
Lifetime Color Stability Within ±200K.

- R7S Single-pin Based Low Wattage Ceramic Metal Halide Lamps
- FadeBlock™ UV Filtering

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated) (401)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs.(351)	Approximate Lumens(352):		CRI	CCT (K)	
											Initial	Mean(353)			
70	TD-6	R7S	<input type="checkbox"/>	23160-5	CDM70/ TD/830	M139CD-RENJ/E	12	*G, Clear, FadeBlock, Hor. ±45°, also M85 (374, 391, 392, 396)	2 ¼	4 ½	15,000	6500	5200	85	3000
			<input type="checkbox"/>	37370-4	CDM70/ TD/942	M139PO-REMJ/E	12	*G, Clear, FadeBlock, Hor. ±45°, also M85 (374, 391, 392, 396)	2 ¼	4 ½	12,000	6000	4800	92	4000
150	TD-7	R7S	<input type="checkbox"/>	23167-0	CDM150/ TD/830	M142AJ-REXJ/E	12	*G, Clear, FadeBlock, Hor. ±45°, also ANSI M102 or M81 (374, 391, 392, 396)	2 19/32	5 ½	15,000	13,250	10,600	85	3000
			<input type="checkbox"/>	37371-2	CDM150/ TD/942	M142PP-RENJ/E	12	*G, Clear, FadeBlock, Hor. ±45°, also ANSI M102 or M81 (374, 391, 392, 396)	2 19/32	5 ½	6000	14,200	11,360	96	4000

Protected MasterColor Ceramic Metal Halide Lamps

PAR Style. Open or Enclosed Luminaires.
Lifetime Color Stability Within ±200K.

- FadeBlock UV Filtering

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated) (401)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs.(351)	Approximate Lumens(352):		CRI	CCT (K)	
											Initial	Mean(353)			
39	PAR 20	Med.	<input type="checkbox"/>	23365-0	CDM35/ PAR20/M/SP	M130/O	12	*G, PAR WISO Spot 10° FadeBlock 23,000 MBCP (391, 392, 396, 397)	N/A	3 ¾	9000	2000	1600	81	3000
			<input type="checkbox"/>	23364-3	CDM35/ PAR20/M/FL	M130/O	12	*G, PAR WISO Flood 30° FadeBlock 5000 MBCP (391, 392, 396, 397)	N/A	3 ¾	9000	2000	1600	81	3000
	PAR 30L	Med.	<input type="checkbox"/>	22329-7	CDM35/ PAR30L/M/SP	M130/O	6	*G, PAR WISO Spot 10° FadeBlock 44,000 MBCP (391, 392, 396, 397)	N/A	4 ¾	9000	2000	1600	81	3000
			<input type="checkbox"/>	22330-5	CDM35/ PAR30L/M/FL	M130/O	6	*G, PAR WISO Flood 30° FadeBlock 7400 MBCP (391, 392, 396, 397)	N/A	4 ¾	9000	2200	1760	81	3000
70	PAR 30L	Med.	<input type="checkbox"/>	23224-9	CDM70/ PAR30L/M/SP	M143/ M98/O	6	*G, PAR WISO Spot 10° FadeBlock 68,000 MBCP (391, 392, 396)	N/A	4 ¾	9000	4850	3880	82	3000
			<input type="checkbox"/>	23221-5	CDM70/ PAR30L/M/FL	M143/ M98/O	6	*G, PAR WISO Flood 40° FadeBlock 10,000 MBCP (391, 392, 396)	N/A	4 ¾	9000	4850	3880	82	3000
	PAR 38	Med.	<input type="checkbox"/>	22250-5	CDM70/ PAR38/SP/3K	M143/ M98/O	12	*G, PAR WISO Spot 15° FadeBlock 50,000 MBCP (391, 392, 396, 399)	N/A	5 7/16	10,000	4800	3840	82	3000
			<input type="checkbox"/>	22249-7	CDM70/ PAR38/FL/3K	M143/ M98/O	12	*G, PAR WISO Flood 25° FadeBlock 18,000 MBCP (391, 392, 396, 399)	N/A	5 7/16	10,000	4800	3840	82	3000
			<input type="checkbox"/>	23216-5	CDM70/PAR38/ WFL/3K	M143/ M98/O	12	*G, PAR WISO Wide Flood 60° FadeBlock 5000 MBCP (391, 392, 396, 399)	N/A	5 7/16	10,000	4800	3840	82	3000
			<input type="checkbox"/>	28872-0	CDM70/PAR38/ SP/4K	M143/ M98/O	12	*G, PAR WISO Spot 15° FadeBlock 42,000 MBCP (391, 392, 396, 399)	N/A	5 7/16	10,000	4200	3360	92	4000
			<input type="checkbox"/>	28873-8	CDM70/PAR38/ FL/4K	M143/ M98/O	12	*G, PAR WISO Flood 25° FadeBlock 16,000 MBCP (391, 392, 396, 399)	N/A	5 7/16	10,000	4200	3360	92	4000
			<input type="checkbox"/>	28874-6	CDM70/PAR38/ WFL/4K	M143/ M98/O	12	*G, PAR WISO Wide Flood 60° FadeBlock 4000 MBCP (391, 392, 396, 399)	N/A	5 7/16	10,000	4200	3360	92	4000
100	PAR 38	Med.	<input type="checkbox"/>	24477-2	CDM100/ PAR38/SP/3K	M140/ M90/O	12	*G, PAR WISO Spot 15° FadeBlock 70,000 MBCP (391, 394, 396, 399)	N/A	5 7/16	12,500	6800	5440	85	3000
			<input type="checkbox"/>	24476-4	CDM100/ PAR38/FL/3K	M140/ M90/O	12	*G, PAR WISO Flood 25° FadeBlock 25,000 MBCP (391, 394, 396, 397)	N/A	5 7/16	12,500	6800	5440	85	3000
			<input type="checkbox"/>	24478-0	CDM100/ PAR38/WFL/3K	M140/ M90/O	12	*G, PAR WISO Wide Flood 60° FadeBlock 7000 MBCP (391, 394, 396, 399)	N/A	5 7/16	12,500	6800	5440	85	3000
			<input type="checkbox"/>	28876-1	CDM100/ PAR38/SP/4K	M140/ M90/O	12	*G, PAR WISO Spot 15° FadeBlock 54,000 MBCP (391, 394, 396, 399)	N/A	5 7/16	10,000	6000	4800	93	4000
			<input type="checkbox"/>	28878-7	CDM100/ PAR38/FL/4K	M140/ M90/O	12	*G, PAR WISO Flood 25° FadeBlock 20,000 MBCP (391, 394, 396, 399)	N/A	5 7/16	10,000	6000	4800	93	4000
			<input type="checkbox"/>	28880-3	CDM100/ PAR38/WFL/4K	M140/ M90/O	12	*G, PAR WISO Wide Flood 60° FadeBlock 5000 MBCP (391, 394, 396, 399)	N/A	5 7/16	10,000	6000	4800	93	4000

— Exclusive Philips Product

ANSI Code: O — Open Fixture Rated
E — Enclosed Fixture Rated

† — New Since Last Printing

Footnotes located on page 99

— Features ALTO® Lamp Technology

— High Color Rendering Lamps

Protected MasterColor Ceramic Metal Halide Lamps

ED-17P Sleeved Arc Tube. Open or Enclosed •

Protective Quartz Sleeve Surrounds the Arc Tube.

Luminaires. Lifetime Color Stability Within ±200K.

• MP Designation Indicates Lamps are Suitable for Open Fixture Applications.

• FadeBlock™ UV Filtering

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated) (401)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs.(351)	Approximate Lumens(352):			CCT (K)	
											Initial	Mean(353)	CRI		
50	ED-17P	Med. <input type="checkbox"/>	36891-0	MHC50/U/MP/3K	M148/M110/O	12	*G, Clear, FadeBlock (391, 394, 396, 399)	3 7/16	5 7/16	10,000	4000	3000	82	3000	
			<input type="checkbox"/>	36893-6	MHC50/U/MP/4K	M148/M110/O	12	*G, Clear, FadeBlock (391, 394, 396, 399)	3 7/16	5 7/16	10,000	3560	2640	82	4000
70	ED-17P	Med. <input type="checkbox"/>	23366-8	MHC70/U/MP/3K	M143/M98/O	12	*G, Clear, FadeBlock (391, 394, 396, 399)	3 7/16	5 7/16	10,000	5900	4700	82	3000	
			<input type="checkbox"/>	23367-6	MHC70/C/U/MP/3K	M143/M98/O	12	*G, Ltg. Phos. Coated (391, 394, 396, 399), FadeBlock	N/A	5 7/16	10,000	5700	4600	82	3000
			<input type="checkbox"/>	36057-8	MHC70/C/MP/4K	M143/M98/O	12	*G, Clear, FadeBlock (391, 394, 396, 399)	3 7/16	5 7/16	10,000	5600	4750	82	4000
			<input type="checkbox"/>	36059-4	MHC70/C/U/MP/4K	M143/M98/O	12	*G, Ltg. Phos. Coated (391, 394, 396, 399), FadeBlock	N/A	5 7/16	10,000	5100	4350	82	4000
100	ED-17P	Med. <input type="checkbox"/>	23368-4	MHC100/U/MP/3K	M140/M90/O	12	*G, Clear, FadeBlock (391, 394, 396, 399)	3 7/16	5 7/16	12,500	8800	7000	85	3000	
			<input type="checkbox"/>	23444-3	MHC100/C/U/MP/3K	M140/M90/O	12	*G, Ltg. Phos. Coated (391, 394, 396, 399), FadeBlock	N/A	5 7/16	12,500	8500	6800	85	3000
			<input type="checkbox"/>	36060-2	MHC100/U/MP/4K	M140/M90/O	12	*G, Clear, FadeBlock (391, 394, 396, 399)	3 7/16	5 7/16	12,500	8000	6800	85	4000
			<input type="checkbox"/>	36061-0	MHC100/C/U/MP/4K	M140/M90/O	12	*G, Ltg. Phos. Coated (391, 394, 396, 399), FadeBlock	N/A	5 7/16	12,500	7500	6375	85	4000
150	ED-17P	Med. †	37724-2	MHC150/U/MP/4K	M102/M142/O	12	*G, Clear, FadeBlock (391, 394, 396, 399)	3 7/16	5 7/16	9000	12,400	9920	92	4000	
			†	37726-7	MHC150/C/U/MP/4K	M102/M142/O	12	*G, Phos. Coated, FadeBlock (391, 394, 396, 399)	N/A	5 7/16	9000	11,500	9200	92	4000

MasterColor Ceramic Metal Halide Lamps

ED-17 and ED-28. Enclosed Luminaires Only.

Lifetime Color Stability Within ±200K.

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated) (401)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs.(351)	Approximate Lumens(352):			CCT (K)	
											Initial	Mean(353)	CRI		
50	ED-17	Med. <input type="checkbox"/>	36020-6	MHC50/U/M/3K	M148/M110/E	12	*G, Clear (391, 392, 399)	3 7/16	5 7/16	10,000	4250	3200	82	3000	
			<input type="checkbox"/>	36022-2	MHC50/C/U/M/3K	M148/M110/E	12	*G, Ltg. Phos. Coated (391, 392, 399)	N/A	5 7/16	10,000	4000	3000	82	3000
			<input type="checkbox"/>	36023-0	MHC50/U/M/4K	M148/M110/E	12	*G, Clear (391, 392, 399)	3 7/16	5 7/16	15,000	3750	2800	90	4000
			<input type="checkbox"/>	36024-8	MHC50/C/U/M/4K	M148/M110/E	12	*G, Ltg. Phos. Coated (391, 392, 399)	N/A	5 7/16	15,000	3500	2600	90	4000
70	ED-17	Med. <input type="checkbox"/>	20884-3	MHC70/U/M/3K	M143/M98/E	12	*G, Clear (391, 392, 399)	3 7/16	5 7/16	10,000	6200	4960	82	3000	
			<input type="checkbox"/>	20887-6	MHC70/C/U/M/3K	M143/M98/E	12	*G, Ltg. Phos. Coated (391, 392, 399)	N/A	5 7/16	10,000	6000	4800	82	3000
			<input type="checkbox"/>	28129-5	MHC70/U/M/4K	M143/M98/E	12	*G, Clear (391, 392, 399)	3 7/16	5 7/16	15,000	6000	4800	92	4000
			<input type="checkbox"/>	28133-7	MHC70/C/U/M/4K	M143/M98/E	12	*G, Ltg. Phos. Coated (391, 392, 399)	N/A	5 7/16	15,000	5800	4680	92	3900

— Exclusive Philips Product

† — New Since Last Printing

ANSI Code: O — Open Fixture Rated

E — Enclosed Fixture Rated

— Features ALTO® Lamp Technology

— High Color Rendering Lamps

Footnotes located on page 99

MasterColor Ceramic Metal Halide Lamps, continued

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated) (401)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
100	ED-17	Med. □	20888-4	MHC100/U/M/3K	M140/M90/E	12	*G, Clear (391, 392, 399)	3 7/16	5 7/16	12,500	9300	7500	85	3000
			20889-2	MHC100/C/U/M/3K	M140/M90/E	12	*G, Phos. Coated (391, 392, 399)	N/A	5 7/16	12,500	9000	7200	85	3000
			28135-2	MHC100/U/M/4K	M140/M90/E	12	*G, Clear (391, 392, 399)	3 7/16	5 7/16	15,000	9000	7200	93	4000
			28136-0	MHC100/C/U/M/4K	M140/M90/E	12	*G, Phos. Coated (391, 392, 399)	N/A	5 7/16	15,000	8700	6960	93	3900
	ED-28	Mog. †	36543-7	MHC100/U/ED28/HR/4K	M140/M90/E	12	*G, Clear (372, 377, 378, 399)	5	8 5/16	10,000	8500	6800	92	4100
150	ED-17	Med. †	37720-0	MHC150/U/M/4K	M102/M142/E	12	*G, Clear (391, 394, 396, 399)	3 7/16	5 7/16	9000	13,500	9450	93	4200
			37721-8	MHC150/C/U/M/4K	M102/M142/E	12	*G, Phos. Coated (391, 394, 396, 399)	N/A	5 7/16	9000	12,500	8750	93	3900

MasterColor Ceramic Metal Halide Pulse Start Lamps

ED-37. Open or Enclosed Luminaires. Lifetime Color Stability Within ± 200K.

- Patent Pending Coil Design Offer Protection for Open Fixture Rating.
- For Operation on Metal Halide Pulse Start Ballasts.

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated) (401)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
400	ED-37	EEM †	38632-6	CDM400/V/O/PS/4K	M135/M128/O	12	*G, S, Clear, Vertical ±15° (391)	7	11 1/2	20,000	37,000	31,450	90	4000
			38635-9	CDM400/C/V/O/PS/4K	M135/M128/O	12	*G, S, Phos. Coated, Vertical ±15° (391)	7	11 1/2	20,000	34,000	28,900	90	3700

MasterColor Ceramic Metal Halide HPS-RetroWhite™

ED-18. Open or Enclosed Luminaires. Lifetime Color Stability Within ± 200K.

- Replace Yellow Light with White Light with just a Simple Twist.
- For Operation on HPS Ballasts.
- 85%+ Lumen Maintenance.
- No Shut Off Required in 24-hours a day/7-days a week operations (relamp fixtures at or before the end of rated life).
- Patent Pending Coil Design Offers Protection for Open Fixture Rating.

