

HIGH INTENSITY DISCHARGE LAMPS

MasterColor Ceramic Metal Halide Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401,407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.) (351)	Approx. Initial Lumens (352)	Approx. Mean Lumens (353)	CRI	CCT (K)
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MINI MASTERCOLOR ELITE CERAMIC METAL HALIDE TUBULAR SINGLE-ENDED GU6.5 LAMPS (391, 392, 396, 397)

Enclosed luminaires only; lifetime color stability within ±200K

20	T4	GU6.5	40850-0	★†	CDM20/TM/830 GU6.5 ELITE	C156/E	12	G, Clear, FadeBlock	1½	2¼	15,000	1800	1550	85	3000
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MINI MASTERCOLOR CERAMIC METAL HALIDE TUBULAR SINGLE-ENDED T3.5 LAMPS (391, 392, 396, 397)

Enclosed luminaires only; lifetime color stability within ±200K

22	T3.5	PGJ5	14040-0	★	CDM20/TM/830	C175/E	12	G, Clear, FadeBlock	¾	1¼	12,000	1650	1155	85	3000
39	T3.5	PGJ5	21139-1	★	CDM35/TM/930	C179/E	12	G, Clear, FadeBlock	¾	1¼	12,000	3000	2400	90	3000

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

20	T4	G8.5	41046-4	★†	CDM Elite 20/TC/830	C156/E	12	G, Clear, FadeBlock	2	3½	15,000	1800	1550	85	3000
39	T4	G8.5	40916-9	★†	CDM Elite 35/TC/930	C130/E	12	G, Clear, FadeBlock	2	3½	15,000	4000	3500	90	3000
			40484-8	★	CDM Elite 35/TC/930	C130/E	12	G, Clear, FadeBlock	2	3½	12,000	3500	3150	90	3000
70	T4	G8.5	40917-7	★†	CDM Elite 70/TC/930	C139/E	12	G, Clear, FadeBlock	2	3½	15,000	7650	6700	90	3000
			14837-9	★	CDM Elite 70/TC/930	C139/E	12	G, Clear, FadeBlock	2	3½	12,000	7300	6500	90	3000

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

Enclosed luminaires only; lifetime color stability within ±200K

39	T4	G8.5	37372-0	★	CDM35/TC/830	C130/E	12	G, Clear, FadeBlock	2	3½	12,000	3300	2300	81	3000
			20883-5	★	CDM35/TC/842	C130/E	12	G, Clear, FadeBlock	2	3½	12,000	3300	2640	85	4200
70	T4	G8.5	37373-8	★	CDM70/TC/830	C139/E	12	G, Clear, FadeBlock	2	3½	12,000	6400	4500	83	3000
			20885-0	★	CDM70/TC/942	C139/E	12	G, Clear, FadeBlock	2	3½	12,000	5900	3840	90	4200

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

Enclosed luminaires only; lifetime color stability within ±200K

20	T6	G12	41047-2	★†	CDM Elite 20/T6/830	C156/E	12	G, Clear, FadeBlock	2½	3⅝	15,000	1800	1550	85	3000
39	T6	G12	40914-4	★†	CDM Elite 35/T6/930	C130/E	12	G, Clear, FadeBlock	2½	3⅝	15,000	4000	3500	90	3000
			40483-0	★	CDM Elite 35/T6/930	C130/E	12	G, Clear, FadeBlock	2½	3⅝	12,000	3500	3150	90	3000
70	T6	G12	40915-1	★†	CDM Elite 70/T6/930	C139/E	12	G, Clear, FadeBlock	2½	3⅝	15,000	7650	6700	90	3000
			14836-1	★	CDM Elite 70/T6/930	C139/E	12	G, Clear, FadeBlock	2½	3⅝	12,000	7300	6500	90	3000
100	T6	G12	40829-4	★†	CDM Elite 100/T6/930	C191/E	12	G, Clear, FadeBlock	2½	4½	15,000	11,000	9680	90	3000

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

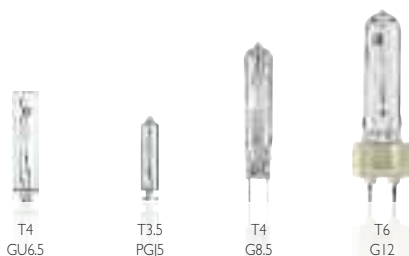
Enclosed luminaires only; lifetime color stability within ±200K

39	T6	G12	22328-9	★	CDM35/T6/830	C130/E	12	G, Clear, FadeBlock	2½	3⅝	12,000	3300	2600	81	3000
			20886-8	★	CDM35/T6/842	C130/E	12	G, Clear, FadeBlock	2½	3⅝	12,000	3300	2800	84	4200
70	T6	G12	22337-0	★	CDM70/T6/830	C139/E	12	G, Clear, FadeBlock	2½	3⅝	12,000	6600	4950	81	3000
			28137-8	★	CDM70/T6/942	C139/E	12	G, Clear, FadeBlock	2½	3⅝	12,000	6600	4620	92	4200
150	T6	G12	23272-8	★	CDM150/T6/830	C142/E	12	G, Clear, FadeBlock, also ANSI M102	2½	4½	12,000	14,000	9800	85	3000
			37369-6	★	CDM150/T6/942	C142/E	12	G, Clear, FadeBlock, also ANSI M102	2½	4½	12,000	12,700	8900	96	4200

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

HID symbols and footnotes located on page 89

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



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MasterColor Ceramic Metal Halide Lamps

Watts	Bulb	Base	Product Number	Symbols Footnotes	Ordering Code	ANSI Code Ballast Ref. or MBCP*	Pkg. Qty.†	Description (401,407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
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MASTERCOLOR CDM ELITE MW (MEDIUM WATT) CERAMIC METAL HALIDE TUBULAR SINGLE-ENDED T9 LAMPS (391, 392, 396, 397)

Enclosed luminaires only

210	T9	PGZ18	22062-4	☐★\$	CDM EliteMW 210/T9/930/U/E	C183/E	12	G, Clear, Fadeblock	3½	7½	24,000	24,200	22,100	90	3000
			22063-2	☐★\$	CDM EliteMW 210/T9/942/U/E	C183/E	12	G, Clear, Fadeblock	3½	7½	24,000	23,100	20,800	90	4200
315	T9	PGZ18	21831-3	☐★\$	CDM EliteMW 315/T9/930/U/E	C182/E	12	G, Clear, Fadeblock	3½	7½	30,000	37,800	34,700	90	3000
			22064-0	☐★\$	CDM EliteMW 315/T9/942/U/E	C182/E	12	G, Clear, Fadeblock	3½	7½	30,000	36,200	32,600	90	4200

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

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

210	T12	PGZX18	23806-3	☐★†\$	CDM EliteMW 210/T12/930/U/O	C183/O	12	G, Clear, Fadeblock	3½	7½	20,000	22,100	20,700	90	3000
			23808-9	☐★†\$	CDM EliteMW 210/T12/942/U/O	C183/O	12	G, Clear, Fadeblock	3½	7½	20,000	22,100	19,900	90	4200
315	T12	PGZX18	23807-1	☐★†\$	CDM EliteMW 315/T12/930/U/O	C182/O	12	G, Clear, Fadeblock	3½	7½	20,000	36,200	32,500	90	3000
			23809-7	☐★†\$	CDM EliteMW 315/T12/942/U/O	C182/O	12	G, Clear, Fadeblock	3½	7½	20,000	34,700	31,200	90	4200

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

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

70	TD6	RX7s	23160-5	★	CDM70/TD/830	C139/C85/E	12	G, Clear, FadeBlock, Hor. ± 45°	2¼	4¼	15,000	6500	5200	82	3000
			37370-4	★	CDM70/TD/942	C139/C85/E	12	G, Clear, FadeBlock, Hor. ± 45°	2¼	4¼	15,000	6000	4500	92	4200
150	TD7	RX7s	23167-0	★	CDM150/TD/830	C142/C102/C81E	12	G, Clear, FadeBlock, Hor. ± 45°	2½	5½	15,000	13,250	11,260	88	3000
			37371-2	★	CDM150/TD/942	C142/C102/C81E	12	G, Clear, FadeBlock, Hor. ± 45°	2½	5½	15,000	14,200	12,070	96	4200

