



METAL HALIDE LAMPS

PULSESTRIKE™ SERIES



PULSE START METAL HALIDE MEDIUM & MOGUL BASE FOR GENERAL LIGHTING

USHIO's 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 re-strike 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 re-strike capability (4 minutes vs. 15 minutes)— up to 75% faster than probe-start

APPLICATIONS

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

Distributed by:

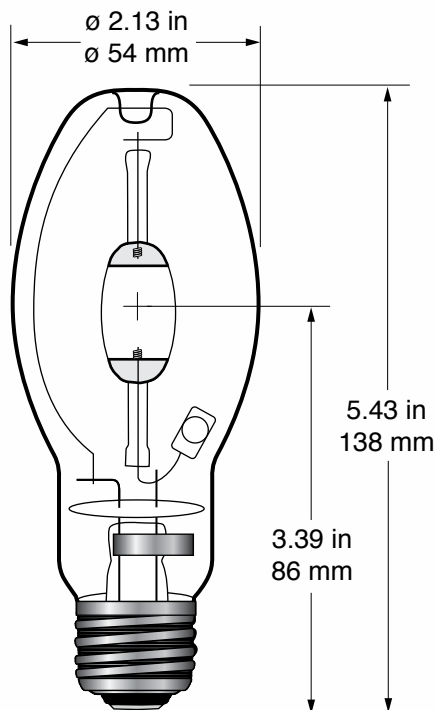
USHIO

CHARACTERISTICS & SPECIFICATIONS

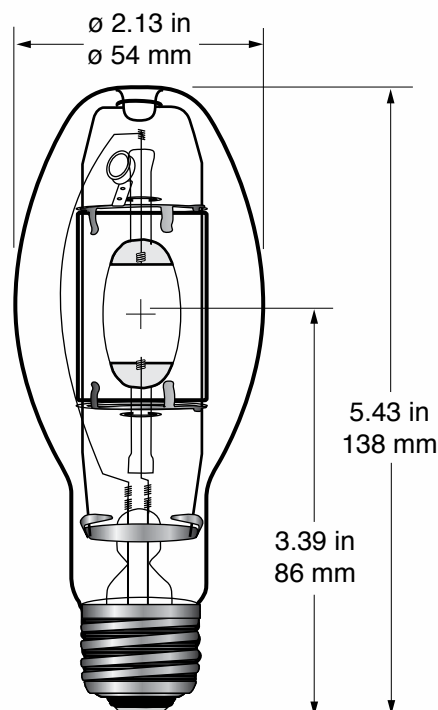
PULSESTRIKE™ METAL HALIDE

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

Medium Base:
E26 — Enclosed (/E)
and Open (/O) Fixture



ED17
/E = Enclosed fixtures only



EDX17
/O = Open or Enclosed fixtures

Watts (W)	Ushio Ordering Code	Ushio Lamp Description	ANSI Ballast	Bulb Type	Color Temp (K)	Initial Lumens Vert / Horiz Burn Position	Approx Mean Lumens Vert / Horiz Burn Position	Avg Life (h)
E26 MEDIUM BASE								
70	5001342	MP70/U/MED/32/PS	M98/O	EDX17 Clear	3200	5500 / 5200	4100 / 3300	15000*
70	5001344	MH70/U/MED/40/PS	M98/E	ED17 Clear	4000	6000 / 4850	4100 / 3150	15000*
70	5001346	MP70/U/MED/40/PS	M98/O	EDX17 Clear	4000	5500 / 5150	4000 / 3550	15000*
100	5001414	MP100/U/MED/32/PS	M90/O	EDX17 Clear	3200	8800 / 8400	5700 / 5575	15000*
100	5001348	MH100/U/MED/40/PS	M90/E	ED17 Clear	4000	8500 / 8100	5300 / 5100	15000*
100	5001350	MP100/U/MED/40/PS	M90/O	EDX17 Clear	4000	8100 / 8050	4900 / 4800	15000*
150	5001354	MP150/U/MED/32/PS	M102/O	EDX17 Clear	3200	13300 / 12400	9200 / 8300	15000*
150	5001356	MH150/U/MED/40/PS	M102/E	ED17 Clear	4000	14000 / 12100	9700 / 9600	15000*
150	5001358	MP150/U/MED/40/PS	M102/O	EDX17 Clear	4000	12300 / 12200	9500 / 9400	15000*

Case Quantity: 12

Burn Position:
Medium E26 Base — Universal

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

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

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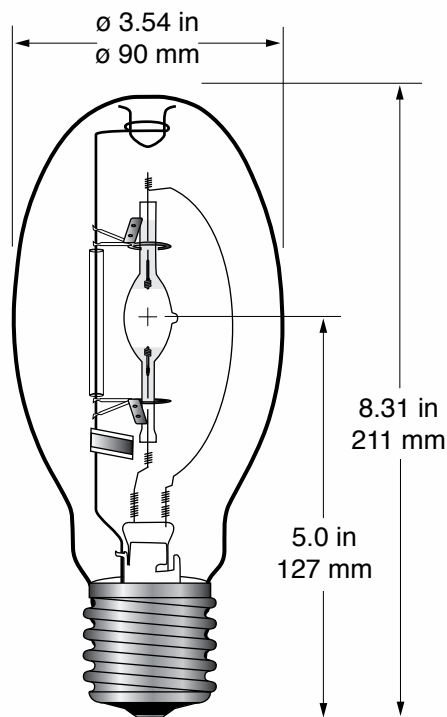
CHARACTERISTICS & SPECIFICATIONS