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated) (401)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
250	ED-18	Mog. †	38628-4	CDM250S50/V/O/4K	S50/O	12	*G, Clear, Vertical ±15° (374, 399)	5 3/4	9 3/4	20,000	22,500	19,125	90	4000
400	ED-18	Mog. †	38627-6	CDM400S51/V/O/4K	S51/O	12	*G, Clear, Vertical ±15° (374, 399)	5 3/4	9 3/4	20,000	36,000	30,600	90	4000

□ — Exclusive Philips Product

† — New Since Last Printing

V — Vertical Operation ±15°

EEM Extended Eyelet Mogul Base (EX39)

ANSI Code: O — Open Fixture Rated

E — Enclosed Fixture Rated

□ — Features ALTO® Lamp Technology

■ — High Color Rendering Lamps

Footnotes located on page 99

Metal Halide Lamps

General Information

- White light source offers improved color rendition over HPS and all dimmable down to 50%

Operating Position:

- /U Universal
- /BU Base up ±15° unless specified otherwise
- /BD Base down ±15° unless specified otherwise
- /HOR Horizontal

Explanation of suffix in ordering code (no suffix = clear, mogul base):

- /C Coated
- /M Medium Base
- /MP Protected

Descriptive symbols for Metal Halide Lamps:

- MH Metal Halide
- PS Pulse Start
- MS High Output Metal Halide
- MHT Safety Lifeguard Metal Halide

Pulse Start Metal Halide Lamps Enclosed Luminaires Only.

Pulse Start Metal Halide is Designed for Operation on Only Approved Ballasts with Metal Halide Pulse Ignitors. It Offers:

- Quicker Start/Restrike (2 Minute Start/4 Minute Restrike Vs. 4 Minute Start/15 Minute Restrike for Standard Metal Halide Lamps)
- Longer Life (15,000–20,000+ Hours)
- Improved Lumen Maintenance (20%) Increase
- Increased Efficacy (up to 120 LPW)

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs.(351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
175	ED-28	Mog.	27662-6	MS175/BU/PS	M137/E	12	★G, Base Up ±15° Pulse Start (372, 374, 391)	5	8¼	15,000	16,000	11,200	65	3900
250	ED-28	Mog.	27661-8	MS250/BU/PS	M138/E	12	★G, Base Up ±15° Pulse Start (372, 374, 391)	5	8¼	15,000	23,800	16,600	65	4000
320	ED-28	Mog. †	38381-0	MS320/U/PS	M132/E	12	★G, Clear Pulse Start (372, 374, 391)	5	8⅝	20,000	31,700	23,140	65	3900
			38386-9	MS320/C/U/PS	M132/E	12	★G, Phos. Coated Pulse Start (372, 374, 391)	N/A	8⅝	20,000	30,100	21,500	70	3600
350	ED-37	Mog. †	38387-7	MS350/BU/PS	M131/E	12	★G, Clear, Base Up ±15° Pulse Start (372, 374, 391)	7	11½	20,000	37,000	28,000	65	4000
			38385-5	MS350/C/BU/PS	M131/E	12	★G, Phos. Coated, Base Up ±15° Pulse Start (372, 374, 391)	7	11½	20,000	35,000	26,250	70	3700
400	ED-37	Mog.	27816-8	MS400/BU/PS	M135/ M128/S	12	★G, Clear Base Up ±15° Pulse Start (372, 374, 391) ▶	7	11½	20,000	44,000	31,000	66	3900
			28362-2	MS400/C/BU/PS	M135/ M128/S	12	★G, Phos. Coated Base Up ±15° Pulse Start (372, 374, 391) ▶	7	11½	20,000	41,600	29,120	70	3700
1000	BT-37	Mog. □	36019-8	MS1000/BU/ BT37/PS	M141/E	6	★G, Clear Base Up ±15° Pulse Start (372, 374, 391)	7	11½	15,000	120,000	96,000	65	3800

Protected Pulse Start Metal Halide Lamps BT-37. Open or Enclosed Luminaires.

Pulse Start Metal Halide is Designed for Operation on Only Approved Ballasts with Metal Halide Pulse Ignitors. It Offers:

- Quicker Start/Restrike (2 Minute Start/4 Minute Restrike Vs. 4 Minute Start/15 Minute Restrike for Standard Metal Halide Lamps)
- Longer Life (20,000+ Hours)
- Improved Lumen Maintenance (20%) Increase
- Increased Efficacy (up to 100 LPW)

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs.(351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
400	BT-37	EEM †	28931-4	MP400/BU/PS	M135/O	6	★G, Clear, Base Up ± 15° Pulse Start (372, 374, 391)	7	11½	20,000	40,000	28,000	65	3800
			29029-6	MP400/C/BU/PS	M135/O	6	★G, Phos. Coated, Base Up ±15° (372, 374, 391)	7	11½	20,000	37,000	24,050	68	3800

□ — Exclusive Philips Product

† — New Since Last Printing

▶ — Open luminaire if operated vertically ±15°

Footnotes located on page 99

ANSI Code: O — Open Fixture Rated

E — Enclosed Fixture Rated

S — Open or Enclosed Fixture Rated

Note: 400W Recommended for enclosed luminaires if operated other than vertical ±15°

Metal Halide Lamps

Metal Halide Lamps Enclosed Luminaires Only.

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. *	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs.(351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
150	ED-17	Med.	35462-1	MH150/U/M	M107/E	12	*G, Clear (372, 400)	3 1/16	5 1/16	10,000	12,500	8500	65	3700
			35463-9	MH150/C/U/M	M107/E	12	*G, Phos. Coated (372, 400)	N/A	5 1/16	10,000	12,000	7900	65	3400
175	ED-17	Med.	31358-5	MH175/U/M	M57/E	12	*G, Clear(372, 377, 385, 393)	3 1/16	5 1/16	10,000	13,500	9100	65	4000
			31359-3	MH175/C/U/M	M57/E	12	*G, Phos. Coated (372, 377, 385)	N/A	5 1/16	10,000	13,000	8380	65	3700
	ED-28	Mog.	28733-4	MH175/U	M57/E	12	*G, & St. Ltg., Clear (372, 377, 385, 393)	5	8 1/16	10,000	13,500	8775	65	4000
			28728-4	MH175/C/U	M57/E	12	*G, & St. Ltg., Phos. Coated (372, 377, 385, 393)	N/A	8 1/16	10,000	13,000	8200	70	3700
			31287-6	MH175/3K/BU	M57/E	12	*G, Base Up ±15° Phos. Coated (372, 374, 377)	N/A	8 1/4	10,000	12,000	7560	70	3200
			24725-4	MS175/BU	M57/E	12	*G, Base Up ±15° (372, 374, 377)	5	8 1/4	10,000	15,000	9400	65	4300
	POMB		28649-2	MS175/HOR	M57/E	12	*G, Hor. ±45° Clear (372, 374, 377)	5	8 1/4	10,000	15,000	9000	65	4300
			28650-0	MS175/C/HOR	M57/E	12	*G, Hor. ±45° Phos. Coated (372, 374, 377)	N/A	8 1/4	10,000	14,500	8400	70	4100
250	ED-28	Mog.	27484-5	MH250/U	M58/E	12	*G, & St. Ltg., Clear (372, 377, 393)	5	8 1/16	10,000	20,500	13,500	65	4000
			29169-0	MH250/C/U	M58/E	12	*G, & St. Ltg., Phos. Coated (372, 377, 393)	N/A	8 1/16	10,000	19,475	12,500	70	3700
			31137-3	MH250/3K/BU	M58/E	12	*G, Base Up ±15° Phos. Coated (372, 374, 377)	N/A	8 1/4	10,000	18,000	11,300	70	3200
	POMB		28652-6	MS250/HOR	M58/E	12	*G, S, Hor. ±45° Clear (372, 374, 377)	5	8 1/4	10,000	23,000	13,800	65	4300
			28654-2	MS250/C/HOR	M58/E	12	*G, Hor. ±45° Phos. Coated (372, 374, 377)	N/A	8 1/4	10,000	21,850	12,700	70	3800
	T-15	Mog.	33382-3	MH250/T15	M58/E	12	*G, Clear, (372, 374, 377, 385)	5 3/4	9 1/4	10,000	21,000	16,800	65	4000
400	ED-28	Mog.	27862-2	MH400/U/ED28	M59/E	12	*G, Clear (372, 377, 385, 393)	5	8 1/16	20,000	36,000	24,000	65	4000
			24673-6	MS400/BU/ED28	M59/E	12	*G, Clear Base Up ±15° (372, 374, 377)	5	8 1/16	20,000	40,000	26,000	65	4000
	ED-37	POMB	28655-9	MS400/HOR	M59/E	6	*G, S, Hor. ±45° Clear (372, 374, 377)	7	11 1/2	20,000	40,000	25,000	65	4300
			28656-7	MS400/C/HOR	M59/E	6	*G, Hor. ±45° Phos. Coated (372, 374, 377)	N/A	11 1/2	20,000	38,000	23,500	70	4100
	Mog.		34415-0	MH400/U	M59/S	6	*G, & St. Ltg., Clear (372, 377, 385, 393) ▽	7	11 1/2	20,000	36,000	24,000	65	4000
			34416-8	MH400/C/U	M59/S	6	*G, & St. Ltg., Phos. Coated (372, 377, 385, 393) ▽	N/A	11 1/2	20,000	34,200	22,300	70	3700
			31285-0	MH400/3K/U	M59/S	6	*G, Phos. Coated (372, 377, 385) ▽	N/A	11 1/2	20,000	33,000	20,800	70	3200
			30170-5	MS400/BU	M59/S	6	*High Efficacy, Base Up ±15° Clear (372, 374, 377) ▽	7	11 1/2	20,000	40,000	26,500	65	4000
			30172-1	MS400/C/BU	M59/S	6	*High Efficacy, Base Up ±15° Phos. Coat. (372, 374, 377) ▽	N/A	11 1/2	20,000	38,000	25,000	70	3700
			31135-7	MS400/3K/BU	M59/S	6	*G, Base Up ±15° Phos. Coated (372, 374, 377) ▽	N/A	11 1/2	20,000	36,000	22,700	70	3200
			T-15	Mog. □	23127-4	MH400/T15	M59/E	12	*G, Clear (372, 377, 385)	5 3/4	9 3/4	10,000	36,000	23,000

□ — Exclusive Philips Product

POMB Position Oriented Mogul Base

ANSI Code: E — Enclosed Fixture Rated

S — Open or Enclosed Fixture Rated

Note: 400W + 1000W Recommended for enclosed luminaires if operated other than vertical ±15°

Footnotes located on page 99

Metal Halide Lamps

Protected Metal Halide Lamps Open or Enclosed Luminaires.

LAMP OPERATING INSTRUCTIONS

- 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.
- 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.
- Use only in an enclosed fixture capable of withstanding particles of glass having temperatures up to 1000° C.
- Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
- Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
 - Operate lamp only within specified limits of operation.
 - For total supply load refer to ballast manufacturers electrical data.
- Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
- If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
- Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
- 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.
- Lamps may require 10 to 20 minutes to re-light if there is a power interruption.
- Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
- Do not use this lamp:
 - In a fixture that contains a Pulse Start metal halide ballast.
 - 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.** If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

Protected Metal Halide Lamps

- Protective Quartz Sleeve Surrounds the Arc Tube.
- MP Designation Indicates Lamps are Suitable for Open Fixture Applications.

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs.(351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
175	ED-28	EEM †	28119-6	MP175/BU	M57/O	12	*Base Up ±15° Clear (372, 374, 377)	5	8 5/16	10,000	15,000	12,000	65	3900
250	ED-28	EEM †	28124-6	MP250/BU	M58/O	12	*Base Up ±15° Clear (372, 374, 377)	5	8 5/16	10,000	22,000	16,500	65	3900
400	BT-37	EEM	28110-5	MP400/BU	M59/O	6	*Base Up ±15° Clear (372, 374, 377)	7	11 1/2	20,000	38,000	25,000	65	4000
			29080-9	MP400/C/BU	M59/O	6	*Base Up ±15° Phos. Coated (372, 374, 377)	7	11 1/2	20,000	36,000	23,800	65	4000
1000	BT-56	EEM †	28118-8	MP1000/BU	M47/O	6	*Base Up ±15° Clear (372, 374, 377)	9 1/2	15 3/8	12,000	107,000	75,000	65	3900

† — New Since Last Printing

EEM Extended Eyelet Mogul Base (EX39)

ANSI Code: O — Open Fixture Rated

Footnotes located on page 99

Metal Halide Lamps Reflector Style; Enclosed Luminaires

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
175	PAR 38▲ Med.	☐	30858-5	MH175/RFL	M57/E	6	*G, Clear, 65° Beam (372, 377)	N/A	5 13/16	7500	10,000 MBCP	N/A	65	4100
			31513-5	MH175/RSP	M57/E	6	*G, Clear, 16° Beam (372, 377)	N/A	5 13/16	7500	60,000 MBCP	N/A	65	4100
400	R 60	Mog. ☐	31973-1	MH400/RSP	M59/E	6	*G, Clear, 15° Beam (372, 377)	N/A	10 7/8	15,000	120,000 MBCP	N/A	65	3900

Double-Ended Metal Halide Lamps Enclosed Luminaires (387)

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
70	T-6	R7S	30350-3	MHN70/TD/840	M85/E	12	*G, Hor. ±15° (372, 374, 387, 391, 392)	N/A	4 1/4	6000	5500	4400	80	4200
150	T-7	R7S ☐	30355-2	MHN150/TD/840	M81/E	12	*G, Hor. ±15° (372, 374, 387, 391, 392)	N/A	5 1/8	12,000	11,250	7900	80	4200
1800	Special PSFc20-6 Sfc20-6		31360-1	MHD1800W	—	4	Sports Ltg. Spot Hor. ±15° (374, 387, 391)	4 1/4	14	4500	150,000	N/A	92	5600
			34301-2	MHD1800/HV	—	4	Sports Ltg. Spot Hor. ±15° (374, 387, 391)	4 1/4	14	4500	150,000	N/A	92	5600

Safety Lifeguard Metal Halide Lamps Open or Enclosed Luminaires.

Safety Lifeguard lamps are designed to reduce the danger of possible injury from shortwave ultraviolet radiation. The lamp will self-extinguish automatically within 15 minutes after the outer envelope is broken by any means, accidental or intentional.

These lamps are particularly suited for use in open luminaires where the outer envelope is vulnerable to breakage, and the risk of exposure to

ultraviolet radiation is present. However, the lamp's ability to self-extinguish does not protect against the danger of breakage itself. Accordingly, the users are advised to follow the good lamping practices noted in the Operating Instructions for Metal Halide Lamps.

In case of lamp failure, for safety and to preserve ballast life, turn off electric power and replace lamp promptly.