MASTERCOLOR INTEGRATED PAR LAMPS (396, 406)

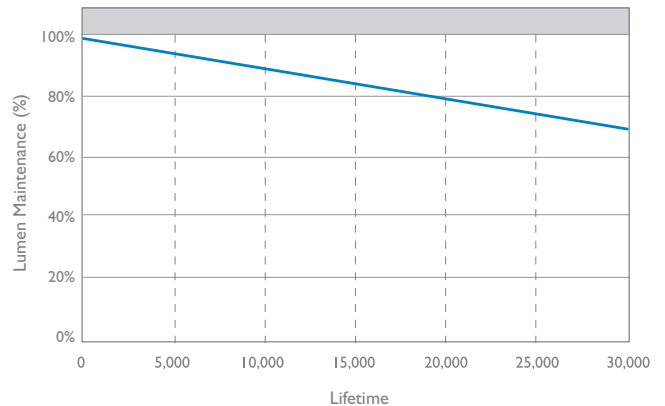
These lamps may be used in open fixtures; do not use in totally enclosed recessed fixtures

25	PAR38	Med.	14477-4	☐★●	CDM-i25W/830/ PAR38/10/ALTO	MBCP = 26,000	6	G, PAR Spot 10°	—	5½	15,000	1450	1015	87	3000
			14478-2	☐★●	CDM-i25W/830/ PAR38/25/ALTO	MBCP = 5600	6	G, PAR Flood 25°	—	5½	15,000	1450	1015	87	3000
			14479-0	☐★●	CDM-i25W/830/ PAR38/40/ALTO	MBCP = 2100	6	G, PAR W. Flood 40°	—	5½	15,000	1450	1015	87	3000

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MAINTENANCE CURVE

Philips MasterColor Elite MW 315W Lamps



HIGH INTENSITY DISCHARGE LAMPS

MasterColor Ceramic Metal Halide Lamps

Watts	Bulb Base	Product Number	Symbols, Ordering Footnotes Code	ANSI Code Ballast Ref. or MBCP*	Pkg. Qty.‡	Description (401,407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.) (351)	Approx. Initial Lumens (352)	Approx. Mean Lumens (353)	Approx. CRI	CCT (K)
PROTECTED MASTERCOLOR CERAMIC METAL HALIDE R111 LAMPS (391, 392, 396, 397)													
Open or Enclosed luminaires; lifetime color stability within ±200K													
22	R111 GX8.5	15297-4	☐★	CDM-R111/20W/830 10DG	C175/O MBCP=20,000	6	G, R111, N. Spot 10°	—	3%	9000	750	500	85 3000
		20882-7	☐★	CDM-R111/20W/830 24DG	C175/O MBCP=4500	6	G, R111, N. Flood 24°	—	3%	9000	750	500	85 3000
39	R111 GX8.5	13554-1	☐★	CDM-R111/35W/830 10DG	C130/O MBCP=35,000	6	G, R111, Spot 10°	—	3%	12,000	1100	720	81 3000
		13556-6	☐★	CDM-R111/35W/830 24DG	C130/O MBCP=8500	6	G, R111, N. Flood 24°	—	3%	12,000	1350	880	81 3000
		13921-2	☐★	CDM-R111/35W/830 40DG	C130/O MBCP=4000	6	G, R111, Flood 40°	—	3%	12,000	1350	880	81 3000
70	R111 GX8.5	14754-6	☐★	CDM-R111/70W/830 10DG	C139/O MBCP=50,000	6	G, R111, Spot 10°	—	3%	12,000	2500	1625	84 3000
		14755-3	☐★	CDM-R111/70W/830 24DG	C139/O MBCP=15,000	6	G, R111, N. Flood 24°	—	3%	12,000	2850	1850	84 3000
		14795-8	☐★	CDM-R111/70W/830 40DG	C139/O MBCP=9000	6	G, R111, Flood 40°	—	3%	12,000	2850	1850	84 3000

PROTECTED MASTERCOLOR ELITE CERAMIC METAL HALIDE MR16 LAMPS (391, 392, 396, 397)

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

20	MR16 GX10	40918-5	☐★†	CDM-MR16/20W/830/10D ELITE	C156/O MBCP=13,500	6	G, MR16 Spot 10°	—	2%	15,000	1050	880	85 3000
		40919-3	☐★†	CDM-MR16/20W/830/25D ELITE	C156/O MBCP=4500	6	G, MR16 Flood 25°	—	2%	15,000	1050	880	85 3000
		40920-1	☐★†	CDM-MR16/20W/830/40D ELITE	C156/O MBCP=2100	6	G, MR16 W. Flood 40°	—	2%	15,000	1050	880	85 3000
39	MR16 GX10	40921-9	☐★†	CDM-MR16/35W/930/10D ELITE	C130/O MBCP=18,000	6	G, MR16 Spot 10°	—	2%	12,000	2150	1800	90 3000
		40922-7	☐★†	CDM-MR16/35W/930/25D ELITE	C130/O MBCP=8000	6	G, MR16 Flood 25°	—	2%	12,000	2150	1800	90 3000
		40923-5	☐★†	CDM-MR16/35W/930/40D ELITE	C130/O MBCP=3900	6	G, MR16 W. Flood 40°	—	2%	12,000	2150	1800	90 3000

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

Open or enclosed luminaires; lifetime color stability within ±200K

39	PAR30L Med.	21171-4	☐★●†	CDM35/PAR30L/M/SP/3K/ALTO ELITE	C130/O MBCP=52,000	6	G, PAR WISO Spot 10°	—	4%	12,000	2300	1955	90 3000
		21172-2	☐★●†	CDM35/PAR30L/M/FL/3K/ALTO ELITE	C130/O MBCP=7800	6	G, PAR WISO Flood 30°	—	4%	12,000	2300	1955	90 3000

