

PULSESTRIKE™ METAL HALIDE

PULSE-START METAL HALIDE FOR GENERAL LIGHTING

The USHIO PulseStrike™ Metal Halide lamps utilize a specialized formed-body arc tube where the quartz glass is contoured to follow the natural curve of the arc stream between the electrodes. This advanced arc tube design allows for the use of a higher fill gas pressure in the arc chamber, which dramatically reduces the damage to the electrodes caused by electrode evaporation. This permits an increase in life and superior lumen maintenance.

PulseStrike™ Metal Halide lamps produce higher lumens per watt, superior color uniformity, and greater energy savings. These lamps can reduce warm-up time by 50% and improve hot restrike time by 75% when compared to standard probe-start Metal Halide lamps.

Available in - Medium Base E26: 70W, 100W, and 150W
Mogul Base E39, EX39: 250W, 320W, 350W, and 400W

FEATURES & BENEFITS:

- High Efficacy - Increased Luminous Flux
- Better Color Performance and Consistency
- 50% Faster Warm-Up Time (2 Minutes vs. 4 Minutes) - Reduces Electrode Wear up to 50%
- Improved Hot Restrike Capability (4 Minutes vs. 15 Minutes) - Up to 75% Faster than Probe-Start
- Universal Burn Position

APPLICATIONS:

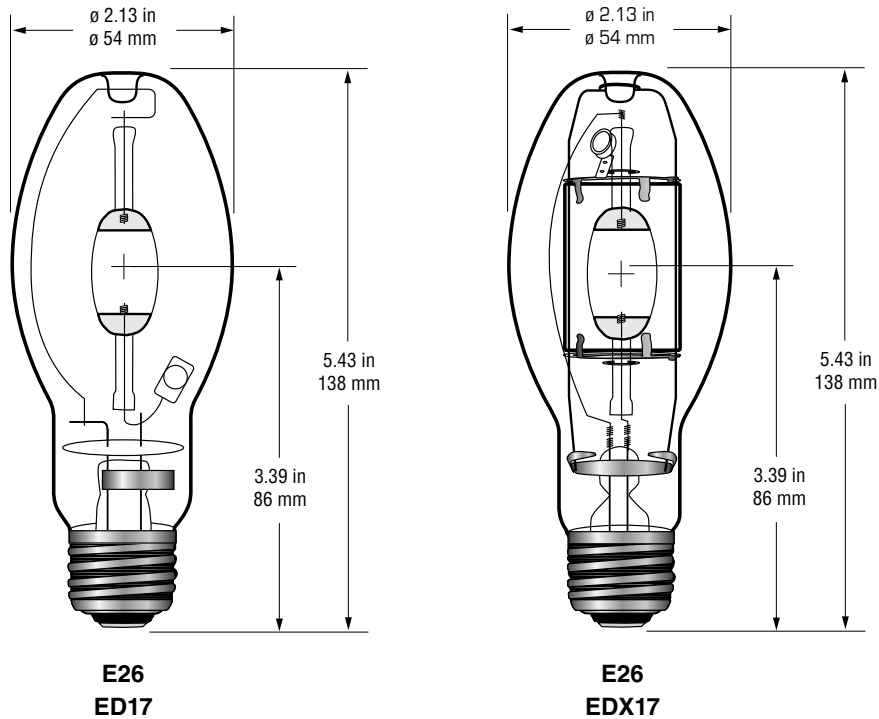
- Commercial and Industrial
- Flood Lighting
- Stadium and Sports Facilities
- Downlighting
- Parking Garages / Lots
- Security
- Retail
- Retrofit / Upgrade
- Gas Stations



USHIO

Pulse-Start Metal Halide for General Lighting

Color Rendering Index:
 65 CRI - 70W & 100W
 68 CRI - 150W



Case Quantity: 12

Watts (W)	Ordering Code	Lamp Description	Bulb Type	Bulb Finish	Color Temp (K)	Initial Lumens		Approx Mean Lumens		Average Rated Life (h)	ANSI Ballast / Fixture
						Vert. Burn Position	Hor. Burn Position	Vert. Burn Position	Hor. Burn Position		
PULSESTRIKE™ - Medium Screw Base											
70	5001342	MP70/U/MED/32/PS	EDX17	Clear	3200	5500	5200	4100	3300	15000*	M98/O
70	5001344	MH70/U/MED/40/PS	ED17	Clear	4000	6000	4850	4100	3150	15000*	M98/E
70	5001346	MP70/U/MED/40/PS	EDX17	Clear	4000	5500	5150	4000	3550	15000*	M98/O
100	5001414	MP100/U/MED/32/PS	EDX17	Clear	3200	8800	8400	5700	5575	15000*	M90/O
100	5001348	MH100/U/MED/40/PS	ED17	Clear	4000	8500	8100	5300	5100	15000*	M90/E
100	5001350	MP100/U/MED/40/PS	EDX17	Clear	4000	8100	8050	4900	4800	15000*	M90/O
150	5001354	MP150/U/MED/32/PS	EDX17	Clear	3200	13300	12400	9200	8300	15000*	M102/O
150	5001356	MH150/U/MED/40/PS	ED17	Clear	4000	14000	12100	9700	9600	15000*	M102/E
150	5001358	MP150/U/MED/40/PS	EDX17	Clear	4000	12300	12200	9500	9400	15000*	M102/O