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
400	ED-37	Mog.	34598-3	MHT400/U	M59PJ-T400/U/S	6	*G & St. Ltg. Clear (372, 377, 364)	7	11 1/2	20,000	34,200	27,400	65	4000
			34601-5	MHT400/C/U	M59PK-T400/U/S	6	*G & St. Ltg. Phos. Coated (372, 377, 364)	N/A	11 1/2	20,000	32,500	25,000	65	3700
1000	BT-56	Mog.	23358-5	MHT1000/U(1)	M47PA-T1000/U/S	6	*G & St. Ltg. Clear (359, 372, 377)	9 1/2	15 3/8	12,000	104,500	83,600	65	3700

☐ — Exclusive Philips Product

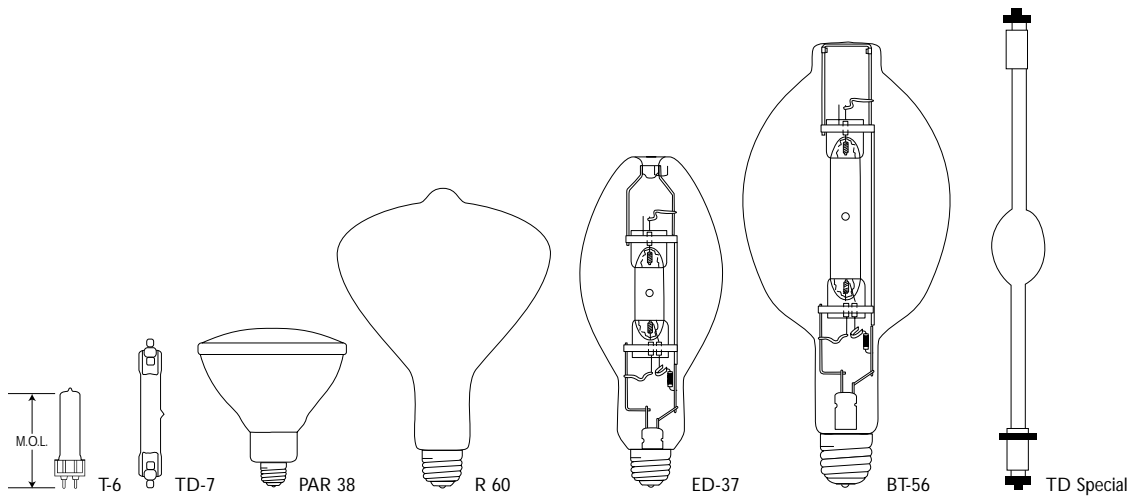
(1) — Recommended for enclosed luminaires if operated other than vertical ±15°

PAR 38▲ (One piece)

ANSI Code: E — Enclosed Fixture Rated
S — Open or Enclosed Fixture Rated

Note: 400W + 1000W Recommended for enclosed luminaires if operated other than vertical ±15°

Footnotes located on page 99



High Pressure Sodium Lamps

Ceramalux™ High Pressure Sodium Lamps

Explanation of suffix in ordering code
(no suffix = clear, mogul base, std. color):

- /C Comfort Color
- /D Diffuse Coated
- /LV Low Volt
- /M Medium Base

Descriptive symbols for High Pressure Sodium Lamps:

- G General
- W Wide Beam
- EW Econ-o-watt®
- S Street Lighting
- VW Very Wide Beam

Operating Position: Universal

White SON® High Pressure Sodium Lamp "Incandescent" Color Quality

- Excellent Color Rendition of 85 CRI
- Incandescent Color Appearance of 2700K
- Small Compact Source
- Long Life—10,000 Hours

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
50	T-10	PG-12	30229-9	SDW-T 50W/LV	S104AF-50	12	*G (360, 373, 376, 394)	3 3/16	5 7/8	10,000	2500	2125	85	2700
	ED-17	Med. ■	31344-5	SDW-50W/LV/D	S104	12	*G (360, 373, 376, 394)	N/A	5 7/16	10,000	2350	2000	85	2700
100	T-10	PG-12	30228-1	SDW-T 100W/LV	S105NZ-100	12	*G (360, 373, 376, 394)	3 3/16	5 7/8	10,000	5200	4430	85	2700
	ED-17	Med. ■	31346-0	SDW-100W/LV/D	S105	12	*G (360, 373, 376, 394)	N/A	5 7/16	10,000	4900	4170	85	2700

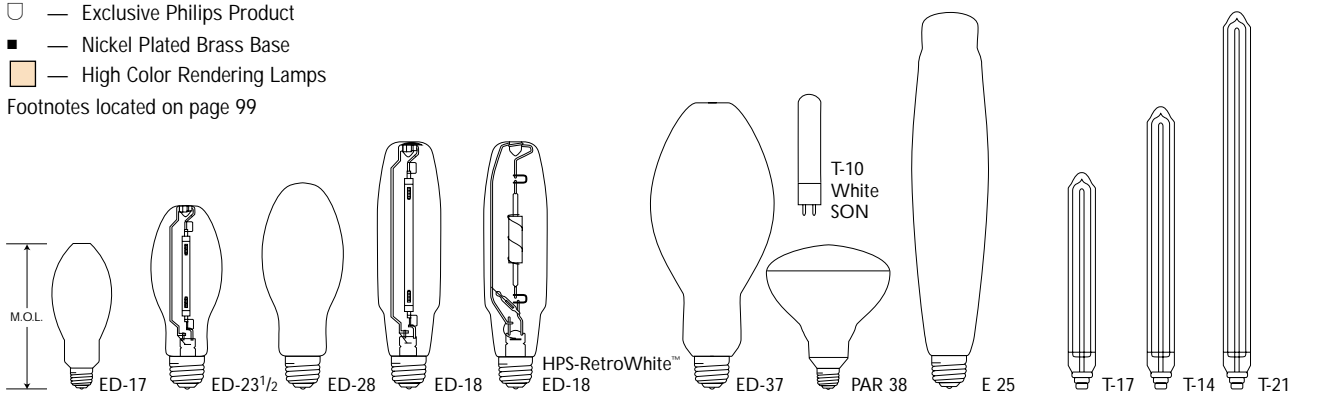
Ceramalux Comfort High Pressure Sodium Lamp Improved Color Rendering

- Improved Color Rendition of 65 CRI
- Warm White Color Appearance
- High Efficacy
- Operates on Standard HPS Ballasts

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
70	ED-17	Med. 52V	30617-5	C70S62/C/M	S62LG-70/C	12	*G (360, 373, 376)	3 3/16	5 7/16	15,000	4400	3960	60	2200
			30621-7	C70S62/C/D/M	S62LH-70/C	12	*G (360, 373, 376)	N/A	5 7/16	15,000	4180	3760	60	2200
	ED-23 1/2	Mog. 52V	30615-9	C70S62/C	S62ME-70/C	12	*G (360, 373, 376)	5	7 3/4	15,000	4400	3960	60	2200
100	ED-17	Med. 55V	30635-7	C100S54/C/M	S54SG-100/C	12	*G (360, 373, 376)	3 3/16	5 7/16	15,000	7300	6570	60	2200
			ED-23 1/2	Mog. 55V	30637-3	C100S54/C	S54SB-100/C	12	*G (360, 373, 376)	5	7 3/4	15,000	7300	6570
			30636-5	C100S54/C/D	S54MC-100/C	12	*G (360, 373, 376)	N/A	7 3/4	15,000	6940	6250	60	2200
150	ED-17	Med. 55V	30647-2	C150S55/C/M	S55RN-150/C	12	*G (360, 373, 376)	3 3/16	5 7/16	15,000	12,000	10,800	60	2200
			30644-9	C150S55/C/D/M	S55RP-150/C	12	*G (360, 373, 376)	N/A	5 7/16	15,000	11,000	9900	60	2200
	ED-23 1/2	Mog. 55V	30643-1	C150S55/C	S55SC-150/C	12	*G (360, 373, 376)	5	7 3/4	15,000	12,000	10,800	60	2200
250	ED-18	Mog. 100V	30245-5	C250S50/C	S50VA-250/C	12	*G (360, 373, 376)	5 3/4	9 3/4	15,000	23,000	20,700	65	2200
400	ED-18	Mog. 100V	30652-2	C400S51/C	S51WA-400/C	12	*G (360, 373, 376)	5 3/4	9 3/4	15,000	37,500	33,750	65	2200

- — Exclusive Philips Product
- — Nickel Plated Brass Base
- — High Color Rendering Lamps

Footnotes located on page 99



Ceramalux™ High Pressure Sodium Lamps featuring ALTO® Lamp Technology

- Low Total Cost of Ownership
- High Efficacy up to 140 LPW

- Long Life—Up to 24,000 hours
- ALTO Lamp Technology passes EPA's TCLP test for non-hazardous waste

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty.	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs.(351)	Approximate Lumens(352):			CCT (K)
											Initial	Mean(353)	CRI	
35	ED-17 52V	Med.	30632-4	C35S76/M	S76HA-35	12	*G (360, 373, 376)	3 1/16	5 7/16	24,000+	2250	2025	20	2100
			30633-2	C35S76/D/M	S76HB-35	12	*G (360, 373, 376)	N/A	5 7/16	24,000+	2150	1935	20	2100
50	ED-17 52V	Med.	30336-2	C50S68/M	S68LP-50	12	*G (360, 373, 376)	3 1/16	5 7/16	24,000+	4000	3600	21	2100
			30337-0	C50S68/D/M	S68LR-50	12	*G (360, 373, 376)	N/A	5 7/16	24,000+	3800	3420	21	2100
	ED-23 1/2 52V	Mog. †	36867-0	C50S68/ALTO	S68MS-50	12	*G, S (360, 373, 376)	5	7 3/4	24,000+	4000	3600	21	2100
			33154-6	C50S68/D/ALTO	S68MT-50	12	*G, S (360, 373, 376)	N/A	7 3/4	24,000+	3800	3420	21	2100
70	ED-17 52V	Med.	33192-6	C70S62/M	S62LG-70	12	*G (360, 373, 376)	3 1/16	5 7/16	24,000+	6300	5670	21	2100
			33214-8	C70S62/D/M	S62LH-70	12	*G (360, 373, 376)	N/A	5 7/16	24,000+	5860	5270	21	2100
	ED-23 1/2 52V	Mog. †	36869-6	C70S62/ALTO	S62ME-70	12	*G, S (360, 373, 376)	5	7 3/4	24,000+	6300	5670	21	2100
			33225-4	C70S62/D/ALTO	S62MF-70	12	*G, S (360, 373, 376)	N/A	7 3/4	24,000+	5860	5270	21	2100
	PAR 38 ▲	Med.	30620-9	C70S62/RFL	S62SL-70	12	*G, VW, 50 (360, 373)	N/A	5 13/16	16,000	4400	N/A	21	2100
100	ED-17 55V	Med.	34446-5	C100S54/M	S54SG-100	12	*G (360, 373, 376)	3 1/2	5 7/16	24,000+	9500	8550	21	2100
			34448-1	C100S54/D/M	S54SH-100	12	*G (360, 373, 376)	N/A	5 7/16	24,000+	8800	7920	21	2100
	ED-23 1/2 55V	Mog. †	36872-0	C100S54/ALTO	S54SB-100	12	*G, S (360, 373, 376)	5	7 3/4	24,000+	9500	8550	21	2100
			33227-0	C100S54/D/ALTO	S54MC-100	12	*G, S (360, 373, 376)	N/A	7 3/4	24,000+	8800	7920	21	2100
150	ED-17 55V	Med.	30347-9	C150S55/M	S55RN-150	12	*G (360, 373, 376)	3 1/2	5 7/16	24,000+	16,000	14,400	21	2100
			30348-7	C150S55/D/M	S55RP-150	12	*G (360, 373, 376)	N/A	5 7/16	24,000+	15,000	13,500	21	2100
	ED-23 1/2 55V	Mog. †	36874-6	C150S55/ALTO	S55SC-150	12	*G, S (360, 370, 373, 376)	5	7 3/4	24,000+	16,000	14,400	21	2100
			33228-8	C150S55/D/ALTO	S55MD-150	12	*G, S (360, 370, 373, 376)	N/A	7 3/4	24,000+	15,000	13,500	21	2100
	ED-28 100V	Mog. †	36876-1	C150S56/ALTO	S56SD-150	12	*G, S (360, 370, 373, 376)	5	8 15/16	24,000+	16,000	14,400	21	2100
200	ED-18 100V	Mog. †	36877-9	C200S66/ALTO	S66MN-200	12	*G, S (360, 373, 376)	5 3/4	9 3/4	24,000+	22,000	19,800	21	2100
225	ED-18 84V	Mog. \$	32291-7	C225S50/EW	S50	12	*EW, G, S (360, 373, 376)	5 3/4	9 3/4	24,000+	27,500	24,800	21	2100
250	ED-18 100V	Mog. †	36879-5	C250S50/ALTO	S50VA-250	12	*G, S (360, 373, 376)	5 3/4	9 3/4	24,000+	28,500	25,600	21	2100
			33171-0	C250S50/S	S50VA-250/S	12	*G, S, High Output (360, 373, 376)	5 3/4	9 3/4	24,000+	30,000	27,000	21	2100
	ED-28 100V	Mog.	33173-6	C250S50/D/ALTO	S50VC-250	12	*G, S (360, 373, 376)	N/A	8 5/16	24,000+	26,000	24,300	21	2100
310	ED-18 100V	Mog.	20226-7	C310S67	S67MR-310	12	*G, S (360, 373, 376)	5 3/4	9 3/4	24,000+	37,000	33,300	21	2100
360	ED-18 84V	Mog. \$	32292-5	C360S51/EW	S51	12	*EW, G, S (360, 373, 376)	5 3/4	9 3/4	24,000+	47,500	42,800	25	2100
400	ED-18 100V	Mog. †	36881-1	C400S51/ALTO	S51WA-400	12	*G, S (360, 373, 376)	5 3/4	9 3/4	24,000+	50,000	45,000	21	2100
	ED-37 100V	Mog.	34602-3	C400S51/D/ALTO	S51WB-400	6	*G, S (360, 373, 376)	N/A	11 1/2	24,000+	47,500	42,750	21	2100
430	ED-18	Mog.	31710-7	SON AGRO 430W	S51	12	*AGRO (360, 373, 389, 396)	5 3/4	9 3/4	16,000	53,000	47,700	21	2100
600	T-14	Mog. ■	23982-2	C600S106	S106	12	*G (360, 373, 376)	6 7/8	11 1/8	24,000+	90,000	81,000	21	2100
1000	ED-37 250V	Mog. ■	32386-5	C1000S52/ED37	S52	6	*G, S (360, 373, 376)	7	11 1/2	24,000+	125,000	112,000	21	2100
	E-25 250V	Mog. †	36883-7	C1000S52/ALTO	S52XB-1000	6	*G, S (359, 360, 362, 373, 376)	8 3/4	15 1/16	24,000+	140,000	126,000	21	2100

- \$ — Energy Saving Product
- † — New Since Last Printing
- — Nickel Plated Brass Base

- PAR 38 ▲ (One piece)
- — Features ALTO Lamp Technology
- Footnotes located on page 99

HIGH INTENSITY DISCHARGE LAMPS

High Pressure Sodium Lamps

MasterColor® Ceramic Metal Halide HPS-RetroWhite™ ED-18. Open or Enclosed Luminaires. Lifetime Color Stability Within ± 200K.

- Replace Yellow Light with White Light with just a Simple Twist.
- For Operation on HPS Ballasts.
- 85%+ Lumen Maintenance.
- No Shut Off Required in 24-hours a day/7-days a week operations (relamp fixtures at or before the end of rated life).
- Patent Pending Coil Design Offer Protection for Open Fixture Rating.

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated) (401)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs.(351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
250	ED-18	Mog. †	38628-4	CDM250S50/ V/O/4K	S50/O	12	*G, Clear, V (374, 399)	5 3/4	9 3/4	20,000	22,500	19,125	90	4000
400	ED-18	Mog. †	38627-6	CDM400S51/ V/O/4K	S51/O	12	*G, Clear, V (374, 399)	5 3/4	9 3/4	20,000	36,000	30,600	90	4000

Instant Restrike High Pressure Sodium Lamp

- Extra Arc Tube Offers Light Instantly After Momentary Power Interruption, and Will Provide 80% Light Output Within 1–2 Minutes
- For Applications Where Instant Restrike is not Required, Rated Lamp Life is 40,000 Hours
- Operates on Standard HPS Ballasts and Auxillary Equipment

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs.(351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
50	ED-23 1/2 52V	Mog. ■	35467-0	C50S68/2	S68	12	*G, S (360, 373, 376)	5	7 3/4	24,000+	3800	3450	21	2100
70	ED-23 1/2 52V	Mog. ■	26541-3	C70S62/2	S62	12	*G, S (360, 373, 376)	5	7 3/4	24,000+	5600	5050	21	2100
100	ED-23 1/2 55V	Mog. ■	26560-3	C100S54/2	S54	12	*G, S (360, 373, 376)	5	7 3/4	24,000+	9100	8190	21	2100
150	ED-23 1/2 55V	Mog. ■	26561-1	C150S55/2	S55	12	*G, S (360, 373, 376)	5	7 3/4	24,000+	15,600	14,000	21	2100
250	ED-18 100V	Mog. ■	37717-6	C250S50/2	S50VJ- 250	12	*G, S (360, 373, 376)	5 3/4	9 3/4	24,000+	27,500	24,750	21	2100
400	ED-18 100V	Mog. ■	37688-9	C400S51/2	S51WG- 400	12	*G, S (360, 373, 376)	5 3/4	9 3/4	24,000+	49,000	44,000	21	2100
1000	E-25 250V	Mog. ■	20412-3	C1000S52/2	S52	6	*G, S (360, 373, 376)	8 3/4	15 1/16	24,000+	140,000	126,000	21	2100

- † — New Since Last Printing
- — Exclusive Philips Product
- — Nickel Plated Brass Base
- V — Vertical Operation ±15°

- — High Color Rendering Lamps
- ANSI Code: O — Open Fixture Rated
- Footnotes located on page 99

Ceramalux™ RetroLux High Pressure Sodium Lamps

For Operation on All Mercury Vapor and Metal Halide Ballasts of Similar Wattage

- 150W retrofits 175 watt Mercury or Metal Halide
- 215W retrofits 250 watt Mercury or Metal Halide
- 360W retrofits 400 watt Mercury or Metal Halide

Operating Position: Universal

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
150	ED-28	Mog. \$	31142-3	C150S63/ RetroLux	S63	12	*G, S	5	8 ⁵ / ₁₆	24,000	15,000	13,500	25	1900
215	ED-28	Mog. \$	31144-9	C215S65/ RetroLux	S65	12	*G, S	5	8 ⁵ / ₁₆	24,000	23,000	20,700	25	1900
360	ED-37	Mog. \$	31145-6	C360S64/ RetroLux	S64	6	*G, S	7	11 ¹ / ₂	24,000	45,000	40,500	25	1900

Low Pressure Sodium Lamps — SOX

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
18	T-17	D.C. <input type="checkbox"/> Bay.	23404-7	SOX-E18	L69RA-18	12	Clear Base Up ± 110°	N/A	8 ¹ / ₂	14,000	1800	1800	N/A	1700
35	T-17	D.C. Bay.	32781-7	SOX35	L70RB-35	12	Clear Base Up ± 110°	N/A	12 ¹ / ₁₆	18,000	4800	4800	N/A	1700
55	T-17	D.C. Bay.	32151-3	SOX55	L71RC-55	12	Clear Base Up ± 110°	N/A	16 ³ / ₄	18,000	8000	8000	N/A	1700
90	T-21	D.C. Bay.	32152-1	SOX90	L72RD-90	12	Clear Hor. ± 20°	N/A	20 ³ / ₄	18,000	13,500	13,500	N/A	1700
135	T-21	D.C. <input type="checkbox"/> Bay.	32153-9	SOX135	L73RE-135	12	Clear Hor. ± 20°	N/A	30 ¹ / ₂	18,000	22,500	22,500	N/A	1700
180	T-21	D.C. <input type="checkbox"/> Bay.	32799-9	SOX180	L74RF-180	9	Clear Hor. ± 20°	N/A	44 ¹ / ₁₆	18,000	33,000	33,000	N/A	1700

- Exclusive Philips Product
- \$ — Energy Saving Product

Footnotes located on page 99

Mercury Vapor Lamps

Mercury Vapor Lamps

Lifeguard lamps with Weather Duty® bulbs, except as noted.
Lamps may be operated in any position.