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

Open or enclosed luminaires; lifetime color stability within ±200K

22	PAR20 Med.	21151-6	★ ●	CDM20/PAR20/ M/SP/3K/ALTO	C156/C175/O	12	G, PAR WISO Spot 10° (397)	—	3%	9000	940	600	81	3000
		21152-4	★ ●	CDM20/PAR20/ M/FL/3K/ALTO	C156/C175/O	12	G, PAR WISO Flood 30° (397)	—	3%	9000	980	615	81	3000
22	PAR30L Med.	21149-0	★ ●	CDM20/PAR30L/ M/SP/3K/ALTO	C156/C175/O	6	G, PAR WISO Spot 10° (397)	—	4%	9000	1200	750	81	3000
		21140-9	★ ●	CDM20/PAR30L/ M/FL/3K/ALTO	C156/C175/O	6	G, PAR WISO Flood 25° (397)	—	4%	9000	1200	750	81	3000
39	PAR20 Med.	23365-0	★ ●	CDM35/PAR20/ M/SP/3K/ALTO	C130/O	12	G, PAR WISO Spot 10° (397)	—	3%	9000	2000	1300	81	3000
		23364-3	★ ●	CDM35/PAR20/ M/FL/3K/ALTO	C130/O	12	G, PAR WISO Flood 30° (397)	—	3%	9000	2000	1300	81	3000
		15140-7	★ ●	CDM35/PAR20/ M/SP/4K/ALTO	C130/O	12	G, PAR WISO Spot 10° (397)	—	3%	6000	1950	1650	92	4000
		15141-5	★ ●	CDM35/PAR20/ M/FL/4K/ALTO	C130/O	12	G, PAR WISO Flood 30° (397)	—	3%	6000	1950	1650	92	4000
39	PAR30L Med.	22329-7	★ ●	CDM35/PAR30L/ M/SP/3K/ALTO	C130/O	6	G, PAR WISO Spot 10° (397)	—	4%	11,000	2200	1430	81	3000
		22330-5	★ ●	CDM35/PAR30L/ M/FL/3K/ALTO	C130/O	6	G, PAR WISO Flood 25° (397)	—	4%	11,000	2200	1430	81	3000
70	PAR30L Med.	23224-9	★ ●	CDM70/PAR30L/ M/SP/3K/ALTO	M143/M98/O	6	G, PAR WISO Spot 10°	—	4%	12,000	5000	3050	83	3000
		23221-5	★ ●	CDM70/PAR30L/ M/FL/3K/ALTO	M143/M98/O	6	G, PAR WISO Flood 40°	—	4%	12,000	5000	3050	83	3000
		15142-3	★ ●	CDM70/PAR30L/ M/SP/4K/ALTO	C139/O	6	G, PAR WISO Spot 10°	—	4%	12,000	4300	3010	94	4000
		15143-1	★ ●	CDM70/PAR30L/ M/FL/4K/ALTO	C139/O	6	G, PAR WISO Flood 40°	—	4%	12,000	4300	3010	94	4000
70	PAR38 Med.	22250-5	★ ●	CDM70/PAR38/ SP/3K/ALTO	M143/M98/O	12	G, PAR WISO Spot 15° (399)	—	5%	12,500	4100	2870	85	3000
		22249-7	★ ●	CDM70/PAR38/ FL/3K/ALTO	M143/M98/O	12	G, PAR WISO Flood 25° (399)	—	5%	12,500	4100	2870	85	3000
		28872-0	□ ★ ●	CDM70/PAR38/ SP/4K/ALTO	M143/M98/O	12	G, PAR WISO Spot 15° (399)	—	5%	12,500	3700	2590	92	4000
		28873-8	□ ★ ●	CDM70/PAR38/ FL/4K/ALTO	M143/M98/O	12	G, PAR WISO Flood 25° (399)	—	5%	12,500	3700	2590	92	4000
100	PAR38 Med.	24477-2	★ ●	CDM100/PAR38/ SP/3K/ALTO	M140/M90/O	12	G, PAR WISO Spot 15° (399)	—	5%	12,500	6200	4340	85	3000
		24476-4	★ ●	CDM100/PAR38/ FL/3K/ALTO	M140/M90/O	12	G, PAR WISO Flood 25° (399)	—	5%	12,500	6200	4340	85	3000
		28876-1	□ ★ ●	CDM100/PAR38/ SP/4K/ALTO	M140/M90/O	12	G, PAR WISO Spot 15°(399)	—	5%	12,500	5700	3990	92	4000
		28878-7	□ ★ ●	CDM100/PAR38/ FL/4K/ALTO	M140/M90/O	12	G, PAR WISO Flood 25° (399)	—	5%	12,500	5700	3990	92	4000

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

ED17P sleeved arc tube; open or enclosed luminaires; lifetime color stability within $\pm 200\text{K}$; pulse start

50	ED17P	Med.	36891-0	☐★●	MHC50/U/MP/3K/ALTO	M148/M110/O	12	G, Clear, FadeBlock	3 $\frac{1}{8}$	5 $\frac{1}{8}$	10,000	4000	2680	85	3000
			36893-6	☐★●	MHC50/U/MP/4K/ALTO	M148/M110/O	12	G, Clear, FadeBlock	3 $\frac{1}{8}$	5 $\frac{1}{8}$	20,000	3600	2450	92	4000
70	ED17P	Med.	23366-8	★●	MHC70/U/MP/3K/ALTO	M143/M98/O	12	G, Clear, FadeBlock	3 $\frac{1}{8}$	5 $\frac{1}{8}$	16,000	5900	4365	85	3000
			23367-6	★●	MHC70/CU/MP/3K/ALTO	M143/M98/O	12	G, Coated, FadeBlock	—	5 $\frac{1}{8}$	16,000	5400	3995	85	3000
			36057-8	☐★●	MHC70/U/MP/4K/ALTO	M143/M98/O	12	G, Clear, FadeBlock	3 $\frac{1}{8}$	5 $\frac{1}{8}$	20,000	5800	4060	92	4000
			36059-4	☐★●	MHC70/CU/MP/4K/ALTO	M143/M98/O	12	G, Coated, FadeBlock	—	5 $\frac{1}{8}$	20,000	5200	3640	92	4000
100	ED17P	Med.	23368-4	★●	MHC100/U/MP/3K/ALTO	M140/M90/O	12	G, Clear, FadeBlock	3 $\frac{1}{8}$	5 $\frac{1}{8}$	16,000	8600	6450	85	3000
			23444-3	★●	MHC100/CU/MP/3K/ALTO	M140/M90/O	12	G, Coated, FadeBlock	—	5 $\frac{1}{8}$	16,000	7900	5925	85	3000
			36060-2	☐★●	MHC100/U/MP/4K/ALTO	M140/M90/O	12	G, Clear, FadeBlock	3 $\frac{1}{8}$	5 $\frac{1}{8}$	20,000	8200	6150	92	4000
			36061-0	☐★●	MHC100/CU/MP/4K/ALTO	M140/M90/O	12	G, Coated, FadeBlock	—	5 $\frac{1}{8}$	20,000	7500	5625	92	4000
150	ED17P	Med.	13463-5	★●	MHC150/U/MP/3K/ALTO	M142/M102/O	12	G, Clear, FadeBlock	3 $\frac{1}{8}$	5 $\frac{1}{8}$	16,000	12,900	9545	85	3000
			13464-3	★●	MHC150/CU/MP/3K/ALTO	M142/M102/O	12	G, Coated, FadeBlock	—	5 $\frac{1}{8}$	16,000	11,900	8805	85	3000
			37724-2	☐★●	MHC150/U/MP/4K/ALTO	M142/M102/O	12	G, Clear, FadeBlock	3 $\frac{1}{8}$	5 $\frac{1}{8}$	20,000	12,000	9000	92	4000
			37726-7	☐★●	MHC150/CU/MP/4K/ALTO	M142/M102/O	12	G, Coated, FadeBlock	—	5 $\frac{1}{8}$	20,000	11,000	8250	92	4000

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

Enclosed luminaires only; lifetime color stability within $\pm 200\text{K}$; pulse start

50	ED17	Med.	36020-6	☐★●	MHC50/U/M/3K/ALTO	M148/M110/E	12	G, Clear (391, 392, 399)	3 $\frac{1}{8}$	5 $\frac{1}{8}$	10,000	4100	2750	85	3000
			36022-2	☐★●	MHC50/CU/M/3K/ALTO	M148/M110/E	12	G, Coated (391, 392, 399)	—	5 $\frac{1}{8}$	10,000	3800	2545	85	3000
			36023-0	☐★●	MHC50/U/M/4K/ALTO	M148/M110/E	12	G, Clear (391, 392, 399)	3 $\frac{1}{8}$	5 $\frac{1}{8}$	20,000	3750	2550	92	4000
			36024-8	☐★●	MHC50/CU/M/4K/ALTO	M148/M110/E	12	G, Coated (391, 392, 399)	—	5 $\frac{1}{8}$	20,000	3600	2450	92	4000
70	ED17	Med.	20884-3	★●	MHC70/U/M/3K/ALTO	M143/M98/E	12	G, Clear (391, 392, 399)	3 $\frac{1}{8}$	5 $\frac{1}{8}$	16,000	6200	4585	85	3000
			20887-6	★●	MHC70/CU/M/3K/ALTO	M143/M98/E	12	G, Coated (391, 392, 399)	—	5 $\frac{1}{8}$	16,000	5800	4290	85	3000
			28129-5	☐★●	MHC70/U/M/4K/ALTO	M143/M98/E	12	G, Clear (391, 392, 399)	3 $\frac{1}{8}$	5 $\frac{1}{8}$	20,000	5900	4130	92	4000
			28133-7	☐★●	MHC70/CU/M/4K/ALTO	M143/M98/E	12	G, Coated (391, 392, 399)	—	5 $\frac{1}{8}$	20,000	5500	3850	92	4000
100	ED17	Med.	20888-4	★●	MHC100/U/M/3K/ALTO	M140/M90/E	12	G, Clear (391, 392, 399)	3 $\frac{1}{8}$	5 $\frac{1}{8}$	16,000	9500	7125	85	3000
			20889-2	★●	MHC100/CU/M/3K/ALTO	M140/M90/E	12	G, Coated (391, 392, 399)	—	5 $\frac{1}{8}$	16,000	8800	6600	85	3000
			28135-2	☐★●	MHC100/U/M/4K/ALTO	M140/M90/E	12	G, Clear (391, 392, 399)	3 $\frac{1}{8}$	5 $\frac{1}{8}$	20,000	9000	6750	92	4000
			28136-0	☐★●	MHC100/CU/M/4K/ALTO	M140/M90/E	12	G, Coated (391, 392, 399)	—	5 $\frac{1}{8}$	20,000	8400	6300	92	4000
	ED28	Mog.	36543-7	☐★	MHC100/U/ED28/HR/4K	M140/M90/E	12	G, Clear (372, 377, 378)	5	8 $\frac{1}{8}$	10,000	8500	6800	92	4100
150	ED17	Med.	13022-9	☐★●	MHC150/U/M/3K/ALTO	M142/M102/E	12	G, Clear (391, 392, 399)	3 $\frac{1}{2}$	5 $\frac{1}{8}$	16,000	14,000	10,500	85	3000
			13023-7	☐★●	MHC150/CU/M/3K/ALTO	M142/M102/E	12	G, Coated (391, 392, 399)	—	5 $\frac{1}{8}$	16,000	12,500	9375	85	3000
			37720-0	☐★●	MHC150/U/M/4K/ALTO	M142/M102/E	12	G, Clear (391, 392, 399)	3 $\frac{1}{8}$	5 $\frac{1}{8}$	20,000	13,000	9750	92	4000
			37721-8	☐★●	MHC150/CU/M/4K/ALTO	M142/M102/E	12	G, Coated (391, 392, 399)	—	5 $\frac{1}{8}$	20,000	12,000	9000	92	4000