PULSESTRIKE™ METAL HALIDE

Color Rendering Index:
(4000K - 68 CRI)

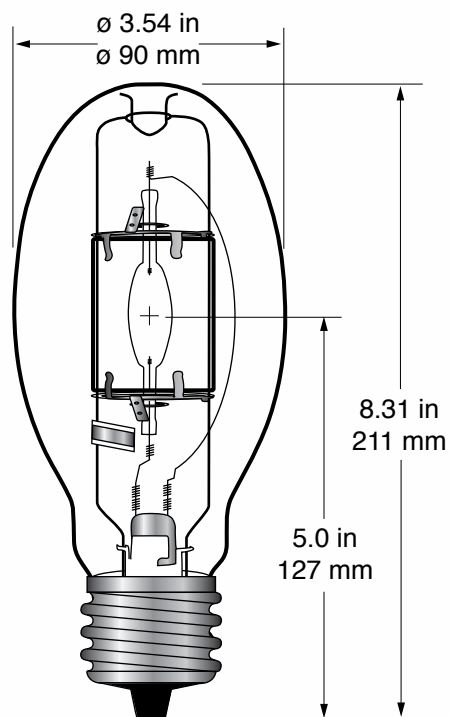
Mogul Base:

E39— Enclosed Fixture (/E)
EX39— Open Fixture (/O)



ED28

/E = Enclosed fixtures only



ED28

/O = Open or Enclosed fixtures

Watts (W)	Ushio Ordering Code	Ushio Lamp Description	ANSI Ballast	Bulb Type	Color Temp (K)	Initial Lumens Vert / Horiz Burn Position	Approx Mean Lumens Vert / Horiz Burn Position	Avg Life (h)
E39 MOGUL BASE								
250	5001360	MH250/U/MOG/40/PS	M153/E	ED28 Clear	4000	25000 / 23500	19000 / 17500	15000*/20000**
250	5001362	MP250/U/MOG/40/PS	M153/O	ED28 Clear	4000	26000 / 24500	19500 / 18200	15000*/20000**
320	5001364	MH320/U/MOG/40/PS	M154/E	ED28 Clear	4000	32500 / 31500	25500 / 25000	20000*/30000**
320	5001366	MP320/U/MOG/40/PS	M154/O	ED28 Clear	4000	32500 / 30500	23000 / 22000	20000*/30000**
350	5001368	MH350/U/MOG/40/PS	M131/E	ED28 Clear	4000	37000 / 35500	28000 / 27000	20000*/30000**
350	5001370	MP350/U/MOG/40/PS	M131/O	ED28 Clear	4000	39000 / 36500	29000 / 26500	20000*/30000**
400	5001372	MH400/U/MOG/40/PS	M155/E	ED28 Clear	4000	40000 / 39000	32000 / 30000	20000*/30000**
400	5001374	MP400/U/MOG/40/PS	M155/O	ED28 Clear	4000	42000 / 41000	30500 / 30000	20000*/30000**

Case Quantity: 12

Burn Position:

Mogul E39 & EX39 Base — Universal

Burn Cycle:

*11 hours ON, 1 hour OFF

**120 hours ON, 1 hour OFF

(Recommended shut down 15 minutes per week)

ANSI Fixture Requirement:

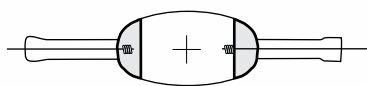
/E = Enclosed Fixtures Only

/O = Open or Enclosed Fixtures

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

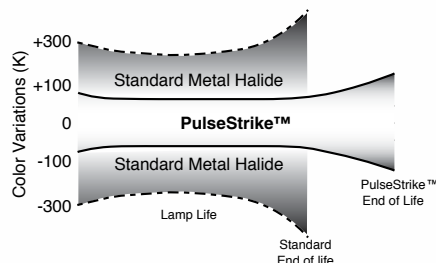


Standard Metal Halide
Pinched Body (Probe Start)

- Uses additional probe start electrode
- Larger cold surface area; reduces 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.

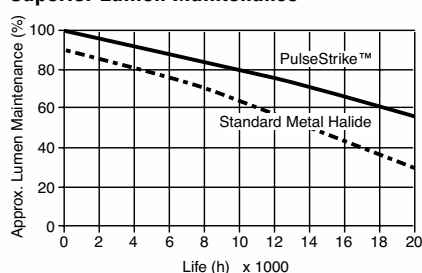


Energy Saving

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 Re-strike Time

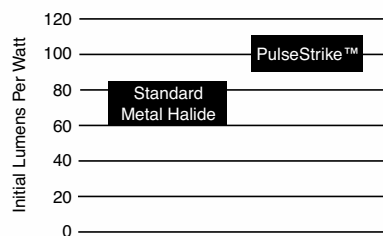
The formed arc tube of PulseStrike™ lamps and the use of a high voltage ignitor, enables the Metal Halide gases to be broken up faster (up to 50%), allowing a higher gas fill pressure. The formed arc tube design furthermore means less mass that has to be heated, thus resulting in a faster start up time. 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 -30° 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.

LAMP CONTAINS MERCURY

Manage in Accord with Disposal Laws

See: www.lamprecycle.org or 1-800-895-8842

Form No. S-PSMH/R-0810: The specifications on this sheet supersede all previously published specifications and may be subject to change for design and specification improvement without prior notice.