Explanation of suffix in ordering code
(no suffix = clear, non-phosphor coated):

/DX Deluxe White
/M Medium Base

Descriptive symbols for Mercury Vapor Lamps:

B Black Light
FF Frosted Face
G General Lighting
K Kleen-Beam
RF Reflector Flood
RS Reflector Spot
SR Semi Reflector
S Street Lighting
PS PAR Spot
VW Very Wide
W Wide

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

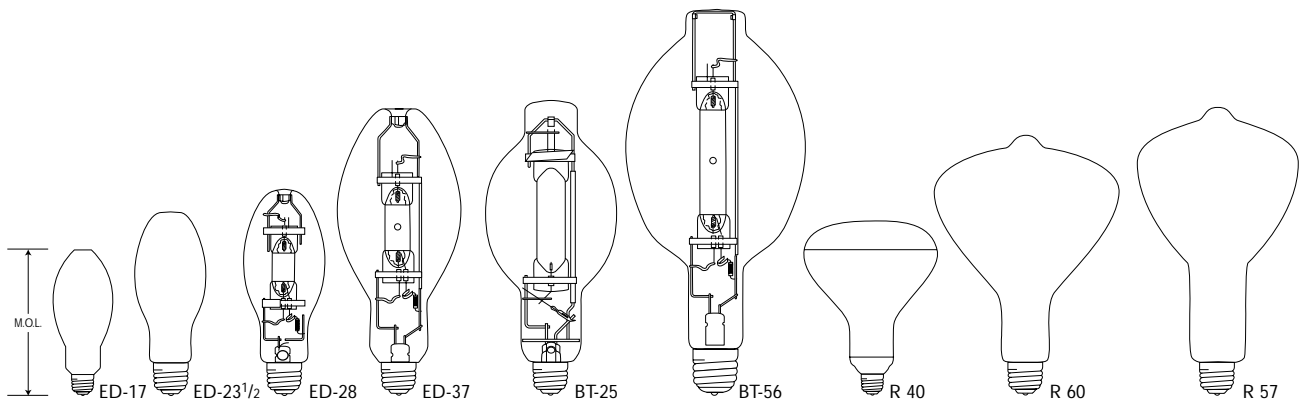
broken or punctured are commercially available."

See Safety Lifeguard Mercury Vapor Lamps for those applications where the lamps are to be used in luminaires to light areas where activities are conducted that can result in the outer envelope being broken or punctured and where prolonged exposure of a population confined to the area can occur.

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code (363)	Former Code(363) Trade Name	Pkg. Qty. •	Description	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs.(351)	Approximate Lumens(352):		CRI	CCT (K)		
											Initial	Mean(353)				
50	ED-17	Med.	35664-2	H46DL-40-50/DX	H46DL/DX	12	*G (379, 384)	N/A	5 1/8	24,000+	1580	1260	45	3200		
75	ED-17	Med.	27524-8	H43AV-75/DX	H43	12	*G, S (379)	N/A	5 7/16	24,000+	2800	2250	45	3200		
100	A-23	Med.	35658-4	H38MP-100/DX	H38-4MP/DX	24	*G (379)	N/A	5 7/16	24,000+	4300	3400	45	3700		
	ED-23 1/2	Mog.	33712-1	H38HT-100	H38-4HT	12	*G, S, B (355)	5	7 1/2	24,000+	4100	3450	20	7000		
			33713-9	H38JA-100/DX	H38-4JA/DX	12	*G, S (379)	N/A	7 1/2	24,000+	4400	3400	45	3700		
	R 40	Med	31947-5	H38BP-100/DX	H38BP/DX	12	*RF, FF, VW (379)	N/A	7 1/2	24,000+	2850	2300	45	3700		
175	ED-28	Mog.	31965-7	H39KB-175	H39-22KB	12	*G, S, B (355)	5	8 5/16	24,000+	7900	7400	20	6800		
			24805-4	H39KC-175/DX	H39-22KC/DX	12	*G, S (379)	N/A	8 5/16	24,000+	8500	7600	45	3700		
			28659-1	H39KC-175/DX	H39-22KC/DX	6	*G, S (379)	N/A	8 5/16	24,000+	8500	7600	45	3700		
	R 40	Med.	32258-6	H39BM-175	H39-22BM	12	*RF, FF, W	N/A	7 1/2	24,000+	6100	5150	20	6800		
			30105-1	H39BP-175/DX	H39-22BP/DX	12	*RF, FF, VW (379)	N/A	7 1/2	24,000+	5750	4800	45	3000		
250	ED-28	Mog.	31985-5	H37KB-250	H37-5KB	12	*G, S, B (355)	5	8 5/16	24,000+	12,100	10,500	20	6700		
			24814-6	H37KC-250/DX	H37-5KC/DX	12	*G, S (379)	N/A	8 5/16	24,000+	13,000	10,700	45	3700		
400	ED-37	Mog.	25205-6	H33CD-400	H33-1-CD	6	*G, S, B (355)	7	11 1/2	24,000+	21,000	18,900	20	6500		
			24842-7	H33GL-400/DX	H33-1-GL/DX	6	*G, S (379)	N/A	11 1/2	24,000+	23,000	19,100	45	3700		
	R 57	Mog.	35660-0	H33DN-400/DX	H33-1-DN/DX	6	*G, SR (379)	N/A	12 3/4	24,000+	23,000	19,100	45	3700		
			35661-8	H33FS-400/DX	H33-1-FS/DX	6	*K, FF, RF (379)	N/A	10 7/8	24,000+	15,500	12,400	45	3700		
700	BT-46	Mog.	35662-6	H35ND-700/DX	H35-18ND/DX	6	*G, S (379)	N/A	14 1/2	24,000+	43,000	33,600	45	3700		
1000	BT-56	Mog.	35659-2	H34GW-1000/DX	H34-12GW/DX	6	*G (359, 379)	N/A	15 3/8	16,000+	60,000	45,000	45	3700		
			Note —H34 Types are used INDOORS at 50°F or higher (and outdoors only in very mild climates). They are not electrically interchangeable with H36 lamps.													
			25107-4	H36GV-1000	H36-15GV	6	*G, S (359)	9 1/2	15 3/8	24,000+	57,500	48,400	20	6300		
39707-5	H36GW-1000/DX	H36-15GW/DX	6	*G, S (359, 379)	N/A	15 3/8	24,000+	63,000	47,500	45	3700					

Note—H36 Types are used both OUTDOORS and INDOORS. They are not electrically interchangeable with H34 lamps.

Footnotes located on page 99



Safety Lifeguard Mercury Vapor Lamps

Descriptive symbols for Mercury Vapor Lamps:

- G General Lighting
- S Street Lighting

Safety Lifeguard lamps are designed to reduce the danger of possible injury from shortwave ultraviolet radiation. The lamp will self-extinguish automatically within 15 minutes after the outer envelope is broken by any means, accidental or intentional.

These lamps are particularly suited for use in open luminaires where the outer envelope is vulnerable to breakage, and the risk of exposure to

ultraviolet radiation is present. However, the lamp's ability to self-extinguish does not protect against the danger of breakage itself. Accordingly, the users are advised to follow the good lamping practices noted in the Operating Instructions for Metal Halide Lamps.

In case of lamp failure, for safety and to preserve ballast life, turn off electrical power and replace lamp promptly.

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code (363)	Former Code(363) Trade Name	Pkg. Qty. •	Description	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
100	ED-23½	Mog.	33714-7	H38JA-T100/DX		12	*G, S (379)	N/A	7½	24,000+	3950	3060	45	3700
175	ED-28	Mog.	25269-2	H39KC-T175/DX		12	*G, S (379)	N/A	8⅝	24,000+	7700	6850	45	3700
250	ED-28	Mog.	38663-1	H37KC-T250/DX		12	*G, S (379)	N/A	8⅝	24,000+	11,700	9650	45	3700
400	ED-37	Mog.	25292-4	H33GL-T400/DX		6	*G, S (379)	N/A	11½	24,000+	20,700	17,200	45	3700
1000	BT-56	Mog.	20742-3	H36GW-T1000/DX		6	*G, S (359, 379)	N/A	15⅝	24,000+	56,700	42,800	45	3700

Self-Ballasted Mercury Vapor Lamps

To Order, Include Lamp Voltage

Lamp Watts	Bulb	Base	Product Number 046677-	Ordering Code	ANSI Code/ Ballast Ref.	Pkg. Qty. •	Description (Operating Position—Universal, unless otherwise indicated)	L.C.L. (In.)	M.O.L. (In.)	Rated Avg. Life Hrs. (351)	Approximate Lumens(352):		CRI	CCT (K)
											Initial	Mean(353)		
160	E-23	Med.	32059-8	S160E23/DX	B87YM-160	12	HG. Ltg. 120V Deluxe White (368, 382)	N/A	7	12,000	2800	2250	50	3300
250	E-28	Med.	33894-7	S250E28/DX/M	B94HM-250	12	HG. Ltg. 120V Deluxe White (368, 382, 383)	N/A	8½	12,000	5990	4790	50	3300
		Mog.	33899-6	S250E28/DX	B94HP-250	12	HG. Ltg. 120V Deluxe White(368, 382, 383)	N/A	8⅝	12,000	5990	4790	50	3300
450	BT-37	Mog.	38516-1	S450BT37/C		6	HG. Ltg. 230V Std. White (365, 367)	N/A	11½	16,000	9700	8300	50	3300
750	R 57	Mog.	29620-2	S750R57	B78YF-750	6	HG. Ltg. 120V—Refl. I.F. Base Up ±75° (368, 369)	N/A	12¾	16,000	14,000	N/A	40	4000
			36864-7	S750R57/C	B78YE-750	6	HG. Ltg. Semi-Refl. 250V—Std. White (365, 367)	N/A	12¾	16,000	17,300	N/A	50	3300

Footnotes located on page 99

Induction Lighting

The QL Induction Lighting System

QL induction lighting is based on a technology which is fundamentally different from that of incandescent lamps or today's conventional gas discharge lamps. Instead of the glowing filaments of incandescent lamps, or the electrodes used in conventional gas discharge lamps, light generation is by means of induction—the transmission of energy via a magnetic field—combined with a gas discharge.

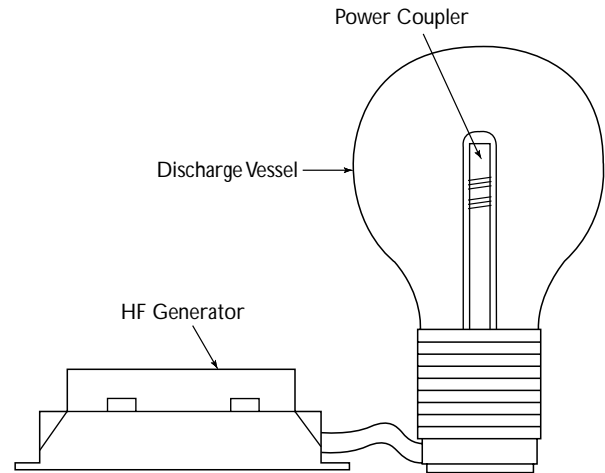
Induced Current In Lamp Bulb (Vessel)

In the QL induction lighting system, the energy source—equivalent to the primary coil of the transformer—is the lamp's induction coil, which is powered by the high-frequency electronics in the HF generator. The secondary coil is represented by the low-pressure gas and metal vapor inside the lamp bulb. The induced current causes the acceleration of charged particles in the metal vapor. These particles collide, resulting in excitation and ionization of the metal vapor atoms, and raising the energy level of the free electrons from these atoms to a higher, unstable state. As these excited electrons fall back to their stable, lower-energy state, they emit ultraviolet radiation. This falls on the fluorescent coating inside the lamp bulb, causing light to be emitted.

QL System Components

The QL lamp system consists of three main components (see illustration), each of which can be replaced separately if service is required.

- The vessel or discharge bulb is a closed glass bulb containing a low-pressure inert gas filling with a small amount of mercury vapor. The walls of the vessel are coated on the inside with a fluorescent powder of any of the modern three-line phosphor types, providing a choice of color temperatures. At present, the colors/830 (3000K) and /840 (4000K) are available. The discharge vessel is fixed to the power coupler by the plastic lamp cap with a click system. These two components normally never need to be disassembled, due to the ultra-long lifetime of the system.



- The power coupler transfers energy from the HF generator to the discharge inside the glass bulb, using an antenna that comprises the primary induction coil and its ferrite core. Other parts of the power coupler are a plastic support for the antenna, a 40 cm coaxial connecting cable carrying current from the HF generator, and a heat conducting rod with mounting flange. The mounting flange allows the QL lamp system to be mechanically attached to the luminaire, and removes waste heat to a heat sink which forms part of the luminaire.
- The HF generator produces the 2.65 MHz alternating current supply to the antenna.