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HID symbols and footnotes located on page 89



HIGH INTENSITY DISCHARGE LAMPS

MasterColor Ceramic Metal Halide Lamps

Watts	Bulb	Base	Product Number	Symbols	Ordering Footnotes Code	ANSI Code Ballast Ref.	Pkg. Qty.:	Description (401,407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI (K)	CCT (K)
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MASTERCOLOR CERAMIC METAL HALIDE PULSE START ED23.5 LAMPS (391, 392, 399)

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

70	ED23½	Mog.	15492-2	U	★ ●	CDM70/U/PS/4K ALTO	M143/M98/E	12	G, Clear	5	7½	24,000	5900	4150	85	4000
100	ED23½	Mog.	15493-0	U	★ ●	CDM100/U/PS/4K ALTO	M140/M90/E	12	G, Clear	5	7½	24,000	9000	6750	85	4000
150	ED23½	Mog.	15494-8	U	★ ●	CDM150/U/PS/4K ALTO	M142/M102/E	12	G, Clear	5	7½	24,000	13,000	9100	85	4000

MASTERCOLOR CERAMIC METAL HALIDE PULSE START PROTECTED LAMPS (374, 391, 392, 399)

Open or Enclosed luminaires; lifetime color stability within ±200K; (V = Vertical Operation ±15°)**

250	ED28	EX39	20583-1	★ ●	CDM250/V/O/PS/4K/ALTO	M153/O	12	G, Clear, Vertical ±15°	5	8½	24,000	22,500	18,000	90	4200
		Excl. Mog.	20584-9	★ ●	CDM250/CV/O/PS/4K/ALTO	M153/O	12	G, Coated, Vertical ±15°	—	8½	24,000	21,300	17,000	90	4200
320	ED28	EX39	13291-0	★ ●	CDM320/V/O/PS/4K/ALTO	M170/M132/O	12	G, Clear, Vertical ±15°	5	8½	24,000	28,800	23,000	90	4200
		Mog.	13256-3	★ ●	CDM320/CV/O/PS/4K/ALTO	M170/M132/O	12	G, Coated, Vertical ±15°	—	8½	24,000	28,000	22,400	90	4200
350	ED37	EX39	13257-1	★ ●	CDM350/V/O/PS/4K/ALTO	M171/M131/O	6	G, Clear, Vertical ±15°	7	11½	24,000	31,500	25,200	90	4200
		Excl. Mog.	13292-8	★ ●	CDM350/CV/O/PS/4K/ALTO	M171/M131/O	6	G, Coated, Vertical ±15°	—	11½	24,000	30,600	24,500	90	4200
400	ED28	EX39	14598-6	★ ●	CDM400/V/O/PS/4K/ED28/ALTO	M172/M155/O	12	G, Clear, Vertical ±15°	5	8½	20,000	36,000	28,800	90	4200
		Excl. Mog.	13290-2	★ ●	CDM400/V/O/PS/4K/ALTO	M172/M155/O	6	G, Clear, Vertical ±15°	7	11½	24,000	36,000	28,800	90	4200
	ED37	EX39	13293-6	★ ●	CDM400/CV/O/PS/4K/ALTO	M172/M155/O	6	G, Coated, Vertical ±15°	—	11½	24,000	35,000	27,900	90	4200

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HIGH INTENSITY DISCHARGE LAMPS

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

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code	Pkg. Ballast Ref.	Pkg. Qty. Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.) (351)	Approx. Initial Lumens (352)	Approx. Mean Lumens (353)	CCT (K)
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MASTERCOLOR CERAMIC METAL HALIDE HPS-RETRO WHITE (374, 399, 403, 404)

ED18, open or enclosed luminaires; lifetime color stability within ±200K HPS-Retro White Lamps Rated for Vertical Operation Only (V = Vertical Operation ± 15°)*

250	ED18	Mog.	13093-0	★ ●	CDM250S50/V/O/4K/ALTO	M168/O/S50	12	G, Clear; Vertical ± 15°	5 3/4	9 3/4	20,000	20,500	16,400	85 4000
400	ED18	Mog.	13094-8	★ ●	CDM400S51/V/O/4K/ALTO	M169/O/S51	12	G, Clear; Vertical ± 15°	5 3/4	9 3/4	20,000	34,800	27,840	85 4000

HPS-Retro White Lamps Rated for Horizontal Operation Only (HOR = Horizontal Operation ± 15°)

250	ED18	Mog.	14649-8	★ ●	CDM250S50/ HOR/4K/ALTO	M168/O/S50	12	G, Clear; Horizontal ± 15°	5 3/4	9 3/4	20,000	20,500	16,400	85 4000
400	ED18	Mog.	14650-6	★ ●	CDM400S51/ HOR/4K/ALTO	M169/O/S51	12	G, Clear; Horizontal ± 15° (403)	5 3/4	9 3/4	15,000	34,800	29,600	85 4000

COSMOWHITE (391, 392, 396, 397)

Enclosed luminaires only; lifetime color stability within ±200K (HOR = Horizontal Operation ± 15°)

60	T6	PGZ12	15731-3	□ ★ \$	CPO-T WHITE 60W/728	CI87/E	12	G, Clear; FadeBlock, Horiz. ±15°	2 1/2	5 3/4	30,000*	6900	6200	70 2800
90	T6	PGZ12	40604-1	□ ★ \$ †	CPO-T WHITE 90W/728	CI88/E	12	G, Clear; FadeBlock, Horiz. ±15°	2 3/4	5 3/4	30,000*	10,450	8800	70 2800
140	T6	PGZ12	15732-1	□ ★ \$	CPO-T WHITE 140W/728	CI89/E	12	G, Clear; FadeBlock, Horiz. ±15°	2 3/4	5 3/4	30,000*	16,500	14,020	70 2800

