

METAL HALIDE LAMPS

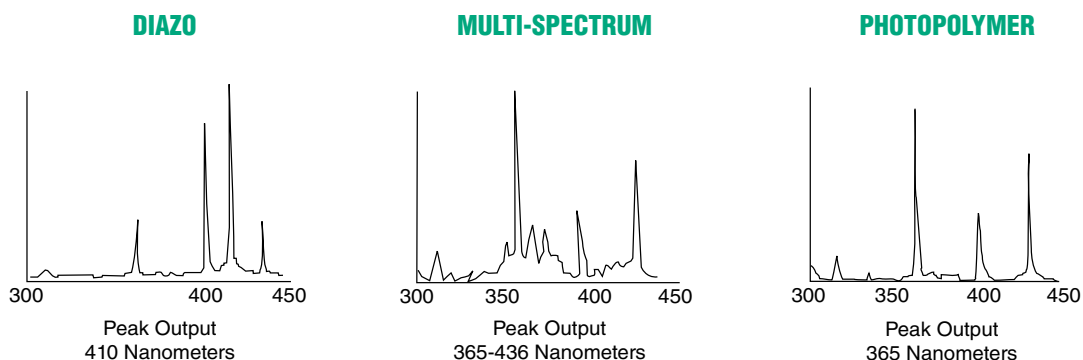
USHIO MHL series metal halide lamps contain mercury, scandium and various other metal halogens in an inner bulb that produces a very high light output. As the high temperature of the arc discharge excites the halogenides to evaporate and separate into atoms, the metallic atoms illuminate and release the predetermined target ultraviolet wavelength. The mercury line of 365 nanometers remains present, and although depressed in strength, the combination of these halogenides effect the required ultraviolet wavelengths required for photopolymer, multi-spectrum and diazo processing applications.

For the operation of an MHL lamp, bridge-gap ballasts designed specially for metal halide lamps should be used. Bridge-gap ballasts are designed with a higher open circuit secondary and a higher current carrying capacity. A thermal fuse should also be integrated into the ballast.

LAMP OPERATION AND SAFETY

Metal halogens are extremely active compounds producing high levels of both UV-A and short-wave UV-B and UV-C radiation known to be harmful to the human eye and skin. To avoid danger, the bulb temperature must be maintained within the recommended limits. As the bulb temperature rises, high internal pressure can build to the fracturing point of the quartz; to stay within the safety limits the temperature must not exceed 850°C. As with mercury vapor lamps, metal halide lamps should be operated and handled only under the direction and supervision of qualified personnel.

SPECTRAL ENERGY DISTRIBUTION



METAL HALIDE & MERCURY LAMPS

MHL



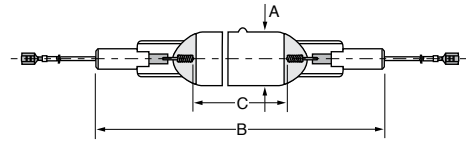
Watts (W)	Ordering Code	Lamp Description	Dimensions (mm)			Spectral Range (nm)	Lead Wire Length (mm)	Base	Contact	Process	Fig
			Dia (A)	MOL (B)	LL (C)						
1000	5000061	MHL-1000	25	130	24	400-450	90	Ceramic	AMP Connector	Diazo	1
1200	5000062	MHL-1000/1	23	147	68	350-370	—	RSC	RX7s	Photo-Polymer	2
1000	5000064	MHL-1000S	25	134	24	400-450	80	Ceramic/THS	AMP Connector	Diazo	3
1000	5000065	MHL-1007	25	130	24	300-450	90	Ceramic	AMP Connector	Multi-Spectrum	1
450	5000068	MHL-12	16	110	31	400-450	300	Ceramic	Wire Insulated	Diazo	4
3000	5000071	MHL-121HT	25	181	86	400-450	—	Metal 14.3mm	Metal	Diazo	5
1000	5000072	MHL-13	28	159	75	400-450	300	Ceramic	Wire Insulated	Diazo	4
2000	5000073	MHL-1403	25	180	86	300-450	—	Metal 9.5mm	Metal	Multi-Spectrum	5
1500	5000078	MHL-1507S	25	134	24	300-450	80	Ceramic/THS	AMP Connector	Multi-Spectrum	3
6000	5000079	MHL-153LY	28	240	127	300-450	60	Ceramic	AMP Connector	Multi-Spectrum	6
2000	5000081	MHL-17	28	189	102	400-450	—	Ceramic	Wire Insulated	Diazo	4
5000	5000082	MHL-170L	28	189	102	400-450	56	Ceramic	Spade Tongue	Diazo	7
2000	5000084	MHL-2000/1	25	172	75	400-450	—	Metal 14.3mm	Metal	Diazo	5
2000	5000085	MHL-2000/2	25	180	86	350-370	—	Metal 9.5mm	Metal	Photo-Polymer	8
2000	5000086	MHL-2000/3	25	180	86	400-450	—	Metal 9.5mm	Metal	Diazo	8
250	5000089	MHL-250	15.5	68	18	300-450	—	RCS	R7s	Multi-Spectrum	9
2000	5000788	MHL-252L	28	189	102	300-450	56	Ceramic	Spade Tongue	Multi-Spectrum	7
5000	5000090	MHL-261L	28	189	102	350-370	56	Ceramic	Spade Tongue	Photo-Polymer	7
8000	5000091	MHL-280L	28	250	154	400-450	95	Ceramic	Spade Tongue	Diazo	10
8000	5000092	MHL-281L	28	247	127	300-450	60	Ceramic	Spade Tongue	Multi-Spectrum	11
8000	5000093	MHL-282L	28	247	127	400-450	60	Ceramic	Spade Tongue	Diazo	11
3000	5000098	MHL-3001S	28	133	47	400-450	90	Ceramic/THS	AMP Connector	Diazo	3
3000	5000102	MHL-3007S	28	133	47	300-450	90	Ceramic/THS	AMP Connector	Multi-Spectrum	3
3000	5000104	MHL-3027S	25	190	102	300-450	90	Ceramic/THS	AMP Connector	Multi-Spectrum	3
6000	5000106	MHL-33LY	24.4	240	127	300-450	60	Ceramic	AMP Connector	Multi-Spectrum	6
6000	5000107	MHL-38KT	28	222	120	400-450	—	Metal 12.7mm	Metal	Diazo	5
3500	5000112	MHL-4007	28	230	102	300-450	—	Metal/Wing	Metal	Multi-Spectrum	12
450	5000114	MHL-450	16.3	106	31	300-450	—	RSC	R7s	Multi-Spectrum	9
450	5000115	MHL-460	16.3	106	31	400-450	—	RSC	R7s	Diazo	9
5000	5000116	MHL-5000	28	190	102	400-450	100	Ceramic	AMP Connector	Diazo	1
5000	5000118	MHL-5000/4	25	281	175	400-450	—	Metal 14.3mm	Metal	Diazo	5
5000	5000120	MHL-5000/7	25	281	175	300-450	—	Metal 14.3mm	Metal	Multi-Spectrum	5
5000	5000124	MHL-5007S	28	190	102	300-450	90	Ceramic/THS	AMP Connector	Multi-Spectrum	3
5000	5000126	MHL-5020	28	240	154	400-450	150	Ceramic	AMP Connector	Diazo	1
5000	5000127	MHL-5020S	28	240	154	400-450	150	Ceramic/THS	AMP Connector	Diazo	3
5000	5000128	MHL-5027	28	240	154	300-450	150	Ceramic	AMP Connector	Multi-Spectrum	1
5000	5000129	MHL-5027S	28	240	154	300-450	150	Ceramic/THS	AMP Connector	Multi-Spectrum	3
6000	5000132	MHL-6027S	28	215	127	300-450	160	Ceramic/THS	AMP Connector	Multi-Spectrum	3
7500	5000135	MHL-8027S	28	215	127	300-450	160	Ceramic/THS	AMP Connector	Multi-Spectrum	3