QL Induction Lighting System Specifications

Watts	Product Number 046677-	Ordering Code	Pkg. Qty. •	Description	L.C.L. (In.)	M.O.L. (mm)	Rated Avg. Life Hrs.	Approximate Lumens		CRI	CCT (K)	
								Initial	Mean(353)			
55	<input type="checkbox"/>	27636-0	QL55W/S13	6	Generator, 120V	—	130◇	100,000	—	—	—	—
	<input type="checkbox"/>	26787-2	QL55W/S03	6	Generator, 240V	—	130◇	100,000	—	—	—	—
	<input type="checkbox"/>	27641-0	QL55W/PC	6	Power Coupler	—	131	100,000	—	—	—	—
	<input type="checkbox"/>	27643-6	QL55W/830	6	Discharge Vessel	—	140	100,000	3500	2800	80+	3000
	<input type="checkbox"/>	27657-6	QL55W/840	6	Discharge Vessel	—	140	100,000	3500	2800	80+	4000
85	<input type="checkbox"/>	24665-2	QL85W/S13	6	Generator, 120V	—	130◇	100,000	—	—	—	—
	<input type="checkbox"/>	22571-4	QL85W/S03	6	Generator, 240V	—	130◇	100,000	—	—	—	—
	<input type="checkbox"/>	24944-1	QL85W/PC	6	Power Coupler	—	162	100,000	—	—	—	—
	<input type="checkbox"/>	24945-8	QL85W/830	6	Discharge Vessel	—	180	100,000	6000	4800	80+	3000
	<input type="checkbox"/>	24946-6	QL85W/840	6	Discharge Vessel	—	180	100,000	6000	4800	80+	4000
165	<input type="checkbox"/>	37799-4	QL 165W/S01	6	Generator, 200/277V	—	178◇◇	100,000	—	—	—	—
	<input type="checkbox"/>	36916-5	QL 165W/PC	6	Power Coupler	—	185	100,000	—	—	—	—
	<input type="checkbox"/>	36917-3	QL 165W/830	6	Discharge Vessel	—	210	100,000	12,000	9600	80+	3000
	<input type="checkbox"/>	36918-1	QL 165W/840	6	Discharge Vessel	—	210	100,000	12,000	9600	80+	4000

Operating Position: **Universal**

Power Factor > .9

Total Harmonic Distortion (THD) < 10%

QL System Listings: **UL, CSA, FCC Class A**

Note: QL System requires all three components to operate (order 3 product numbers)

Vessel maximum diameter: 55W=85mm; 85W=111mm; 165W=131mm

◇ Generator dimensions: L=130mm, W=103mm, H=41.5mm

◇◇ Generator dimensions: L=178mm, W=161mm, H=50mm

— Exclusive Philips Product

Footnotes located on page 99

Because of frequent improvements, the values listed may not be current ratings. For design purposes, obtain ratings from current Product Bulletins.

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

★ Heat resisting glass bulb.

G = General Lighting, S = Street Lighting

▲ PAR 38 (One Piece)

■ Nickel plated brass base.

(351) Rated average life is the life obtained, on the 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 lamps with a rated average life of 24,000 hours, life is based on survival of 67% of the lamps.

(352) Valves for vertical operation of lamp.

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

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

(356) Opaque coating on reflecting section of bulb.

(357) Protect bulb from moisture when used in base down position.

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

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

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

(363) These ordering codes generally conform to the designation system of the American National Standards Institute (ANSI).

(364) Rated life: Vertical $\pm 30^\circ$ 20,000 hours; other positions, 15,000 hours.

(365) Supply voltage must be held to ± 10 volts of rated lamp voltage.

(367) Lamps will start down to -10°F .

(368) Supply voltage must be held to ± 5 volts of rated lamp voltage.

(369) Lamps will start down to 0°F .

(370) C150S55 and C150S56 lamps are not electrically interchangeable. Different ballasts are required for the proper operation of each lamp type. ANSI type S55 ballast is for the 55-volt (normal) lamp and the ANSI type S56 ballast is for the 100 volt (nominal) lamp.

(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 degrees 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 1500°W .

(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.

(382) Though made of heat-resistant glass, breakage may result if moisture falls on bulb. Use in well ventilated housing.

(383) For indoor and outdoor use: if outdoors, in base down operation, lamp should be protected by a fully enclosed fixture, adequately ventilated. In base up operation, lamp can be used in open face fixture, 40° below horizontal. All fixtures should protect the lamp and wiring from water and corrosive atmospheric gases. The fixture, holder or shield should provide adequate ventilation near the socket and base of the lamp.

(384) For 40-watt operation use H45 ballast.

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

(385) Rated life: Vertical $\pm 15^\circ$. 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 400W S51 ballasts.

(390) Where instant restrike is not required, rated lamp life is 40,000+ hours.

(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 $\pm 5\%$ of rated ballast line volts for reactor type and $\pm 10\%$ 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.

(395) Lamp color may change temporarily if the lamp is subjected to excessive vibration or shock.

(396) UV filtered design (Fade-Block™).

(397) The circuit must include an overcurrent protection device, i.e. thermo-switched ballast.

(398) Rated Life: Vertical operation = 10,000 hours, Horizontal = 12,000 hours.

(399) Passes EPA tests (TCLP) for mercury, lead non-hazardous waste levels.

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

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

Standard Metal Halide Lamps Enclosed Fixtures Only. Open Fixture Use Restricted to Base Up $\pm 15^\circ$ (Base Down $\pm 15^\circ$)

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.

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.

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-7 days/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:

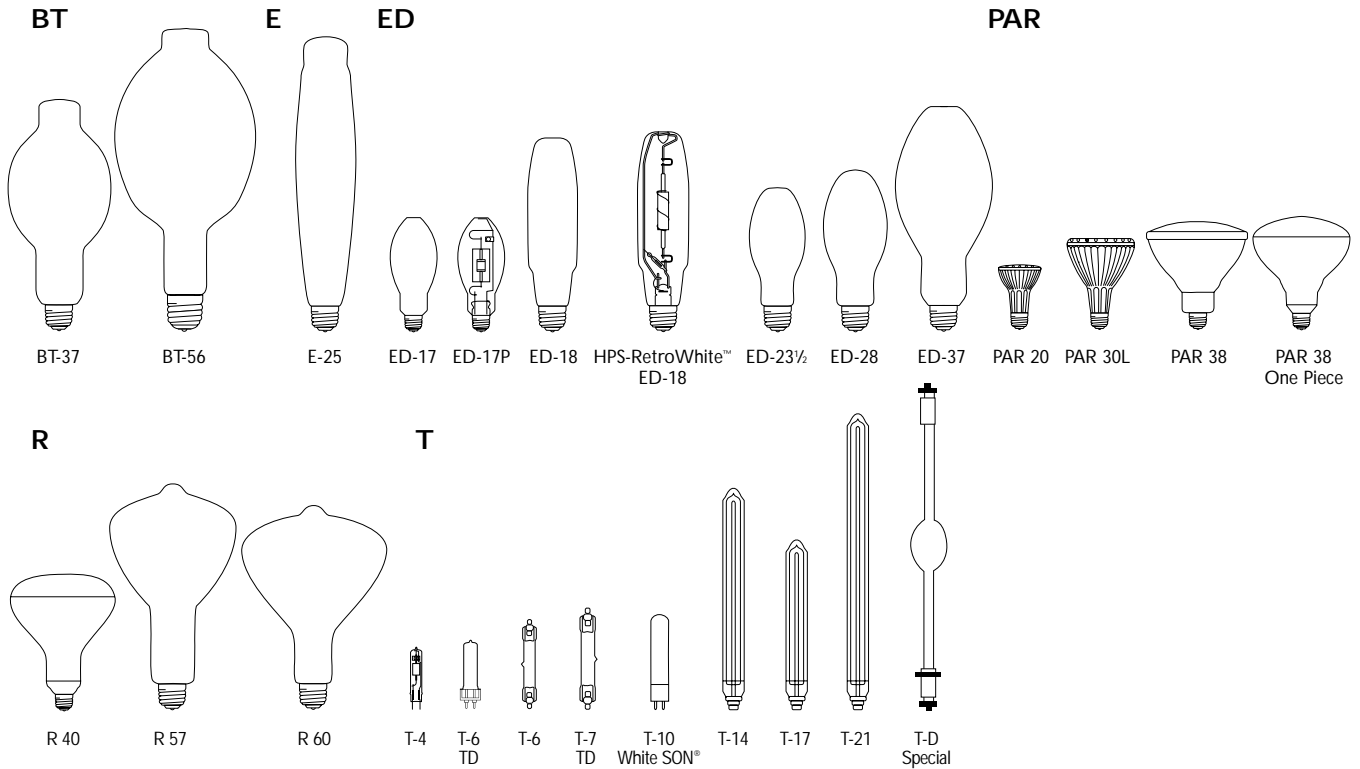
A. In a fixture that contains a Pulse Start metal halide ballast.

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. If such a rupture were to happen, THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.

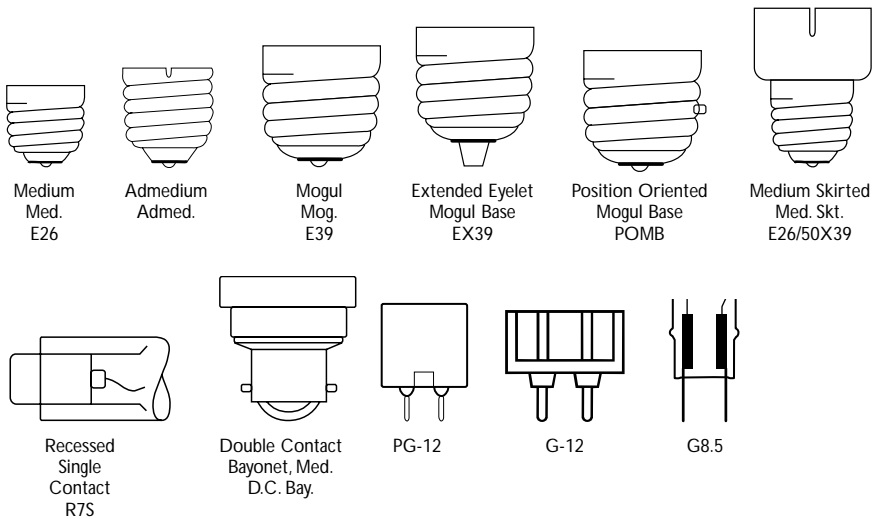
High Intensity Discharge Lamp Base Types and Bulb Shapes

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, "T-17" indicates a tubular shaped bulb having a diameter of 2 1/8 inches. The following illustrations show some of the more popular bulb shapes and sizes.



Base Types (Not Actual Sizes)



Metal Halide Lamps Ordering Code Cross Reference Guide

Philips	General Electric	Osram/Sylvania	Venture	ANSI
Metal Halide	Multi-Vapor	Metalarc	N/A	
N/C	MXR32/C/VBD/O	N/C	N/C	M100
N/C	MXR32/C/VBU/O	N/C	N/C	M100
CDM35/T6/830	CMH39/T/U/830/G12	MC39T6/U/G12/830	N/C	M130
CMH35/TC/830	CMH39/TC/U/830/G8.5	N/C	N/C	M130
CDM35/PAR20/M/SP (10°)	N/C	MCP39PAR20/U/830/SP (10°)	N/C	M130
CDM35/PAR20/M/FL (30°)	N/C	MCP39PAR20/U/830/FL (30°)	N/C	M130
N/C	CMH39/PAR20/830/SP10 (10°)	N/C	N/C	M130
N/C	CMH39/PAR20/830/FL25 (25°)	N/C	N/C	M130
CDM35/PAR30L/M/SP (10°)	CMH39PAR30L/SP10 (10°)	MPD39PAR30LN/U/830/SP (12°)	N/C	M130
CDM35/PAR30L/M/SP (10°)	CMH39PAR30L/SP10 (10°)	MCP39PAR30LN/U/830/SP (10°)	N/C	M130
N/C	CMH39PAR30L/SP15 (15°)	N/C	N/C	M130
CDM35/PAR30L/M/FL (30°)	CMH39PAR30L/FL25 (25°)	MPD39PAR30LN/U/830/FL (35°)	N/C	M130
CDM35/PAR30L/M/FL (30°)	CMH39PAR30L/FL25 (25°)	MCP39PAR30LN/U/830/FL (30°)	N/C	M130
MHC50/U/M/3K	N/C	N/C	N/C	M148/M110
MHC50/C/U/M/3K	N/C	N/C	N/C	M148/M110
MHC50/U/M/4K	N/C	N/C	N/C	M148/M110
MHC50/C/U/M/4K	N/C	N/C	N/C	M148/M110
MHC50/U/MP/3K	N/C	N/C	N/C	M148/M110
MHC50/U/MP/4K	N/C	N/C	N/C	M148/M110
N/C	MXR50/U/MED	N/C	N/C	M110
N/C	MXR50/C/U/MED	N/C	N/C	M110
N/C	MVR50/U/MED	N/C	N/C	M110
N/C	MVR50/C/U/MED	N/C	N/C	M110
N/C	MXR50/U/MED/O	N/C	N/C	M110
N/C	MXR50/C/U/MED/O	N/C	N/C	M110
N/C	N/C	N/C	MH50W/U	M110
N/C	N/C	N/C	MH50W/C/U	M110
N/C	N/C	MP50/U/MED	MP50W/U/3K	M110
N/C	N/C	MP50/C/U/MED	MP50W/C/U/3K	M110
N/C	N/C	N/C	MP50W/U/UVS	M110
N/C	N/C	N/C	MP50W/C/U/UVS	M110
CDM70/T6/830	N/C	MC70T6/U/G12/830	N/C	M139
CDM70/T6/942	N/C	N/C	N/C	M139
CDM70/TD/830	N/C	N/C	N/C	M139
CDM70/TD/942	N/C	N/C	N/C	M139
N/C	CMH70/T/U/830/G12	N/C	N/C	M85/M98/M13
N/C	CMH70/T/U/942/G12	N/C	N/C	M85/M98/M139
CDM70/TC/830	CMH70/TC/U/830/G8.5	N/C	N/C	M98/M139
N/C	CMH70/TD/830/RX7S	N/C	N/C	M85/M98/M139
N/C	CMH70/TD/942/RX7S	N/C	N/C	M85/M98/M139
N/C	ARC70/TD/730/R7S	N/C	N/C	M85
MHN70/TD/840	ARC70/TD/942/R7S	N/C	N/C	M85
N/C	N/C	M70T6/DE	N/C	M85
N/C	N/C	HQI-DE 70W/WDX	N/C	M85
N/C	N/C	HQI-DE 70W/NDX	N/C	M85
N/C	N/C	HQI-DE 70W/WDX-E	N/C	M85
N/C	N/C	HQI-SE 70/WDX	N/C	M85
CDM70/PAR30L/M/SP (10°)	CMH70/U/PAR30L/15 (15°)	MPD70PAR30LN/U/830/SP (12°)	N/C	M98/M143
CDM70/PAR30L/M/SP (10°)	CMH70/U/PAR30L/15 (15°)	MCP70PAR30LN/U/830/SP (12°)	N/C	M98/M139/M143
CDM70PAR30L/M/FL (40°)	CMH70/U/PAR30L/40 (40°)	MPD70PAR30LN/U/830/FL (35°)	N/C	M98/M143
CDM70PAR30L/M/FL (40°)	CMH70/U/PAR30L/40 (40°)	MCP70PAR30LN/U/830/FL (30°)	N/C	M98/M139/M143
CDM70/PAR38/SP/3K (15°)	N/C	MCP70PAR38/U/830/SP (15°)	N/C	M98/M139/M143
CDM70/PAR38/FL/3K (25°)	N/C	MCP70PAR38/U/830/FL (25°)	N/C	M98/M139/M143
CDM70/PAR38/WFL/3K (60°)	N/C	MCP70PAR38/U/830/WFL (60°)	N/C	M98/M139/M143
N/C	CMH70/PAR38/830/SP15 (15°)	N/C	N/C	M98/M139
N/C	CMH70/PAR38/830/FL25 (25°)	N/C	N/C	M98/M139
N/C	CMH70/PAR38/830/WFL	N/C	N/C	M98/M139
CDM70/PAR38/SP/4K (15°)	N/C	N/C	N/C	M98/M143
CDM70/PAR38/FL/4K (25°)	N/C	N/C	N/C	M98/M143
CDM70/PAR38/WFL/4K (60°)	N/C	N/C	N/C	M98/M143
N/C	N/C	MP70PAR38/U/SP20/ECO (20°)	MP70W/U/PAR38/3K/20 (20°)	M98/M143
N/C	N/C	MP70PAR38/U/FL35/ECO (35°)	MP70W/U/PAR38/3K/35 (35°)	M98/M143
N/C	N/C	MP70PAR38/U/VWFL65/ECO (65°)	MP70W/U/PAR38/3K/65 (65°)	M98/M143
N/C	N/C	N/C	MP70W/U/PAR56/3K/10 (10°)	M98/M143
N/C	N/C	N/C	MP70W/U/PAR64/3K/25 (25°)	M98/M143
MHC70/U/M/3K	CMH70/U/830/MED	N/C	N/C	M98/M143
MHC70/C/U/M/3K	CMH70/C/U/830/MED	N/C	N/C	M98/M143
MHC70/U/M/4K	N/C	N/C	N/C	M98/M143
MHC70/C/U/M/4K	N/C	N/C	N/C	M98/M143
MHC70/U/MP/3K	CMH70/U/830/MED/O	N/C	N/C	M98/M143
MHC70/C/U/MP/3K	CMH70/C/U/830/MED/O	N/C	N/C	M98/M143
MHC70/U/MP/4K	N/C	N/C	N/C	M98/M143