ENERGY ADVANTAGE CDM WITH ALLSTART TECHNOLOGY (391, 392, 396, 397)**

145	ED28	EX39	41107-4	□ ★ † \$	CDM145/U/O/4K/ ED28 EA AllStart	CI92/O**	12	G, Clear; Fadeblock	5	8%	20,000	13,500	10,125	87 4000	
			41319-5	□ ★ † \$	CDM145/C/U/O/4K/ ED28 EA AllStart	CI92/O**	12	G, Coated; Fadeblock	—	8%	20,000	12,500	9375	87 4000	
205	ED28	EX39	23256-1	□ ★ † \$	CDM205/U/O/4K EA AllStart	CI84/O***	12	G, Clear; Fadeblock	5	8%	20,000	19,500	15,600	85 4100	
			23692-7	□ ★ † \$	CDM205/C/U/O/4K EA AllStart	CI84/O***	12	G, Coated; Fadeblock	—	8%	20,000	18,000	14,400	85 4100	
330	ED28	EX39	41105-8	□ ★ † \$	CDM330/U/O/4K/ EA AllStart	CI85/O****	12	G, Clear; Fadeblock	5	8%	20,000	33,000	26,400	90 4000	
			Excl.Mog.	23259-5	□ ★ † \$	CDM330/U/O/4K EA AllStart	CI85/O****	6	G, Clear; Fadeblock	7	11 1/2	24,000	33,000	26,400	90 4000
				23693-5	□ ★ † \$	CDM330/C/U/O/4K EA AllStart	CI85/O****	6	G, Coated; Fadeblock	—	11 1/2	24,000	31,000	24,800	90 4000

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

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

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

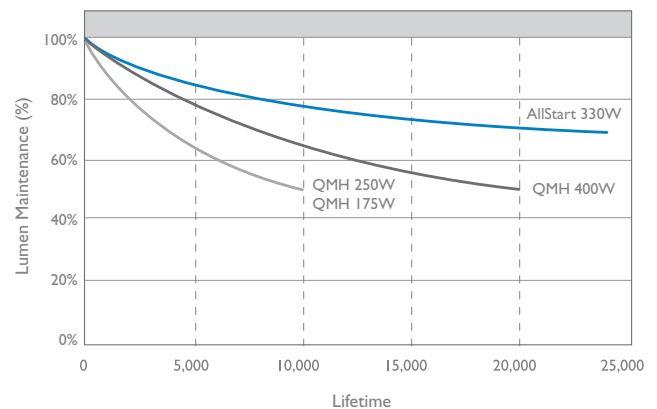
**** 330W compatible with M59 probe start ballast. Also compatible with M128, M135, M155, and M172 pulse start ballasts

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MAINTENANCE CURVE

Philips Energy Advantage CDM 330W Lamps with AllStart Technology



HIGH INTENSITY DISCHARGE LAMPS

Metal Halide Lamps

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

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HIGH INTENSITY DISCHARGE LAMPS

Metal Halide Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code	Pkg. Qty.	Pkg. Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.) (351)	Approx. Initial Lumens (352)	Approx. Mean Lumens (353)	Approx. CRI	CCT (K)
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PULSE START METAL HALIDE LAMPS (372, 374, 391)

Enclosed luminaires only unless otherwise noted; base up operation $\pm 15^\circ$ unless otherwise noted.

Pulse start metal halide is designed for operation on only specified ANSI compatible ballasts with metal halide pulse ignitors.

175	ED17	Med.	23249-6	■ ★	MS175/M/BU/PS	M152/M137/E	12	G, Base Up $\pm 15^\circ$, Pulse Start	3 7/8	5 1/2	15,000	17,500	12,250	68	4000
	ED28	Mog.	27662-6	■ ★	MS175/BU/PS	M152/M137/E	12	G, Base Up $\pm 15^\circ$, Pulse Start	5	8 1/2	15,000	16,000	11,200	62	3700
			14913-8	□ ■ ★	MS175/C/BU/PS	M152/M137/E	12	G, Coated, Base Up $\pm 15^\circ$, Pulse Start	—	8 1/2	15,000	16,000	11,200	62	3900
			20751-4	□ ■ ★	MS175/HOR/PS	M152/M137/E	12	G, Clear, Horizontal, Pulse Start	5	8 1/2	11,500	12,800	8960	62	4200
200	ED28	Mog.	23250-4		MS200/BU/PS	M136/E	12	G, Base Up $\pm 15^\circ$, Pulse Start	5	8 1/2	15,000	21,000	14,700	68	4000
	T15	Mog.	23251-2		MS200/HOR/T15/PS	M136/E	12	G, Clear, Horizontal, Pulse Start	5	8 1/2	15,000	19,000	13,300	68	4000
250	ED28	Mog.	27661-8	■ ★	MS250/BU/PS	M153/M138/E	12	G, Base Up $\pm 15^\circ$, Pulse Start	5	8 1/2	15,000	23,750	16,625	65	4300
			23280-1	□ ■ ★	MS250/U/PS	M153/M138/E	12	G, Clear, Universal, Pulse Start (385)	5	8 1/2	12,000	22,000	15,400	62	3800
320	ED28	Mog.	38381-0	■ ★	MS320/U/PS	M154/M132/E	12	G, Clear, Pulse Start (385)	5	8 1/2	20,000	30,000	21,000	62	4100
			38386-9	■ ★	MS320/C/U/PS	M154/M132/E	12	G, Coated, Pulse Start (385)	—	8 1/2	20,000	29,000	20,300	70	3600
350	ED37	Mog.	38387-7	■ ★	MS350/BU/PS	M131/E	6	G, Clear, Base Up $\pm 15^\circ$, Pulse Start	7	11 1/2	20,000	36,000	25,200	62	4000
			20753-0	□ ■ ★	MS350/HOR/PS	M131/E	6	G, Clear, Horizontal, Pulse Start	7	11 1/2	15,000	33,000	23,100	62	4000
400	ED28	Mog.	23252-0		MS400/BU/ED28/PS	M155/M128/M135/E	12	G, Base Up $\pm 15^\circ$, Pulse Start	5	8 1/2	20,000	44,000	30,800	68	4000
			23253-8		MS400/HOR/ED28/PS	M155/M128/M135/E	12	G, Clear, Horizontal, Pulse Start	5	8 1/2	20,000	40,000	28,000	68	4000
	ED37	Mog.	27816-8	□ ■ ★ X	MS400/BU/PS	M155/M128/M135/S	6	G, Clear, Base Up $\pm 15^\circ$, Pulse Start	7	11 1/2	20,000	42,600	29,820	62	4100
			23283-5	■ ★	MS400/U/PS	M155/M135/M128/E	6	G, Clear, Universal, Pulse Start (385)	7	11 1/2	15,000	40,000	28,000	62	3800
750	BT37	Mog.	13540-0	■ ★	MS750/BU/BT37/PS	M149/E	6	G, Clear, Base Up $\pm 15^\circ$, Pulse Start	7	11 1/2	16,000	82,000	61,500	65	4000
			20754-8	□ ■ ★	MS750/HOR/BT37/PS	M149/E	6	G, Clear, Horizontal, Pulse Start	7	11 1/2	12,000	68,000	47,600	65	4000
1000	BT37	Mog.	36019-8	■ ★	MS1000/BU/BT37/PS	M141/E	6	G, Clear, Base Up $\pm 15^\circ$, Pulse Start	7	11 1/2	15,000	120,000	96,000	65	3700

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HIGH INTENSITY DISCHARGE LAMPS

Metal Halide Lamps

Watts	Bulb	Base	Product Number	Product Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.:	Description (401,407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)	
PROTECTED METAL HALIDE "O" RATED LAMPS (372, 374, 377)*																
175	ED28	EX39	28119-6	■ ★	MP175/BU	M57/O	12	G, Clear, Base Up ± 15°	5	8%	10,000	15,000	12,000	65	3800	
			Exd.Mog.													
250	ED28	EX39	28124-6	■ ★	MP250/BU	M58/O	12	G, Clear, Base Up ± 15°	5	8%	10,000	22,000	16,500	62	3800	
			Exd.Mog.													
360	ED37	EX39	13067-4	■ ★ \$	MP360BU/EW	M165/M59/O	6	G, Clear, Base Up ± 15°	7	11½	20,000	34,200	23,940	65	4000	
			Exd.Mog.	13068-2	■ ★ \$	MP360C/BU/EW	M165/M59/O	6	G, Coated, Base Up ± 15°	—	11½	20,000	31,700	20,605	68	360
400	ED37	EX39	13332-2	■ ★	MP400/BU	M59/O	6	G, Clear, Base Up ± 15°	7	11½	20,000	38,000	26,600	65	4000	
			Exd.Mog.	13333-0	■ ★	MP400C/BU	M59/O	6	G, Coated, Base Up ± 15°	—	11½	20,000	34,500	22,425	67	3700
1000	BT56	EX39	28118-8	■ ★	MP1000/BU	M47/O	6	G, Clear, Base Up ± 15°	9½	15%	12,000	107,000	75,000	65	3900	
			Exd.Mog.													