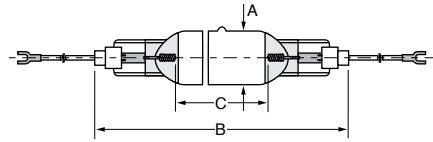
(Hg) - LAMP CONTAINS MERCURY

MHL

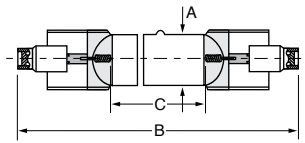
Base: Ceramic
Contact: AMP Connector
Wire: Insulated



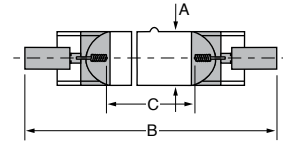
Base: Ceramic
Contact: Spade Tongue
Wire: Insulated



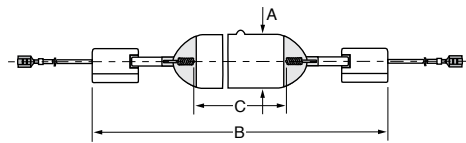
Base: RSC
Contact: RX7s



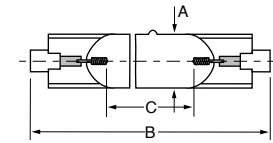
Base: Metal
Contact: Metal



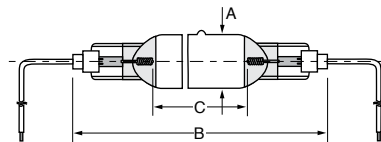
Base: Ceramic/THS
Contact: AMP Connector
Wire: Insulated



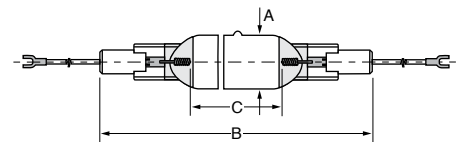
Base: RSC
Contact: R7s



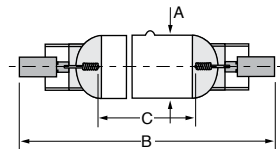
Base: Ceramic
Contact: Wire Insulated



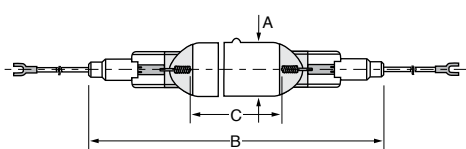
Base: Ceramic
Contact: Spade Tongue
Wire: Insulated



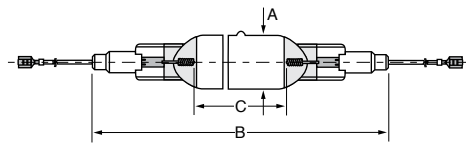
Base: Metal
Contact: Metal



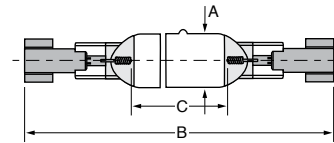
Base: Ceramic
Contact: Spade Tongue
Wire: Insulated



Base: Ceramic
Contact: AMP Connector
Wire: Not Insulated



Base: Metal Wing
Contact: Metal



(Hg) - LAMP CONTAINS MERCURY