Metal Halide Lamps Ordering Code Cross Reference Guide, continued

Philips	General Electric	Osram/Sylvania	Venture	ANSI
MHC70/C/U/MP/4K	N/C	N/C	N/C	M98/M143
N/C	MXR70/U/MED/O	MP70/U/MED	MP70W/U/3K	M98/M143
N/C	MXR70/C/U/MED/O	MP70/C/U/MED	MP70W/C/U/3K	M98/M143
N/C	MXR70/U/MED	N/C	MH70W/U/3K	M98/M143
N/C	MXR70/C/U/MED	N/C	MH70W/C/U/3K	M98/M143
N/C	MVR70/U/MED	N/C	MH70W/U	M98/M143
N/C	MVR70/C/U/MED	N/C	MH70W/C/U	M98/M143
N/C	MXR70/U/PAR/SP (12°)	N/C	N/C	M98/M143
N/C	MXR70/U/PAR/FL (40°)	N/C	N/C	M98/M143
N/C	MXR70/U/PAR/WFL (60°)	N/C	N/C	M98/M143
N/C	N/C	N/C	MH70W/U/ED28	M98/M143
N/C	N/C	N/C	MP70W/U	M98/M143
N/C	N/C	N/C	MP70W/C/U	M98/M143
N/C	N/C	N/C	MP70W/C/U/27K	M98/M143
N/C	N/C	N/C	MP70W/C/U/ED28/3K	M98/M143
N/C	N/C	N/C	MP70W/U/UVS	M98/M143
N/C	N/C	N/C	MP70W/C/U/UVS	M98/M143
N/C	N/C	N/C	MH70W/U/R40/70 (70°)	M98/M143
N/C	N/C	N/C	MH70W/U/R40/15 (15°)	M98/M143
N/C	N/C	N/C	HIT 70W/G12/UVS/3K	M85/M98
N/C	N/C	N/C	HIT 70W/G12/UVS/4K	M85/M98
N/C	N/C	N/C	MH-DE 70W/UVS/3K	M85/M98
N/C	N/C	N/C	MH-DE 70W/UVS/4K	M85/M98
CDM100/PAR38/SP/3K (15°)	N/C	MCP100PAR38/U/830/SP (15°)	N/C	M90/M140
CDM100/PAR38/FL/3K (25°)	N/C	MCP100PAR38/U/830/FL (25°)	N/C	M90/M140
CDM100/PAR38/WFL/3K (60°)	N/C	MCP100PAR38/U/830/WFL (60°)	N/C	M90/M140
N/C	CMH100/PAR38/830/SP15 (15°)	N/C	N/C	M90/M140
N/C	CMH100/PAR38/830/FL25 (25°)	N/C	N/C	M90/M140
N/C	CMH100/PAR38/830/WFL	N/C	N/C	M90/M140
CDM100/PAR38/SP/4K (15°)	N/C	N/C	N/C	M90/M140
CDM100/PAR38/FL/4K (25°)	N/C	N/C	N/C	M90/M140
CDM100/PAR38/WFL/4K (60°)	N/C	N/C	N/C	M90/M140
N/C	N/C	MP100PAR38/U/SP20/ECO (20°)	N/C	M90/M140
N/C	N/C	MP100PAR38/U/FL35/ECO (35°)	N/C	M90/M140
N/C	N/C	MP100PAR38/U/WFL65/ECO (65°)	N/C	M90/M140
N/C	MXR100/U/PAR/SP (12°)	N/C	MP100W/U/PAR38/3K/20 (20°)	M90/M140
N/C	MXR100/U/PAR/FL (40°)	N/C	MP100W/U/PAR38/3K/35 (35°)	M90/M140
N/C	MXR100/U/PAR/WFL (65°)	N/C	MP100W/U/PAR38/3K/65 (65°)	M90/M140
N/C	N/C	N/C	MP100W/U/PAR56/3K/10 (10°)	M90/M140
N/C	N/C	N/C	MP100W/U/PAR56/3K/22 (22°)	M90/M140
N/C	N/C	N/C	MP100W/U/PAR64/3K/10 (10°)	M90/M140
MHC100/U/M/3K	CMH100/U/830/MED	N/C	N/C	M90/M140
MHC100/C/U/M/3K	CMH100/C/U/830/MED	N/C	N/C	M90/M140
MHC100/U/M/4K	N/C	N/C	N/C	M90/M140
MHC100/C/U/M/4K	N/C	N/C	N/C	M90/M140
MHC100/U/MP/3K	CMH100/U/830/MED/O	MPD100/U/MED/830	N/C	M90/M140
MHC100/U/MP/3K	CMH100/U/830/MED/O	MCP100/U/MED/830	N/C	M90/M140
MHC100/C/U/MP/3K	CMH100/C/U/830/MED/O	MPD100/C/U/MED/830	N/C	M90/M140
MHC100/C/U/MP/3K	CMH100/C/U/830/MED/O	MCP100/C/U/MED/830	N/C	M90/M140
MHC100/U/MP/4K	N/C	MPD100/U/MED/840	N/C	M90/M140
MHC100/C/U/MP/4K	N/C	MPD100/C/U/MED/840	N/C	M90/M140
N/C	MXR100/U/MED/O	MPD100/U/MED	MP100W/U/3K	M90/M140
N/C	MXR100/C/U/MED/O	MPD100/C/U/MED	MP100W/C/U/3K	M90/M140
N/C	MXR100/U/MED	N/C	MH100W/U/3K	M90/M140
N/C	MXR100/C/U/MED	N/C	MH100W/C/U/3K	M90/M140
N/C	MVR100/U/MED	N/C	MH100W/U	M90/M140
N/C	MVR100/C/U/MED	N/C	MH100W/C/U	M90/M140
N/C	N/C	N/C	MP100W/U	M90/M140
N/C	N/C	N/C	MP100W/C/U	M90/M140
N/C	N/C	N/C	MH100W/U/ED28	M90/M140
N/C	N/C	N/C	MH100W/C/U/ED28	M90/M140
N/C	N/C	N/C	MP100W/C/U/27K	M90/M140
N/C	N/C	N/C	MP100W/C/U/ED28/3K	M90/M140
N/C	N/C	N/C	MP100W/U/UVS	M90/M140
N/C	N/C	N/C	MP100W/C/U/UVS	M90/M140
N/C	N/C	N/C	MH100W/R40/70 (70°)	M90/M140
N/C	N/C	N/C	MH100W/R40/15 (15°)	M90/M140
N/C	N/C	N/C	HIT 100W/G12/UVS/4K	M90
CDM150/T6/830	N/C	MC150T6/U/G12/830	N/C	M142
CDM150/T6/942	N/C	N/C	N/C	M142
CDM150/TD/830	N/C	N/C	N/C	M142
CDM150/TD/942	N/C	N/C	N/C	M142
N/C	CMH150/TD/830/RX7S	HQI-DE 150/WDX	N/C	M81
N/C	CMH150/TD/942/RX7S	N/C	N/C	M81

Metal Halide Lamps Ordering Code Cross Reference Guide, continued

Philips	General Electric	Osram/Sylvania	Venture	ANSI
N/C	CMH150/T/U/830/G12	HQI-SE 150/WDX	N/C	M81
N/C	CMH150/T/U/942/G12	HQI-SE 150/NDX	N/C	M81
N/C	ARC150/TD/730/R7S	N/C	N/C	M81
MHN150/TD/840	ARC150/TD/742/R7S	N/C	N/C	M81
N/C	CSS150/CAP/50	N/C	N/C	M81
N/C	ARC150/T/U/830/G12	N/C	N/C	M81
N/C	ARC150/T/U/840/G12	N/C	N/C	M81
N/C	MBI150/PAR64/30M (13°)	N/C	N/C	M81
N/C	MBI150/PAR64/30N (3°)	N/C	N/C	M81
N/C	N/C	M150T7/DE	N/C	M81
N/C	N/C	HQI-DE 150/NDX	N/C	M81
N/C	N/C	HQI-R 150/NDX/FO	N/C	M81
MH150/U/M	N/C	N/C	MH150W/U/EM	M107
MH150/C/U/M	N/C	N/C	MH150W/C/U/EM	M107
MHC150/U/M/4K	N/C	N/C	N/C	M102/M142
MHC150/C/U/M/4K	N/C	N/C	N/C	M102/M142
MHC150/U/MP/4K	N/C	N/C	N/C	M102/M142
MHC150/C/U/MP/4K	N/C	N/C	N/C	M102/M142
N/C	MXR150/U/MED/O	N/C	N/C	M102
N/C	MXR150/C/U/MED/O	N/C	N/C	M102
N/C	MXR150/U/MED	N/C	N/C	M102
N/C	MXR150/C/U/MED	N/C	MH150W/C/U/PS/3K	M102
N/C	MVR150/U/MED	N/C	MH150W/U/PS	M102
N/C	MVR150/C/U/MED	N/C	MH150W/C/U/PS	M102
N/C	MVR150/U/WM	N/C	MH150W/U/ED28/EM	M57
N/C	MVR150/C/U/WM	N/C	MH150W/C/U/ED28/EM	M57
N/C	N/C	MPD150/U/MED/840	N/C	M102
N/C	N/C	MPD150/C/U/MED/840	N/C	M102
N/C	N/C	MP150PAR38/U/SP20/ECO (20°)	N/C	M102
N/C	N/C	MP150PAR38/U/FL35/ECO (35°)	N/C	M102
N/C	N/C	MP150PAR38/U/VWFL65/ECO (65°)	N/C	M102
N/C	N/C	MP150/U/MED	N/C	M102
N/C	N/C	MP150/C/U/MED	N/C	M102
N/C	N/C	N/C	MH150W/U/ED28/PS	M102
N/C	N/C	N/C	MH150W/C/U/ED28/PS	M102
N/C	N/C	N/C	MP150W/U/PS	M102
N/C	N/C	N/C	MP150W/C/U/PS	M102
N/C	N/C	N/C	MP150W/U/PS/3K	M102
N/C	N/C	N/C	MP150W/C/U/PS/3K	M102
N/C	N/C	N/C	MP150W/C/U/PS/27K	M102
N/C	N/C	N/C	MP150W/U/ED28/PS	M102
N/C	N/C	N/C	MP150W/C/U/ED28/PS	M102
N/C	N/C	N/C	MP150W/U/UVS/PS	M102
N/C	N/C	N/C	MP150W/C/U/UVS/PS	M102
N/C	N/C	N/C	MP150W/U/ED28/UVS/PS	M102
N/C	N/C	N/C	MP150W/C/U/ED28/UVS/PS	M102
N/C	N/C	N/C	MP150W/U/PAR56/3K/15 (15°)	M102
N/C	N/C	N/C	MP150W/U/PAR56/3K/30 (30°)	M102
N/C	N/C	N/C	MP150W/U/PAR64/3K/15 (15°)	M102
N/C	N/C	N/C	MP150W/U/PAR64/3K/30 (30°)	M102
N/C	N/C	N/C	MH-DE 150W/UVS/BDX (Blue)	M81
N/C	N/C	N/C	MH-DE 150W/UVS/GDX (Green)	M81
N/C	N/C	N/C	MH-DE 150W/UVS/3K	M81/M102
N/C	N/C	N/C	MH-DE 150W/UVS/4K	M81/M102
N/C	N/C	N/C	HIT 150W/G12/UVS/3K	M81/M102
N/C	N/C	N/C	HIT 150W/G12/UVS/4K	M81/M102
MS175/BU/PS	N/C	N/C	MS175W/BU/PS	M137
N/C	N/C	N/C	MS175W/C/BU/PS	M137
N/C	N/C	MP175/BU-ONLY/MED	N/C	M57
MP175/BU	N/C	MP175/BU-ONLY	N/C	M57
N/C	N/C	MP175/C/BU-ONLY	N/C	M57
MH175/RFL (65°)	MVR175/PAR38FL/1 (50°)	N/C	N/C	M57
MH175/RSP (16°)	N/C	N/C	N/C	M57
MH175/U/M	MVR175/U/MED	M175/U/MED	MH175W/U/MED	M57
MH175/C/U/M	MVR175/C/U/MED	M175/C/U/MED	MH175W/C/U/MED	M57
MH175/U	MVR175/U	N/C	MH175W/U	M57
MH175/C/U	MVR175/C/U	N/C	MH175W/C/U	M57
N/C	N/C	N/C	MH175W/U/5K	M57
MH175/3K/BU	N/C	M175/3K/BU-ONLY	N/C	M57
MS175/BU	N/C	N/C	MS175W/BU	M57
N/C	N/C	N/C	MS175W/C/BU	M57
MS175/HOR	MVR175/HOR	MS175/HOR	MS175W/HOR	M57
MS175/C/HOR	MVR175/C/HOR	MS175/C/HOR	MS175W/C/HOR	M57
N/C	N/C	N/C	MS175W/C/HOR/3K	M57
N/C	N/C	M175/U	N/C	M57