SAFETY LIFEGUARD METAL HALIDE LAMPS (372, 377, 385, 393)

Enclosed luminaires only unless otherwise noted

400	ED37	Mog.	34598-3	★ ✕	MHT400/U	M59PJ-T400/U/S	6	G, S, Clear	7	11½	20,000	34,200	27,400	65	4000
			34601-5	★ ✕	MHT400/C/U	M59PK-T400/U/S	6	G, S, Coated	—	11½	20,000	32,500	25,000	65	3700

DOUBLE-ENDED METAL HALIDE LAMPS (374, 387, 393)

Enclosed luminaires (387)

1800	TD	PSFc20-6/	31360-1		MHD1800W	—	4	Sports Ltg. Spot Horizontal ± 15°	4¼	14	4500	150,000	—	92	5600	
			Special SFc20-6													

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HIGH INTENSITY DISCHARGE LAMPS

Metal Halide Lamps

Watts	Bulb	Base	Product Number	Symbols, Ordering Footnotes Code	ANSI Code	Pkg. Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.) (351)	Approx. Initial Lumens (352)	Approx. Mean Lumens (353)	Approx. CRI	CCT (K)
150	BD17	Med.	35462-1	★	MH150/U/M	M107/E	12	G, Clear (385, 400)	3 7/8	5 7/8	10,000	12,500	8500	65	3700
			35463-9	★	MH150/C/U/M	M107/E	12	G, Coated (385, 400)	—	5 7/8	10,000	12,000	7900	65	3400
175	BD17	Med.	31358-5	★	MH175/U/M	M57/E	12	G, Clear (377, 385, 393)	3 7/8	5 7/8	10,000	13,500	9100	65	4000
			31359-3	★	MH175/C/U/M	M57/E	12	G, Coated (377, 385)	—	5 7/8	10,000	13,000	8380	65	3700
	ED28	Mog.	28733-4	★	MH175/U	M57/E	12	G, S, Clear (377, 385, 393)	5	8 7/8	10,000	13,500	8775	65	4000
28728-4			★	MH175/C/U	M57/E	12	G, S, Coated (374, 377, 385)	—	8 7/8	10,000	13,000	8200	70	3700	
250	ED28	Mog.	27484-5	★	MH250/U	M58/E	12	G, S, Clear (377, 385, 393)	5	8 7/8	10,000	20,500	13,500	65	4000
			29169-0	★	MH250/C/U	M58/E	12	G, S, Coated (377, 385, 393)	—	8 7/8	10,000	19,475	12,500	70	3700
360	ED37	Mog.	39065-8	Ⓜ\$★	MS360/BU/EW	M165/M59	6	High Efficacy, Base Up ± 15°, Clear (374, 377)	7	11 1/2	20,000	36,000	24,500	60	4300
			39066-6	Ⓜ\$★	MS360/C/BU/EW	M165/M59	6	High Efficacy, Base Up ± 15°, Coated (374, 377)	—	11 1/2	20,000	34,200	22,600	65	4000
400	ED28	Mog.	27862-2	★	MH400/U/ED28	M59/E	12	G, Clear (377, 385, 393)	5	8 7/8	20,000	36,000	24,000	63	4000
			24673-6	★	MS400/BU/ED28	M59/E	12	G, Clear, Base Up ± 15° (374, 377)	5	8 7/8	20,000	40,000	26,000	62	4100
	ED37	Mog.	27449-8	Ⓜ\$†	MH400/U	M59/E	6	G, S, Clear (377, 385, 393)	7	11 1/2	20,000	39,000	25,350	65	3900
			41520-8	Ⓜ\$†	MH400/C/U	M59/E	6	G, S, Coated (377, 385, 393)	—	11 1/2	20,000	38,000	22,800	65	3600
			34415-0	Ⓜ\$X	MH400/U	M59/S	6	G, S, Clear (377, 385, 393)	7	11 1/2	20,000	36,000	24,000	65	4000
			34416-8	Ⓜ\$X	MH400/C/U	M59/S	6	G, S, Coated (377, 385, 393)	—	11 1/2	20,000	34,200	22,300	70	3700
			30170-5	Ⓜ\$X	MS400/BU	M59/S	6	High Efficacy, Base Up ± 15° Clear (374, 377)	7	11 1/2	20,000	40,000	26,500	65	4000
			30172-1	Ⓜ\$X	MS400/C/BU	M59/S	6	High Efficacy, Base Up ± 15° Coated (374, 377)	—	11 1/2	20,000	39,200	27,440	65	3900

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



HIGH INTENSITY DISCHARGE LAMPS

Metal Halide Lamps, High Pressure Sodium Lamps

Watts	Bulb	Base	Product Number	Symbols Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	CRI	CCT (K)
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METAL HALIDE LAMPS CONTINUED (372)

Enclosed luminaires only unless otherwise noted

1000	BT37	Mog.	32150-5	★	MHI000/U/BT37	M47/E	6	G, Clear (359, 377, 385, 393)	7	1 1/2	10,000	110,000	71,500	65	3700
	BT56	Mog.	41522-4	)★†	MHI000/U	M47/E	6	G, S, Clear (377, 385, 393)	9 1/2	15%	12,000	114,000	79,800	65	3900
			41523-2	)★†	MHI000/C/U	M47/E	6	G, S, Coated (377, 385, 393)	—	15%	12,000	110,000	77,000	65	3500
			29826-5	)★✕	MHI000/U	M47/S	6	G, S, Clear (377, 385, 393)	9 1/2	15%	12,000	110,000	71,000	65	3700
			29827-3	)★✕	MHI000/C/U	M47/S	6	G, S, Coated (377, 385, 393)	—	15%	12,000	104,500	65,800	70	3400
			25093-6	)★✕	MSI000/BU	M47/S	6	High Efficacy, Base Up ± 15° Clear (374, 377)	9 1/2	15%	10,000	120,000	78,000	65	3700
			25137-1	)★✕	MSI000/C/BU	M47/S	6	High Efficacy, Base Up ± 15° Coated (374, 377)	—	15%	10,000	115,000	72,500	70	3400
1500	BT56	Mog.	13162-3	★	MHI500/U	M48/E	6	G, S, Clear (359, 374, 375, 377, 402)	9 1/2	15%	3000	155,000	124,000	60	3700

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

Incandescent color quality, GX12-1 base compact high pressure sodium lamps to be operated on Advance eVision IWSNI00CLF and IWSNI00CBLS electronic ballast only

100	T6	GX12-1	13425-4	□★	SDW-TG 100W/T6/825	S167	12	G	2 1/2	4 1/2	10,000	4900	4165	83	2550
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WHITE SON HIGH PRESSURE SODIUM LAMPS (360, 373, 376, 394)

Incandescent color quality

50	T10	PG12	30229-9	□★	SDW-T 50W/LV	S104	12	G	3 3/8	5 1/8	10,000	2300	2070	83	2500
100	T10	PG12	30228-1	□★	SDW-T 100W/LV	S105	12	G	3 3/8	5 1/8	10,000	5000	4250	83	2550
	BD17	Med.	31346-0	■□★	SDW-100W/LV/D	S105	12	G	—	5 1/8	10,000	4900	4170	85	2700

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

Improved color rendering

70	BD17	Med.	30617-5	★	C70S62/C/M	S62	12	G	3 3/8	5 1/8	15,000	4400	3960	60	2200
100	BD17	Med.	30635-7	★	C100S54/C/M	S54	12	G	3 3/8	5 1/8	15,000	7800	7020	60	2200
150	BD17	Med.	30647-2	★	C150S55/C/M	S55	12	G	3 3/8	5 1/8	15,000	12,000	10,800	60	2200
400	ED18	Mog.	30652-2	★	C400S51/C	S51	12	G	5 3/8	9 3/8	15,000	37,500	33,750	65	2200