ANSI Fixture Requirement:
 /E = Enclosed Fixtures Only
 /O = Open or Enclosed Fixtures

Burn Cycle:
 *11 hours ON, 1 hour OFF
 (Recommended shut down 15 minutes per week)

All dimensions shown in inches unless otherwise noted.

(Hg) contains mercury
 contient du mercure

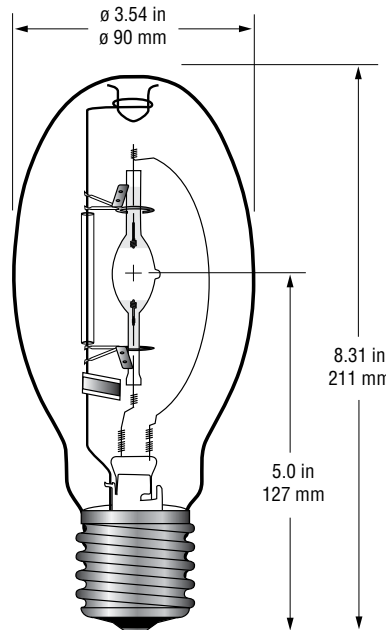


Manage in Accord with Disposal Laws
www.lamprecycle.org 1-800-895-8842

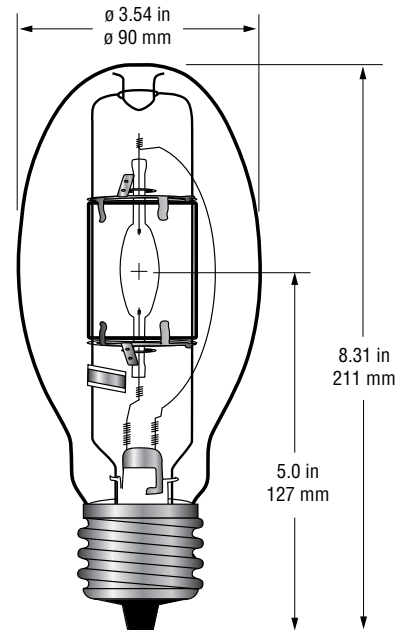
R - NON SELF-EXTINGUISHING LAMP

WARNING: This lamp 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. Lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available. Complies with the USA Federal Standard 21 CFR 1040.30 and Canada Standard SOR/80-381.

Color Rendering Index:
68 CRI - Mogul Base



**E39
ED28**



**EX39
ED28**

Case Quantity: 12

Watts (W)	Ordering Code	Lamp Description	Bulb Type	Bulb Finish	Color Temp (K)	Initial Lumens		Approx Mean Lumens		Average Rated Life (h)	ANSI Ballast / Fixture
						Vert. Burn Position	Hor. Burn Position	Vert. Burn Position	Hor. Burn Position		
PULSESTRIKE™ - Mogul Screw Base											
250	5001360	MH250/U/MOG/40/PS	ED28	Clear	4000	25000	23500	19000	17500	15000*/20000**	M153/E
250	5001362	MP250/U/MOG/40/PS	ED28	Clear	4000	26000	24500	19500	18200	15000*/20000**	M153/O
320	5001364	MH320/U/MOG/40/PS	ED28	Clear	4000	32500	31500	25500	25000	20000*/30000**	M154/E
320	5001366	MP320/U/MOG/40/PS	ED28	Clear	4000	32500	30500	23000	22000	20000*/30000**	M154/O
350	5001368	MH350/U/MOG/40/PS	ED28	Clear	4000	37000	35500	28000	27000	20000*/30000**	M131/E
350	5001370	MP350/U/MOG/40/PS	ED28	Clear	4000	39000	36500	29000	26500	20000*/30000**	M131/O
400	5001372	MH400/U/MOG/40/PS	ED28	Clear	4000	40000	39000	32000	30000	20000*/30000**	M155/E
400	5001374	MP400/U/MOG/40/PS	ED28	Clear	4000	42000	41000	30500	30000	20000*/30000**	M155/O

ANSI Fixture Requirement:

/E = Enclosed Fixtures Only
/O = Open or Enclosed Fixtures

Burn Cycle:

*11 hours ON, 1 hour OFF
**120 hours ON, 1 hour OFF
(Recommended shut down 15 minutes per week)

All dimensions shown in inches unless otherwise noted.