Metal Halide Lamps Ordering Code Cross Reference Guide, continued

Philips	General Electric	Osram/Sylvania	Venture	ANSI
N/C	N/C	M175/C/U	N/C	M57
N/C	MXR175/VBU/PA	N/C	N/C	M57
N/C	MXR175/C/VBU/PA	N/C	N/C	M57
N/C	MVR175/VBU/PA	N/C	N/C	M57
N/C	MVR175/C/VBU/PA	N/C	N/C	M57
N/C	MVR175/VBU/MED/PA	N/C	N/C	M57
N/C	MVR175/C/VBU/MED/PA	N/C	N/C	M57
N/C	MVR175/SP30/U	N/C	N/C	M57
N/C	MXR175/VBD	N/C	N/C	M57
N/C	MXR175/VBU	N/C	N/C	M57
N/C	MXR175/C/VBU	N/C	N/C	M57
N/C	N/C	N/C	MS175W/BU/MED/PS	M57
N/C	N/C	N/C	MS175W/C/BU/MED/PS	M57
N/C	N/C	N/C	MH175W/U/T15	M57
N/C	N/C	N/C	MS175W/BU/3K	M57
N/C	N/C	N/C	MS175W/C/BU/3K	M57
N/C	N/C	N/C	MS175W/BU/MED	M57
N/C	N/C	N/C	MS175W/C/BU/MED/3K	M57
N/C	N/C	N/C	MH175W/U/MED/BDX (Blue)	M57
N/C	N/C	N/C	MH175W/U/MED/GDX (Green)	M57
N/C	N/C	N/C	MH175W/U/MED/ADX (Aqua)	M57
N/C	N/C	N/C	MH175W/U/BDX (Blue)	M57
N/C	N/C	N/C	MH175W/U/GDX (Green)	M57
N/C	N/C	N/C	MH175W/U/R40/70 (70°)	M57
N/C	N/C	N/C	MH175W/U/R40/15 (15°)	M57
N/C	N/C	N/C	MS200W/BU/MED/PS	M136
N/C	N/C	N/C	MS200W/C/BU/MED/PS	M136
N/C	N/C	N/C	MH200W/U/PS	M136
N/C	N/C	N/C	MH200W/C/U/PS	M136
N/C	N/C	N/C	MP200W/V/PS	M136
N/C	N/C	N/C	MP200W/C/V/PS	M136
N/C	N/C	N/C	MP200W/C/V/PS/3K	M136
N/C	N/C	N/C	MP200W/V/UVS/PS	M136
N/C	N/C	N/C	MP200W/C/V/UVS/PS	M136
N/C	N/C	N/C	N/C	S50
MS250/BU/PS	N/C	MS250/PS/BU-ONLY	MH250W/HBU/PS	M138
N/C	N/C	MS250/C/PS/BU-ONLY	MH250W/C/HBU/PS	M138
N/C	N/C	N/C	MH250W/HBD/PS	M138
N/C	N/C	N/C	MH250W/C/HBD/PS	M138
N/C	N/C	N/C	MP250W/BU/PS	M138
N/C	N/C	N/C	MP250W/C/BU/PS	M138
MP250/BU	N/C	MP250/BU-ONLY	N/C	M58
N/C	N/C	MP250/C/BU-ONLY	N/C	M58
MH250/U	MVR250/U	M250/U	MH250W/U	M58
MH250/C/U	MVR250/C/U	M250/C/U	MH250W/C/U	M58
N/C	N/C	N/C	MH250W/U/5K	M58
MH250/3K/BU	N/C	M250/3K/BU-ONLY	MS250W/BU/3K	M58
N/C	N/C	N/C	MS250W/C/BU/3K	M58
N/C	MVR250/SP30/U	N/C	N/C	M58
MS250/HOR	MVR250/HOR	MS250/HOR	MS250W/HOR	M58
MS250/C/HOR	MVR250/C/HOR	MS250/C/HOR	MS250W/C/HOR	M58
N/C	N/C	MS250/3K/HOR	MS250W/HOR/3K	M58
N/C	N/C	N/C	MS250W/C/HOR/3K	M58
MH250/T15	N/C	M250/E/ET-18	MH250W/U/T15	M58
N/C	N/C	N/C	MS250W/BU	M58
N/C	N/C	N/C	MS250W/C/BU	M58
N/C	MVR250/VBU/PA	N/C	N/C	M58
N/C	MVR250/C/VBU/PA	N/C	N/C	M58
N/C	N/C	N/C	MH250W/C/U/LU	S50
N/C	MVR250/VBU/R	N/C	MS250W/BU/LU	S50
CDM250S50/V/O/4K	MVR250/C/VBU/R	N/C	MS250W/C/BU/LU	S50
N/C	N/C	N/C	MPI250W/BU/LU	S50
N/C	N/C	N/C	MPI250W/C/BU/LU	S50
N/C	ARC250/T/H/960/E39	N/C	N/C	M80
N/C	N/C	HQI-DE 250/NDX	N/C	M80
N/C	N/C	HQI-DE 250/DX	N/C	M80
N/C	N/C	HQI-SE 250/DX	N/C	M80
N/C	N/C	N/C	MH250W/U/BDX (Blue)	M58
N/C	N/C	N/C	MH250W/U/GDX (Green)	M58
N/C	N/C	N/C	MH250W/U/ADX (Aqua)	M58
N/C	N/C	N/C	MH250/HOR/T15	M58
N/C	N/C	N/C	MS250W/HOR/T15/3K	M58
N/C	N/C	N/C	MH250W/U/PAR64/20	M58
N/C	N/C	N/C	MH-DE 250W/3K/Fc2	M80
N/C	N/C	N/C	MH-DE 250W/4K/Fc2	M80

Metal Halide Lamps Ordering Code Cross Reference Guide, continued

Philips	General Electric	Osram/Sylvania	Venture	ANSI
N/C	N/C	N/C	MH-DE 250W/4K/RSC	M80
MS320/U/PS	N/C	MS320/PS/BU-ONLY	N/C	M132
MS320/C/U/PS	N/C	MS320/C/PS/BU-ONLY	N/C	M132
N/C	MVR320/VBU/PA	N/C	N/C	M132
N/C	MVR320/C/VBU/PA	N/C	N/C	M132
MS320/U/PS	N/C	N/C	MH320W/U/ED28/PS	M132
MS320/C/U/PS	N/C	N/C	MH320W/C/U/ED28/PS	M132
N/C	MVR320/VBU/XHO/PA	N/C	MS320W/BU/ED28/PS	M132
N/C	MVR320/C/VBU/XHO/PA	N/C	MS320W/C/BU/ED28/PS	M132
N/C	MPR320/VBU/XHO/PA	N/C	N/C	M132
N/C	MPR320/C/VBU/XHO/PA	N/C	N/C	M132
N/C	N/C	MP320/350/PS/BU-ONLY/BT28	N/C	M131/M132
N/C	N/C	MP320/350/C/PS/BU-ONLY/BT28	N/C	M131/M132
N/C	N/C	N/C	MH320W/U/ED37/PS	M132
N/C	N/C	N/C	MH320W/C/U/ED37/PS	M132
N/C	N/C	N/C	MH320W/BU/ED28/PS	M132
N/C	N/C	N/C	MH320W/C/BU/ED28/PS	M132
N/C	N/C	N/C	MH320W/BU/ED37/PS	M132
N/C	N/C	N/C	MH320W/C/BU/ED37/PS	M132
N/C	N/C	N/C	MH320W/BU/ED28/UVS/PS	M132
N/C	N/C	N/C	MH320W/C/BU/ED28/UVS/PS	M132
N/C	MVR325/I/U/WM	N/C	N/C	H33
N/C	MVR325/C/I/U/WM	N/C	N/C	H33
MS350/BU/PS	N/C	N/C	N/C	M131
MS350/C/BU/PS	N/C	N/C	N/C	M131
N/C	N/C	N/C	MH350W/U/PS	M131
N/C	N/C	N/C	MH350W/C/U/PS	M131
N/C	N/C	N/C	MH350W/C/U/PS/3K	M131
N/C	N/C	N/C	MH350W/U/ED28/PS	M131
N/C	N/C	N/C	MH350W/C/U/ED28/PS	M131
N/C	N/C	N/C	MH350W/C/U/ED28/PS/3K	M131
N/C	MVR350/VBU/XHO/PA	N/C	MP350W/V/PS	M131
N/C	MVR350/C/VBU/XHO/PA	N/C	MP350W/C/V/PS	M131
N/C	N/C	MP350/400/PS/BU-ONLY	N/C	M131/M135
N/C	N/C	MP350/400/C/PS/BU-ONLY	N/C	M131/M135
N/C	N/C	N/C	MP350W/C/V/PS/3K	M131
N/C	N/C	N/C	MP350W/V/ED28/PS	M131
N/C	N/C	N/C	MP350W/C/V/ED28/PS	M131
N/C	N/C	N/C	MP350W/C/V/ED28/PS/3K	M131
N/C	N/C	N/C	MP350W/V/UVS/PS	M131
N/C	N/C	N/C	MP350W/C/V/UVS/PS	M131
N/C	MVR360/VBU/WM/HO	MS360/SS/BU-HOR	MS360W/BU/EM	M59
N/C	MVR360/C/VBU/WM/HO	MS360/C/SS/BU-HOR	MS360W/C/BU/EM	M59
N/C	MVR360/VBU/WM/XHO	N/C	N/C	M59
N/C	MVR360/C/VBU/WM/XHO	N/C	N/C	M59
N/C	MPR360/VBU/WM/O	MSP360/SS/BU-ONLY	N/C	M59
N/C	MVR360/VBU/STB/WM	N/C	N/C	M59
N/C	MVR360/C/VBU/STB/WM	N/C	N/C	M59
N/C	N/C	MSP360/C/SS/BU-ONLY	N/C	M59
N/C	N/C	N/C	MS360W/BU/ED28/EM	M59
N/C	N/C	N/C	MS360W/C/BU/ED28/EM	M59
N/C	N/C	N/C	MS360W/HOR/EM	M59
N/C	N/C	N/C	MPI360W/C/BU/EM	M59
CDM400S51/V/O/4K	N/C	N/C	N/C	S51
CDM400/V/O/PS/4K	N/C	N/C	N/C	M135/M128
CDM400/C/V/O/PS/4K	N/C	N/C	N/C	M135/M128
MS400/BU/PS	N/C	MS400/PS/BU-ONLY	MS400W/BU/PS	M135
MS400/C/BU/PS	N/C	MS400/C/PS/BU-ONLY	MS400W/C/BU/PS	M135
N/C	MVR400/VBU/PA	N/C	N/C	M59/M128/M135
N/C	MVR400/C/VBU/PA	N/C	N/C	M59/M128/M135
N/C	MVR400/VBU/HO/PA	N/C	N/C	M128/M135
N/C	MVR400/C/VBU/HO/PA	N/C	N/C	M128/M135
N/C	N/C	N/C	MH400W/HBU/PS	M135
N/C	N/C	N/C	MH400W/C/HBU/PS	M135
N/C	N/C	N/C	MH400W/HBD/PS	M135
N/C	N/C	N/C	MH400W/HBU/ED28/PS	M135
N/C	N/C	N/C	MH400W/HBD/ED28/PS	M135
N/C	N/C	N/C	MP400W/BU/PS	M135
N/C	N/C	N/C	MP400W/C/BU/PS	M135
N/C	N/C	N/C	MP400W/BU/ED28/PS	M135
N/C	N/C	N/C	MP400W/C/BU/ED28/PS	M135
N/C	N/C	N/C	MP400W/BU/UVS/PS	M135
N/C	N/C	N/C	MP400W/C/BU/UVS/PS	M135
MP400/BU	N/C	MP400/BU-ONLY	MPI400W/BU	M59
N/C	N/C	MP400/BD-ONLY	N/C	M59

Metal Halide Lamps Ordering Code Cross Reference Guide, continued

Philips	General Electric	Osram/Sylvania	Venture	ANSI
MP400/C/BU	N/C	MP400/C/BU-ONLY	MPI400W/C/BU	M59
N/C	MPR400/VBU/O	N/C	N/C	M59
N/C	MPR400/C/VBU/O	N/C	N/C	M59
MH400/RSP (15°)	N/C	N/C	N/C	M59
MH400/U/ED28	MVR400/U/ED28	M400/U/BT-28	MH400W/U/ED28	M59
N/C	MVR400/C/U/ED28	M400/C/U/BT-28	MH400W/C/U/ED28	M59
N/C	MVR400/VBU/ED28/PA	N/C	N/C	M135
N/C	MVR400/C/VBU/ED28/PA	N/C	N/C	M135
N/C	N/C	N/C	MH400W/U/ED28/5K	M59
N/C	MVR400/VBU/STB/HO	N/C	N/C	M59
N/C	MVR400/C/VBU/STB/HO	N/C	N/C	M59
MS400/BU/ED28	MVR400/VBU/BT28	MS400/BU-ONLY/BT-28	MS400W/BU/ED28	M59
N/C	N/C	N/C	MS400W/C/BU/ED28	M59
N/C	N/C	N/C	MS400W/C/BU/ED28/3K	M59
MS400/HOR	MVR400/HOR/MOG	MS400/HOR/BT-28	N/C	M59
MS400/C/HOR	MVR400/C/HOR/MOG	MS400/C/HOR/BT-28	N/C	M59
N/C	MVR400/HOR/BT28	N/C	N/C	M59
N/C	N/C	MS400/HOR	MS400W/HOR	M59
N/C	N/C	MS400/C/HOR	MS400W/C/HOR	M59
N/C	N/C	MS400/3K/HOR	MS400W/HOR/3K	M59
N/C	N/C	N/C	MS400W/C/HOR/3K	M59
N/C	N/C	N/C	MS400W/HOR/ED28	M59
N/C	N/C	N/C	MS400W/C/HOR/ED28	M59
N/C	N/C	N/C	MS400W/C/HOR/ED28/3K	M59
MH400/U	MVR400/U	M400/U	MH400W/U	M59
MH400/C/U	MVR400/C/U	M400/C/U	MH400W/C/U	M59
MH400/3K/U	MVR400/SP30/U	N/C	N/C	M59
N/C	N/C	N/C	MH400W/U/5K	M59
MS400/BU	MVR400/VBU	MS400/BU-ONLY	MS400W/BU	M59
MS400/C/BU	MVR400/C/VBU	MS400/C/BU-ONLY	MS400W/C/BU	M59
MS400/3K/BU	N/C	MS400/3K/BU-ONLY	MS400W/BU/3K	M59
N/C	N/C	N/C	MS400W/C/BU/3K	M59
N/C	MVR400/VBD	MS400/BD-ONLY	N/C	M59
N/C	MVR400/SP30U/VBU	N/C	N/C	M59
N/C	MVR400/VBU/XHO	N/C	N/C	M59
N/C	MVR400/C/VBU/XHO	N/C	N/C	M59
MP400/BU/PS	N/C	N/C	N/C	M135
MP400/C/BU/PS	N/C	N/C	N/C	M135
N/C	MPR400/VBU/XHO/PA	N/C	N/C	M135
N/C	MPR400/C/VBU/XHO/PA	N/C	N/C	M135
MH400/T15	N/C	M400/U/ET18	N/C	M59
N/C	N/C	N/C	MH400W/HBU/T15	M59
N/C	N/C	N/C	MH400W/HBD/T15	M59
N/C	N/C	N/C	MS400W/HOR/T15	M59
N/C	N/C	N/C	MS400W/HOR/T15/3K	M59
MHT400/U	MVT400/VBU	N/C	N/C	M59
MHT400/C/U	MVT400/C/VBU	N/C	N/C	M59
N/C	MVT400/I/U	N/C	N/C	H33 or M59
N/C	MVT400/C/I/U	N/C	N/C	H33 or M59
N/C	N/C	MT400/BU-ONLY	N/C	M59
N/C	N/C	MT400/C/BU-ONLY	N/C	M59
N/C	MVR400/U/ED28/R	N/C	MH400W/U/LU/ED28	S51
N/C	MVR400/VBU/R	N/C	N/C	S51
CDM400S51/V/O/4K	MVR400/C/VBU/R	N/C	N/C	S51
CDM400/V/O/PS/4K	N/C	N/C	N/C	M135/M128
CDM400/C/V/O/PS/4K	N/C	N/C	N/C	M135/M128
N/C	N/C	HQI-SE 400/DX	N/C	S51
N/C	N/C	N/C	MS400W/BU/LU	S51
N/C	N/C	N/C	MS400W/C/BU/LU	S51
N/C	N/C	N/C	MPI400W/BU/LU	S51
N/C	N/C	N/C	MPI400W/C/BU/LU	S51
N/C	MVR400/I/U	N/C	N/C	H33 or M59
N/C	MVR400/C/I/U	N/C	N/C	H33 or M59
N/C	KRC400/T/H/960/E39	N/C	N/C	M59/M135
N/C	N/C	N/C	MH400W/U/BDX (Blue)	M59
N/C	N/C	N/C	MH400W/U/GDX (Green)	M59
N/C	N/C	N/C	MH400W/U/ADX (Aqua)	M59
N/C	N/C	N/C	MH400W/U/PDX (Pink)	M59
N/C	N/C	N/C	MH400W/U/PAR64/30 (30°)	M59
N/C	N/C	N/C	MS450W/BU/PS	M144
N/C	N/C	N/C	MS450W/C/BU/PS	M144
N/C	N/C	N/C	MP450W/BU/PS	M144
N/C	N/C	N/C	MP450W/C/BU/PS	M144
N/C	MVR750/VBU/PA	N/C	N/C	M149
N/C	MVR750/C/VBU/PA	N/C	N/C	M149
N/C	N/C	N/C	MH750W/U/LU/BT37	S111
N/C	N/C	N/C	MS750W/BU/LU/BT37	S111

