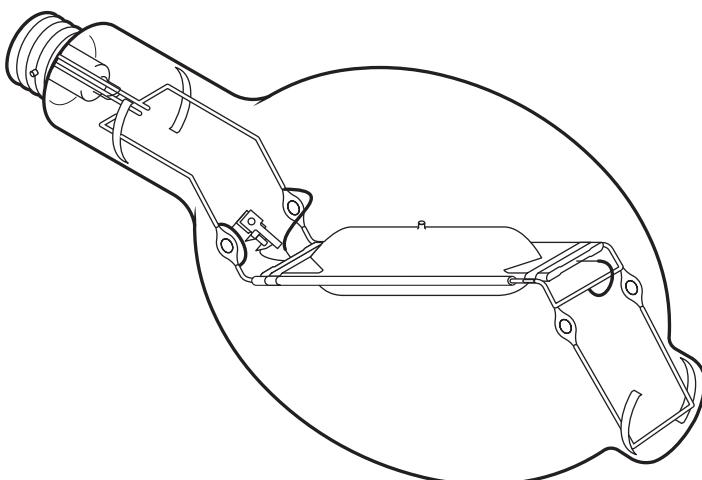
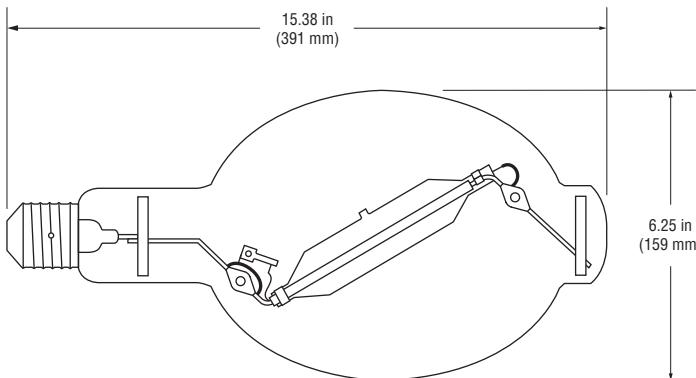


**Z-Lamp™ Lamp and Ballast — 1500 Watt, 60 Hertz****Lamp Data****Physical Characteristics**

Lamp type .....	Z-Lamp™ HID metal halide (MH 1500/MZ)
Lamp designation .....	M48
Bulb designation .....	BT-56
Bulb finish .....	Clear
Operating position .....	Arc tube horizontal
Base .....	Mogul screw position oriented

**Smart Lamp® Operating System Characteristics<sup>1</sup>**

Constant lumens <sup>2</sup> .....	134 000 lm
Useful lamp life <sup>3</sup> .....	5000 h
CIE correlated color temperature (approximate) .....	4200 K
Color rendering index (CRI) .....	R <sub>a</sub> = 65 – 70
Warm-up time (80% output) .....	3 – 5 min
CIE chromaticity coordinates (X, Y) .....	(0.370, 0.390)
Average lamp wattage <sup>2</sup> .....	1450 W
Restrike time for hot lamp .....	10 – 15 min
Maximum operating lamp current .....	6.0 A
Minimum ambient starting temperature .....	-20 °F (-30 °C)



## Footnotes:

- 1) Photometric and life testing conducted by an ISO 17025 accredited lab (Musco Sports-Lighting Photometry Lab, NVLAP Lab Code 200702-0). Operating characteristics are per the Musco Smart Lamp® operating system on a commercial ballast with arc tube horizontal. Lamp lumen measurements in accordance with IES LM-51-00. Lamp color data in accordance with IES LM-58-94. Lamp operating cycle of five hours per start to reflect expected field use in the sports lighting industry.
- 2) Lamp starts out at a reduced wattage and increases over life to offset lumen loss as lamp ages. Power dissipated by auxiliary equipment such as ballast, is not included in the lamp wattage shown.
- 3) Beyond 5000 hours is the time when constant lumens are no longer maintained by the Smart Lamp operating system. Average rated lamp life before failure is substantially greater than 5000 hours as tested and defined per IES LM-47-01 with five hours per start.

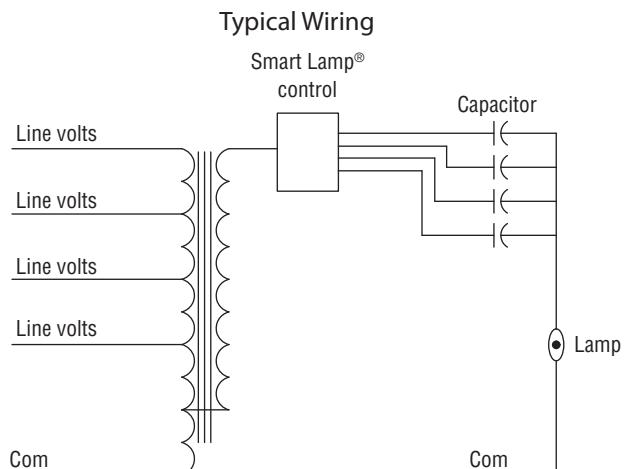
**Z-Lamp™ Lamp and Ballast — 1500 Watt, 60 Hertz****Ballast Data****Physical Characteristics**

Ballast type ..... Constant Wattage Autotransformer (CWA)  
 Ballast designation ..... M48  
 Ballast approvals ..... UL Recognized Component, CSA Certified

**Electrical Data**

Power factor ..... 97%  
 Line volts regulation\* .....  $\pm 10\%$   
 Lamp watts regulation\* .....  $\pm 10\%$   
 Nominal input power ..... 1564 W  
 UL insulation class ..... N (200 °C)  
 UL coil temperature code 1029 ..... A

\*Musco requires line voltage within  $\pm 3\%$  to maintain light levels.



Input voltage/frequency	208 V/60 Hz	240 V/60 Hz	277 V/60 Hz	480 V/60 Hz
Maximum operating line current	8.6 A	7.5 A	6.5 A	3.7 A
Starting line current	7.4 A	6.5 A	5.3 A	2.9 A
Fuse rating	20 A	20 A	15 A	15 A

**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 USA:21CFR 1040.30 Canada:SOR/DORS/80-381.

**Caution**

Arc tubes of metal halide lamps are designed to operate under high pressure and at temperatures up to 1832 °F (1000 °C). If the arc tube ruptures for any reason, pieces of extremely hot glass might be discharged into the surrounding environment, with an associated risk of personal injury, property damage, burns, and fire.

To reduce the possibility of arc tube rupture, turn lamps off at least once per week for at least 15 minutes, in systems which are otherwise operating on a continuous basis (24 hours/day, 7 days/week).

Clean exterior luminaire lens when replacing lamp.



Hg - LAMP CONTAINS MERCURY

Manage in Accord with Disposal Laws

See [www.lamprecycle.org](http://www.lamprecycle.org) or call  
1-800-825-6020 or +1-641-673-0411.