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



HIGH INTENSITY DISCHARGE LAMPS

High Pressure Sodium Lamps

Watts	Bulb	Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.) (351)	Approx. Initial Lumens (352)	Approx. Mean Lumens (353)	CRI	CCT (K)
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CERAMALUX HIGH PRESSURE SODIUM LAMPS (360, 373)

Featuring ALTO Lamp Technology

35	BD17	Med.	40979-7	★†	C35S76/M	S76	12	G (376)	3 1/8	5 1/8	24,000+	2250	2025	21	2100		
50	BD17	Med.	40980-5	★†	C50S68/M	S68	12	G (376)	3 1/8	5 1/8	24,000+	4000	3600	21	2100		
			ED23 1/2	Mog.	36867-0	★●	C50S68/ALTO	S68	12	G, S (376)	5	7 1/4	24,000+	4000	3600	21	2100
70	BD17	Med.	33192-6	★	C70S62/M	S62	12	G (376)	3 1/8	5 1/8	24,000+	6300	5850	21	2100		
			33214-8	★	C70S62/D/M	S62	12	G (376)	—	5 1/8	24,000+	5860	5270	21	2100		
			ED23 1/2	Mog.	36869-6	★●	C70S62/ALTO	S62	12	G, S (376)	5	7 1/4	24,000+	6500	5670	21	2100
100	BD17	Med.	34446-5	★	C100S54/M	S54S	12	G (376)	3 1/2	5 1/8	24,000+	9500	8550	21	2100		
			34448-1	★	C100S54/D/M	S54S	12	G (376)	—	5 1/8	24,000+	8800	7920	21	2100		
			ED23 1/2	Mog.	36872-0	★●	C100S54/ALTO	S54	12	G, S (376)	5	7 1/4	24,000+	9400	8460	21	2100
			33227-0	★●	C100S54/D/ALTO	S54	12	G, S (376)	—	7 1/4	24,000+	8610	7750	21	2100		
150	BD17	Med.	30347-9	★	C150S55/M	S55	12	G (376)	3 1/2	5 1/8	24,000+	16,000	14,400	21	2100		
			30348-7	★	C150S55/D/M	S55	12	G (376)	—	5 1/8	24,000+	15,000	13,500	21	2100		
			ED23 1/2	Mog.	36874-6	★●	C150S55/ALTO	S55	12	G, S (370, 376)	5	7 1/4	24,000+	15,800	14,220	21	2100
			ED28	Mog.	36876-1	★●	C150S56/ALTO	S56	12	G, S (370, 376)	5	8 1/8	24,000+	15,000	13,950	21	2100
200	ED18	Mog.	36877-9	★●	C200S66/ALTO	S66MN-200	12	G, S (376)	5 3/8	9 1/8	24,000+	21,400	19,260	21	2100		
250	ED18	Mog.	36879-5	★●	C250S50/ALTO	S50	12	G, S (376)	5 3/8	9 1/8	24,000+	27,000	24,300	21	2100		
360	ED18	Mog.	32292-5	★★✕	C360S51/EW	S51	12	EW, G, S (376)	5 3/8	9 1/8	24,000+	46,000	41,450	21	2100		
400	ED18	Mog.	36881-1	★●	C400S51/ALTO	S51	12	G, S (376)	5 3/8	9 1/8	24,000+	50,000	45,000	21	2100		
600	T14	Mog.	23982-2	■★	C600S106	S106	12	G (376)	6 1/8	11 1/8	24,000+	90,000	81,000	21	2100		
1000	ED25	Mog.	36883-7	■★●	C1000S52/ALTO	S52XB-1000	6	G, S (359, 362, 376)	8 1/4	15 1/8	24,000	140,000	126,000	21	2100		
			ED37	Mog.	32386-5	■★	C1000S52/ED37	S52	6	G, S (376)	7	11 1/2	24,000	125,000	112,000	21	2100

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



HIGH INTENSITY DISCHARGE LAMPS

High Pressure Sodium Lamps

Watts	Bulb	Base	Product Number	Symbols Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401,407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	Approx. CRI	CCT (K)
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CERAMALUX HIGH PRESSURE SODIUM NON-CYCLING LAMPS (360, 373, 376)

Featuring ALTO Lamp Technology

50	ED23½	Mog.	20224-2	★ ●	C50S68/ALTO NC HPS	S68	20	G, S	5	7%	30,000	4000	3600	21	2100
70	ED23½	Mog.	14739-7	★ ●	C70S62/ALTO NC HPS	S62	12	G, S	5	7%	30,000	6300	5670	21	2100
100	ED23½	Mog.	14740-5	★ ●	C100S54/ALTO NC HPS	S54	12	G, S	5	7%	30,000	10,000	9000	21	2100
150	ED23½	Mog.	14741-3	★ ●	C150S55/ALTO NC HPS	S55	12	G, S	5	7%	30,000	16,000	14,400	21	2100
200	ED18	Mog.	15725-5	★ ●	C200S66/ALTO NC HPS	S66	12	G, S	5½	9%	30,000	22,000	19,800	21	2100
250	ED18	Mog.	14742-1	★ ●	C250S50/ALTO NC HPS	S50	12	G, S	5½	9%	30,000	28,500	25,650	21	2100
400	ED18	Mog.	14743-9	★ ●	C400S51/ALTO NC HPS	S51	12	G, S	5½	9%	30,000	50,000	45,000	21	2100
1000	ED25	Mog.	15726-3	★ ●	C1000S52/ALTO NC HPS	S52	6	G, S	8½	15½%	30,000	130,000	117,000	21	2100

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

50	ED23½	Mog.	35467-0	■ ★	C50S68/2	S68	12	G, S	5	7%	24,000+	3800	3450	21	2100
70	ED23½	Mog.	26541-3	■ ★	C70S62/2	S62	12	G, S	5	7%	24,000+	5600	5050	21	2100
100	ED23½	Mog.	26560-3	■ ★	C100S54/2	S54	12	G, S	5	7%	24,000+	9100	8190	21	2100
150	ED23½	Mog.	26561-1	■ ★	C150S55/2	S55	12	G, S	5	7%	24,000+	15,600	14,000	21	2100
250	ED18	Mog.	37717-6	■ ★	C250S50/2	S50	12	G, S	5½	9%	24,000+	27,500	24,750	21	2100
400	ED18	Mog.	37688-9	■ ★	C400S51/2	S51	12	G, S	5½	9%	24,000+	49,000	44,000	21	2100
1000	ED25	Mog.	20412-3	■ ★	C1000S52/2	S52	6	G, S	8½	15½%	24,000+	140,000	126,000	21	2100

HIGH PRESSURE SODIUM—HORTICULTURE LAMPS (360, 373)

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

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

Watts	Bulb	Base	Product Number	Symbols Footnotes	Ordering Code	ANSI Code Ballast Ref. or MBCP*	Pkg. Qty.‡	Description (401,407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	Approx. CRI	CCT (K)
430	ED18	Mog.	31710-7	★	SON AGRO 430W	S145/S51	12	AGRO (389, 396)	5½	9%	16,000	54,000	48,600	670	2100
1000	ED25	Mog.	14064-0	■ ★	C1000S52/AGROLITE XT	S52	6	AGRO (359, 362, 376)	8½	15½%	15,000	146,000	135,780	1850	2100

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

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



HIGH INTENSITY DISCHARGE LAMPS

Low Pressure Sodium Lamps

Watts	Bulb Base	Product Number	Symbols, Footnotes	Ordering Code	ANSI Code Ballast Ref.	Pkg. Qty.‡	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.) (351)	Approx. Initial Lumens (352)	Approx. Mean Lumens (353)	CRI	CCT (K)
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LOW PRESSURE SODIUM LAMPS—SOX