Metal Halide Lamps Ordering Code Cross Reference Guide, continued

Philips	General Electric	Osram/Sylvania	Venture	ANSI
N/C	MVR950/I/VBU	N/C	N/C	H36 or M47
MS1000/BU/BT37/PS	N/C	N/C	N/C	M141
MP1000/BU	N/C	N/C	N/C	M47
N/C	N/C	MP1000/BU-ONLY	N/C	M47
N/C	N/C	MP1000/C/BU-ONLY	N/C	M47
MH1000/U/BT37	N/C	M1000/U/BT-37	N/C	M47
N/C	MVR1000/U/BT37	N/C	MH1000W/U/BT37	M47
MH1000/U	MVR1000/U	M1000/U	MH1000W/U	M47
MH1000/C/U	MVR1000/C/U	M1000/C/U	MH1000W/C/U	M47
N/C	N/C	N/C	MH1000W/U/5K	M47
MS1000/BU	MVR1000/VBU	MS1000/BU-ONLY	MS1000W/BU	M47
MS1000/BD	N/C	MS1000/BD-ONLY	MS1000W/BD	M47
MS1000/C/BU	MVR1000/C/VBU	MS1000/C/BU-ONLY	MS1000W/C/BU	M47
N/C	N/C	N/C	MS1000W/BU/BT37	M47
MHT1000/U	N/C	MT1000/BU-ONLY	N/C	M47
N/C	SPL1000/PAR64/840/G38 (6°)	N/C	N/C	Non-ANSI Spec
N/C	SPL1000/PAR64/840/HR/G38 (6°)	N/C	N/C	Non-ANSI Spec
N/C	N/C	M1000T7/DE	N/C	N/A
N/C	N/C	N/C	MS1000W/HOR/BT37	M47
N/C	N/C	N/C	MS1000W/HOR/SPORT60	M47
N/C	N/C	N/C	MS1000W/HOR/T25	M47
N/C	N/C	N/C	MH1000W/U/BDX (Blue)	M47
N/C	N/C	N/C	MH1000W/U/GDX (Green)	M47
N/C	N/C	N/C	MH1000W/U/ADX (Aqua)	M47
N/C	N/C	N/C	MH1000W/U/PDX (Pink)	M47
MH1500/BU	MVR1500/HBU	M1500/BU-HOR	MH1500W/HBU	M48
MH1500/BD	MVR1500/HBD	M1500/BD	MH1500W/HBD	M48
N/C	MVR1500/HOR	N/C	N/C	M48
N/C	N/C	N/C	MH1500W/U/XL	M48
N/C	SPL1500/L/H/652.RX7SM	N/C	N/C	M48/M133
N/C	N/C	M1500T7/DE	N/C	N/A
N/C	N/C	M1500T8/DE	N/C	M133
N/C	N/C	N/C	MS1500W/HOR/XP/SPORT60	M48
N/C	MVR1650/HOR	N/C	MS1650W/HOR/XP/SPORT60	M112
MHD1800W	N/C	N/C	N/C	N/A
MHD1800/HV	N/C	N/C	N/C	N/A
N/C	N/C	M2000T8/DE	N/C	N/A
N/C	N/C	M2000T9/DE	N/C	M134
N/C	N/C	HQI-DE 2000W/D/S	N/C	N/A
N/C	N/C	N/C	MH-DE 2000W/4K/1	M134

**Single-Ended & Double-Ended Metal Halide Lamps
Ordering Code Cross Reference Guide**

Philips	General Electric	Osram/Sylvania	Venture	ANSI
CDM35/T6/830	CMH39/T/U/830/G12	MD39T6/U/G12/830	N/C	M130PO-REM J
CDM35/TC/830	CMH39/TC/U/830/G8.5	N/C	N/C	M130PO-REM J
CDM70/T6/830	N/C	MD70T6/U/G12/830	N/C	M139PO-REM J
CDM70/T6/942	N/C	N/C	N/C	M139PO-REM J
N/C	CMH70/T/U/830/G12	N/C	N/C	M85/M98
N/C	CMH70/T/U/942/G12	N/C	N/C	M85/M98
CMH70/TC/830	CMH70/TC/U/830/G8.5	N/C	N/C	M98/M139
N/C	N/C	HQI-SE 70/WDX	N/C	M85
N/C	N/C	N/C	HIT 70W/G12/UVS/3K	M85/M98
N/C	N/C	N/C	HIT 70W/G12/UVS/4K	M85/M98
CDM70/TD/830	N/C	N/C	N/C	M139CD-REN J
CDM70/TD/942	N/C	N/C	N/C	M139CD-REN J
N/C	CMH70/TD/830/RX7S	N/C	N/C	M85/M98
N/C	CMH70/TD/942/RX7S	N/C	N/C	M85/M98
N/C	ARC70/TD/730/R7S	N/C	N/C	M85
MHN70/TD/840	ARC70/TD/942/R7S	N/C	N/C	M85
N/C	N/C	M70T6/DE	MH-DE 70W/UVS/3K	M85/M98
N/C	N/C	N/C	MH-DE 70W/UVS/4K	M85/M98
N/C	N/C	HQI-DE 70/WDX	N/C	M85
N/C	N/C	HQI-DE 70/NDX	N/C	M85
N/C	N/C	HQI-DE 70/WDX-E	N/C	M85
N/C	N/C	N/C	HIT 100W/G12/UVS/4K	M90
CDM150/T6/830	N/C	MD150T6/U/G12/830	N/C	M142PP-REN J
CDM150/T6/942	N/C	N/C	N/C	M142PP-REN J
N/C	CMH150/T/U/830/G12	HQI-SE 150/WDX	N/C	M81/M102

HIGH INTENSITY DISCHARGE LAMPS

**Single-Ended & Double-Ended Metal Halide Lamps
Ordering Code Cross Reference Guide, continued**

Philips	General Electric	Osram/Sylvania	Venture	ANSI
N/C	CMH150/T/U/942/G12	HQI-SE 150/NDX	N/C	M81/M102
N/C	ARC150/T/U/830/G12	N/C	N/C	M81
N/C	ARC150/T/U/942/G12	N/C	N/C	M81
N/C	N/C	N/C	HIT 150W/G12/UVS/3K	M81/M102
N/C	N/C	N/C	HIT 150W/G12/UVS/4K	M81/M102
CDM150/TD/830	N/C	N/C	N/C	M142AJ-REXJ
CDM150/TD/942	N/C	N/C	N/C	M142AJ-REXJ
N/C	CMH150/TD/830/RX7S	HQI-DE 150/WDX	N/C	M81/M102
N/C	CMH150/TD/942/RX7S	N/C	N/C	M81/M102
N/C	ARC150/TD/730/R7S	N/C	N/C	M81
MHN150/TD/840	ARC150/TD/742/R7S	N/C	N/C	M81
N/C	N/C	M150T7/DE	N/C	M81
N/C	N/C	HQI-DE 150/NDX	N/C	M81
N/C	N/C	N/C	MH-DE 150W/UVS/3K	M81/M102
N/C	N/C	N/C	MH-DE 150W/UVS/4K	M81/M102
N/C	N/C	N/C	MH-DE 150W/UVS/BDX	M81
N/C	N/C	N/C	MH-DE 150W/UVS/GDX	M81
N/C	ARC250/T/H/960/E39	N/C	N/C	M80
N/C	N/C	HQI-SE 250/DX	N/C	M80
N/C	N/C	HQI-DE 250/NDX	N/C	M80
N/C	N/C	HQI-DE 250/DX	N/C	M80
N/C	N/C	N/C	MH-DE 250W/3K/Fc2	M80
N/C	N/C	N/C	MH-DE 250W/4K/Fc2	M80
N/C	N/C	N/C	MH-DE 250W/4K/RSC	M80
N/C	N/C	HQI-SE 400/DX	N/C	S51
N/C	N/C	M1000T7/DE	N/C	N/A
N/C	N/C	M1500T7/DE	N/C	N/A
N/C	N/C	M1500T8/DE	N/C	M133
MHD1800W	N/C	N/C	N/C	N/A
MHD1800/HV	N/C	N/C	N/C	N/A
N/C	N/C	M2000T8/DE	N/C	M134
N/C	N/C	M2000T9/DE	N/C	M134
N/C	N/C	HQI-DE 2000W/D/S	N/C	N/A
N/C	N/C	N/C	MH-DE 2000W/4K/1	M134

Ceramalux™ Comfort HPS Ordering Code Cross Reference Guide

Philips	General Electric	Osram/Sylvania	ANSI
Ceramalux	Lucalox	Lumalux	
C70S62/C/M	LU70/DX/MED	N/C	S62LG-70/C
C70S62/C/D/M	N/C	N/C	S62LH-70/C
C70S62/C	N/C	N/C	S62ME-70/C
C100S54/C/M	N/C	N/C	S54SG-100/C
C100S54/C	N/C	N/C	S54SB-100/C
C100S54/C/D	N/C	N/C	S54MC-100/C
C150S55/C/M	LU150/DX/MED	N/C	S55RN-150/C
C150S55/C/D/M	N/C	N/C	S55RP-150/C
C150S55/C	LU150/55/DX	N/C	S55SC-150/C
C250S50/C	LU250/DX	N/C	S50VA-250/C
C400S51/C	LU400/DX	N/C	S51WF-400/C

Ceramalux™ HPS Ordering Code Cross Reference Guide

Philips	General Electric	Osram/Sylvania	ANSI
Ceramalux	Lucalox	Lumalux	
C35S76/M	LU35/MED	LU35/MED	S76HA-35
C35S76/D/M	LU35/D/MED	LU35/D/MED	S76HB-35
C50S68/M	LU50/MED	LU50/MED	S68LP-50
C50S68/D/M	LU50/D/MED	LU50/D/MED	S68LR-50
C50S68/ALTO	N/C	LU50/ECO	S68MS-50
C50S68/D/ALTO	N/C	N/C	S68MT-50
N/C	LU50	N/C	S68MS-50
N/C	LU50/D	LU50/D	S68MT-50
C70S62/M	LU70/MED	LU70/MED	S62LG-70
C70S62/D/M	LU70/D/MED	LU70/D/MED	S62LH-70
C70S62/ALTO	N/C	LU70/ECO	S62ME-70
C70S62/D/ALTO	N/C	N/C	S62MF-70
N/C	LU70	N/C	S62ME-70
N/C	LU70/D	LU70/D	S62MF-70
C70S62/RFL	N/C	N/C	S62SL-70
C100S54/M	LU100/MED	LU100/MED	S54SG-100
C100S54/D/M	LU100/D/MED	LU100/D/MED	S54SH-100
C100S54/ALTO	N/C	LU100/ECO	S54SB-100
C100S54/D/ALTO	N/C	N/C	S54MC-100
N/C	LU100	N/C	S54SB-100
N/C	LU100/D	LU100/D	S54MC-100
C150S55/M	LU150/MED	LU150/55/MED	S55RN-150
C150S55/D/M	LU150/D/MED	LU150/55/D/MED	S55RP-150
C150S55/ALTO	N/C	LU150/55/ECO	S55SC-150
C150S55/D/ALTO	N/C	N/C	S55MD-150
N/C	LU150	N/C	S55SC-150
N/C	LU150/D	LU150/55/D	S55MD-150
C150S56/ALTO	N/C	N/C	S56SD-150
N/C	LU150/100 (ED28)	LU150/100	S56SD-150
C200S66/ALTO	N/C	LU200/ECO	S66MN-200
N/C	LU200	N/C	S66MN-200
C225S50/EW	N/C	N/C	S50
C250S50/ALTO	N/C	LU250/ECO	S50VA-250
C250S50/D/ALTO	N/C	N/C	S50VC-250
N/C	LU250	N/C	S50VA-250
N/C	LU250/D	LU250/D	S50VC-250
C250S50/S	LU250/S	N/C	S50VA-250/S
C310S67	LU310	N/C	S67MR-310
N/C	N/C	LU310/ECO	S67MR-310
C360S51/EW	N/C	N/C	S51
C400S51/ALTO	N/C	LU400/ECO	S51WA-400
C400S51/D/ALTO	N/C	N/C	S51WB-400
N/C	LU400	N/C	S51WA-400
N/C	LU400/D	LU400/D	S51WB-400
N/C	LU400/TD	LU400/T7/RSC	S51
C600S106	LU600/T	LU600/SUPER	S106
N/C	LU750	LU750	S111NH-750
C1000S52/ED37	N/C	N/C	S52
C1000S52/ALTO	LU1000/ECO	N/C	S52XB-1000
N/C	N/C	LU1000	S52
N/C	LU1000/TD	N/C	S52

SON AGRO HPS Ordering Code Cross Reference Guide

Philips	General Electric	Osram/Sylvania	ANSI
SON AGRO 430W N/C N/C	N/C N/C N/C	N/C LU430 PLANTA LU600 PLANTA	S51 S51GJ S106GC

HPS Instant Restrike Ordering Code Cross Reference Guide

Philips	General Electric	Osram/Sylvania	ANSI
Ceramalux C50S68/2 C70S62/2 C100S54/2 C150S55/2 N/C C250S50/2 C400S51/2 C1000S52/2	Lucalox N/C LU70/SBY/XL LU100/SBY/XL LU150/55/SBY/XL LU200/SBY/XL LU250/SBY/XL LU400/SBY/XL LU1000/SBY/XL	Lumalux N/C LU70/SBY LU100/SBY LU150/55/SBY LU200/100/SBY LU250/SBY LU400/SBY LU1000/SBY	S68 S62 S54 S55 S66 S50VJ-250 S51WG-400 S52

Ceramalux™ RetroLux HPS Ordering Code Cross Reference Guide

Philips	General Electric	Osram/Sylvania	ANSI
RetroLux C150S63/RetroLux C215S65/RetroLux C360S64/RetroLux N/C	E-Z Lux LUH150/EZ LUH215/EZ LUH360/EZ N/C	Unalux ULX150 ULX215 ULX360 ULX880	S63 S65 S64 N/A

Mercury Vapor Lamps Ordering Code Cross Reference Guide

Philips	General Electric	Osram/Sylvania	ANSI
H46DL-40-50/DX H43AV-75/DX	HR40/50DX45-46 HR75DX43	H45/46DL-40/50/DX H43AV-75/DX	H46DL-50/DX H43AV-75/DX
N/C N/C N/C	N/C HR75/100PFL43-44 HR100DX38/E17	H43AV-75/N H43/44-75/100/PFL N/C	H43AV-75/N H43KL-75 —
N/C H38MP-100/DX N/C H38HT-100	HR100A38/A23 HR100DX38/A23 N/C HR100A38	N/C H38AV-100/DX H38AV-100/N H38HT-100	H38LL-100 H38MP-100/DX H38MP-100/N H38HT-100
H38JA-100/DX H38JA-T100/DX N/C N/C H38BP-100/DX H44GS-100 H44GS-100/M	HR100DX38 HT100DX38 HR100WDX38 HR100RFL38 HR100RDXFL38 HR100PSP44 N/C HR100PFL44 HR175A39	H38JA-100/DX H38JA-T100/DX H38JA-100/N N/C H38BP-100/DX H44GS-100 H44GS-100/MDSK H44JM-100 H39KB-175	H38JA-100/DX H38JA-T100/DX H38JA-100/N H38BM-100 H38BP-100/DX H44GS-100 — H44JM-100 H39KB-175
H39KB-175	HR175A39	H39KB-175	H39KB-175
H39KC-175/DX H39KC-T175/DX N/C H39BM-175 H39BP-175/DX H37KB-250 H37KC-250/DX H37KC-T250/DX	HR175DX39 HT175DX39 HR175WDX39 HR175RFL39 HR175RDXFL39 HR250A37 HR250DX37 HT250DX37	H39KC-175/DX H39KC-T175/DX H39KC-175/N N/C H39BP-175/DX H37KB-250 H37KC-250/DX H37KC-T250/DX	H39KC-175/DX H39KC-T175/DX H39KC-175/N H39BM-175 H39BP-175/DX H37KB-250 H37KC-250/DX H37KC-T250/DX
N/C	HR250WDX37	H37KC-250/N	H37KC-250/N
H33CD-400 H33GL-400/DX	HR400A33 HR400DX33 HR400DX33/BT	H33CD-400 H33GL-400/DX N/C	H33CD-400 H33GL-400/DX —
H33GL-T400/DX N/C N/C N/C H33DN-400/DX H33FS-400/DX	HT400DX33 HR400WDX33 N/C HR400R33 HR400RDX33 HR400RDXFL33	H33GL-T400/DX H33GL-400/N N/C N/C N/C N/C	H33GL-T400/DX H33GL-400/N H33GL-T400/N H33FY-400 H33DN-400/DX H33FS-400/DX
N/C N/C H35ND-700/DX N/C H34GW-1000/DX	HR400RSP33 HR400A33/T16 HR700DX35 HR1000DX34	N/C H33AR-400 N/C H34GV-1000 H34GW-1000/DX	H33FP-400 H33AR-400 H35ND-700/DX H34GV-1000 H34GW-1000/DX
H36GV-1000 H36GW-1000/DX H36GW-T1000/DX	HR1000A36 HR1000DX36 HT1000DX36	H36GV-1000 H36GW-1000/DX H36GW-T1000/DX	H36GV-1000 H36GW-1000/DX H36GW-T1000/DX