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R - NON SELF-EXTINGUISHING LAMP

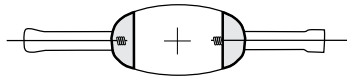
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Pulse-Start Metal Halide for General Lighting

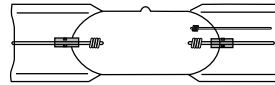
What is the difference in Metal Halide arc tube bodies?

PulseStrike™ pulse start lamps have formed body arc tubes and require an ignitor to start the lamp. Standard Metal Halide lamps have pinched arc tubes with a probe start electrode and uses a bi-metal switch and the crest voltage to start the lamp.

- Precise geometry tolerances
- Smaller mass; accelerates start up and cool down
- Superior lumen maintenance
- Envelope contour follows natural curve of arc stream



**PulseStrike™
Formed Body**

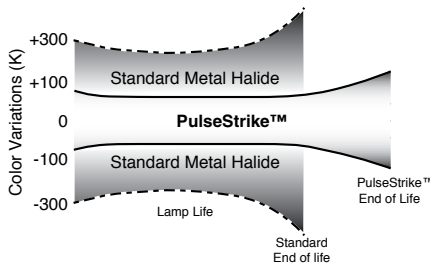


**Standard Metal Halide
Pinched Body (Probe Start)**

- Uses additional probe start electrode
- Larger cold surface area; reduce Metal Halide efficiency
- Standard technology, over 35 years old

Improved Color Uniformity

The formed arc tubes of PulseStrike lamps are manufactured to precise geometry tolerances. Thus the temperature of the arc tube can be controlled more accurately, reducing color temperature differences from lamp to lamp and improving color maintenance over the life of the lamp.



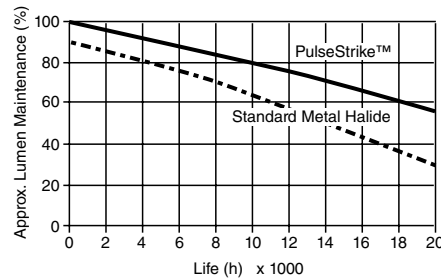
Energy Saving

The formed arc tube of PulseStrike lamps and the use of pulse start technology ballasts enables the PulseStrike lamps to produce up to 105 lm/W. Standard Metal Halide lamps begin life at a lower efficacy of approximately 80 lm/W and their light output may rapidly decrease over time.

A facility requiring fifty standard 400W standard Metal Halide lamps, can be fitted with 320 W PulseStrike lamps for an annual energy savings of \$5,250. \$105 per fixture savings @ \$0.15/kWh (24 hour operation cycle).

Superior Lumen Maintenance

In the formed arc tube of PulseStrike lamps, the use of a pulse start ignitor and low current crest factor results in less electrode wear and thus producing superior lumen maintenance over the life of the lamp. In standard pinched body Metal Halide lamps, the probe start electrode is not in use when the lamp is burning; consequently, resulting in additional tungsten evaporation, quicker blackening of the arc tube and reduced light.



Faster Start-up and Restrike Time

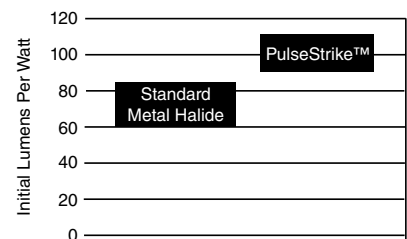
The formed arc tube of PulseStrike lamps and the use of a high voltage ignitor, enables the Metal Halide gases to be broken up faster (up to 50%), allowing a higher gas fill pressure. The formed arc tube design furthermore means less mass that has to be heated, thus resulting in a faster start up time. This also ensures quicker cool-down time, allowing the lamp to be restruck faster.

Longer Life

PulseStrike lamps have a long rated life, and maintain high light output over the life of the lamp. This enables the user to replace lamps less, thereby saving on lamp and lamp change-out costs. Standard Metal Halide lamps have long rated lamp life; however, due to the lumen output drop over lifetime, they become inefficient very quickly.

Higher Lumen Per Watt Efficacy

PulseStrike lamps are 20% more effective at the beginning of lamp life, boasting up to 160 lm/W and approximately 40% more efficient over the life of the lamp. This gives a superior mean lumen package. Standard Metal Halide lamps have an efficacy of approximately 80 lm/W. This light output rapidly decreases over time.



Better Cold Starting

The formed arc tube of PulseStrike lamps and the use of a high voltage ignitor, again enables the higher fill pressure Metal Halide gases to be broken up faster. This enables the use of these lamps in very cold areas as low as -300 C, cold storage facilities and freezer warehouses. Standard Metal Halide lamps take more than 6 minutes from start up to full lumen output and in very cold conditions, they may not start at all.