18	T17	D.C. Bay 23404-7	□	SOX-E18	L69	12	Clear Base Up ± 110°	5½	8½	18,000	1800	1530	—	1700
35	T17	D.C. Bay 32781-7		SOX35	L70	12	Clear Base Up ± 110°	—	12¾	18,000	4550	3870	—	1700
55	T17	D.C. Bay 32151-3		SOX55	L71	12	Clear Base Up ± 110°	9½	16¾	18,000	7800	6630	—	1700
90	T21	D.C. Bay 32152-1		SOX90	L72	12	Clear Horizontal ± 20°	—	20¾	18,000	14,300	12,155	—	1700
135	T21	D.C. Bay 32153-9		SOX135	L73	12	Clear Horizontal ± 20°	—	30¾	18,000	22,600	19,210	—	1700
180	T21	D.C. Bay 15116-7		SOX180	L74	6	Clear Horizontal ± 20°	—	44¾	18,000	32,000	22,400	—	1700

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



HIGH INTENSITY DISCHARGE LAMPS

Mercury Vapor Lamps

Watts	Bulb Base	Product Number	Product Symbols	Ordering Footnotes Code	ANSI Code Ballast Ref.	Pkg. Qty.:	Description (401, 407)	LCL (In.)	MOL (In.)	Rated Avg. Life (Hrs.)(351)	Approx. Initial Lumens(352)	Approx. Mean Lumens(353)	Approx. CRI	Approx. CCT (K)
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MERCURY VAPOR LAMPS

50	BD17 Med.	35664-2	★	H46DL-40-50/DX	H46	12	G, (379, 384)	—	5/8	24,000+	1580	1260	45	3200
75	BD17 Med.	27524-8	★	H43AV-75/DX	H43	12	G, S, (379)	—	5/8	24,000+	2800	2250	45	3200
100	A23 Med.	35658-4	★	H38MP-100/DX	H38	24	G, (379)	—	5/8	24,000+	4300	3700	45	3700
	ED23 1/2 Mog.	33713-9	★	H38JA-100/DX	H38	12	G, S (379)	—	7/8	24,000+	4400	3400	45	3700
175	ED28 Mog.	31965-7	★	H39KB-175	H39	12	G, S, B (355)	5	8/8	24,000+	7900	7400	20	6800
	ED28 Mog.	24805-4	★	H39KC-175/DX	H39	12	G, S (379)	—	8/8	24,000+	7900	7600	45	3700
250	ED28 Mog.	31985-5	★	H37KB-250	H37	12	G, S, B (355)	5	8/8	24,000+	12,100	10,500	20	6700
	ED28 Mog.	24814-6	★	H37KC-250/DX	H37	12	G, S (379)	—	8/8	24,000+	13,000	10,700	45	3700
400	ED37 Mog.	24842-7	★	H33GL-400/DX	H33	6	G, S (379)	—	1 1/8	24,000+	23,000	19,100	45	3700
1000	BT56 Mog.	39707-5	★	H36GW-1000/DX	H36	6	G, S (359, 379)	—	1 5/8	24,000+	59,000	54,000	45	3600

Descriptive symbols for Mercury Vapor Lamps:

- B—Black Light
- FF—Frosted Face
- G—General Lighting
- RF—Reflector Flood
- S—Street Lighting
- VW—Very Wide

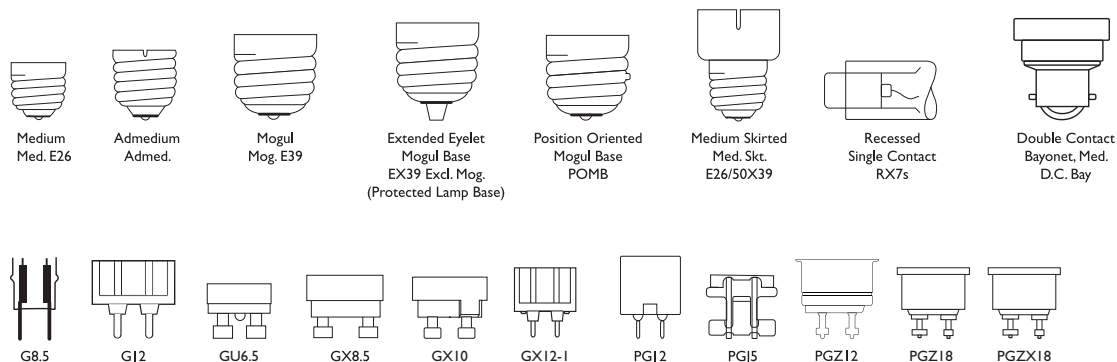
For the most current product information, go to the e-catalog on www.philips.com
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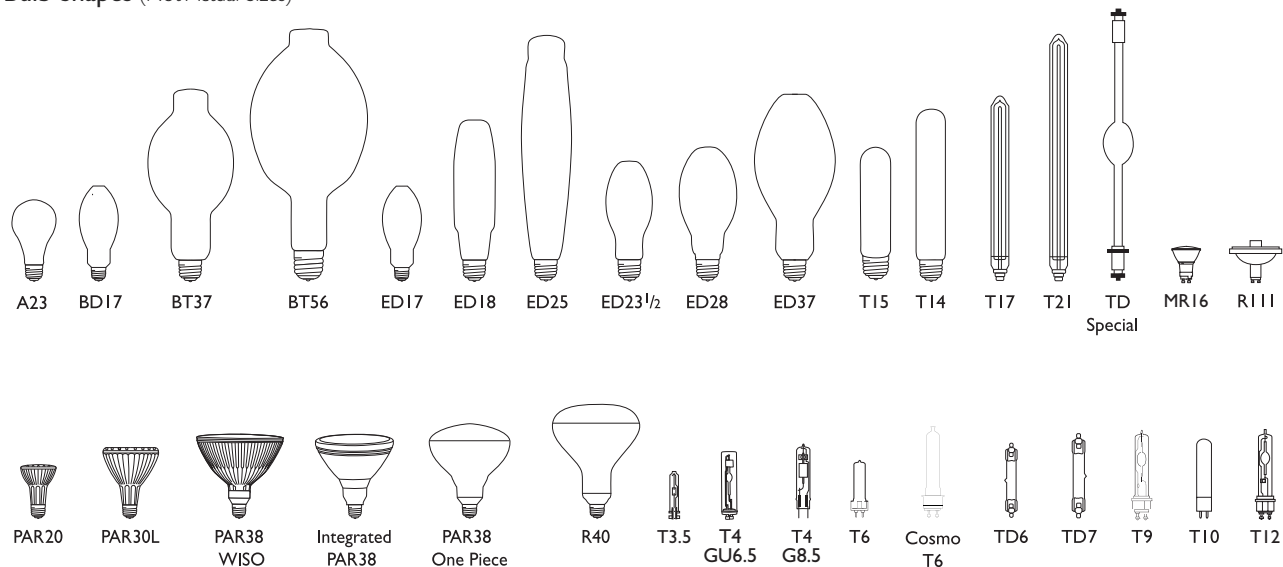
HIGH INTENSITY DISCHARGE LAMPS

Base Types and Bulb Shapes

Base Types (Not Actual Sizes)



Bulb Shapes (Not Actual Sizes)



HIGH INTENSITY DISCHARGE LAMPS

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

□ Exclusive to Philips Lighting Company

■ Nickel plated brass base

§ Energy Saving Product

▲ Aluminum base

★ Heat resisting glass bulb

◆ Maximum Beam Candlepower

) Can be used in open luminaire, only if operated vertically $\pm 15^\circ$

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

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

⊙ This Bulb Meets US Federal Minimum Efficiency Standard

† New since last printing

◇ Designed for instant start operation.

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

G = General Lighting

S = Street Lighting

▼ PAR38 (one piece)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(384) For 40W operation use H45 ballast.

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

(385) Rated average life: vertical $\pm 15^\circ$. 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 430W S145 SON AGRO ballasts.

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

(392) Supply volts must be $\pm 5\%$ 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.

(396) UV filtered design (FadeBlock).

(397) Operate only on thermally protected ballasts.

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

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

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

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

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

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

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

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

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