



# TECHNICAL BULLETIN METAL HALIDE

## EYE HORTILUX METAL ACE™ M400LU/HTL

**ANSI Code:** Use with ballast rated for ANSI S51 lamp

**Product Code:** 51830

### Features:

- Works in all HPS lighting systems with an ignitor
- Nickel-plated base

### PERFORMANCE DATA

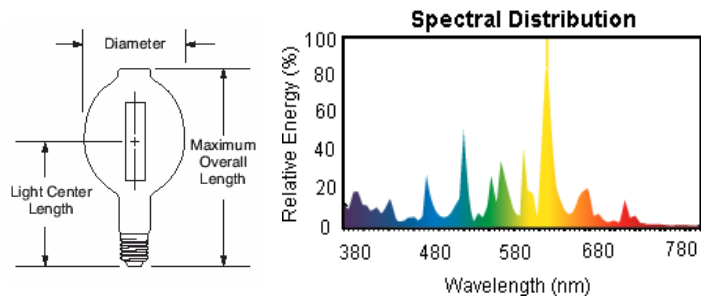
Initial lumens at rated watts after 100 hours operation	36600V/32700H	lm
Mean lumens at 10 hours/start	27300V/24400H	lm
Average life	20000V/15000H	h
Warm up time, maximum	4	min
Correlated color temperature	4500	K
CIE chromaticity	0.364, 0.381	X, Y
Color rendering index (Ra)	65	
Operating Position	Base up- Horizontal	
Time to hot re-start, maximum	15	min

### ELECTRICAL CHARACTERISTICS

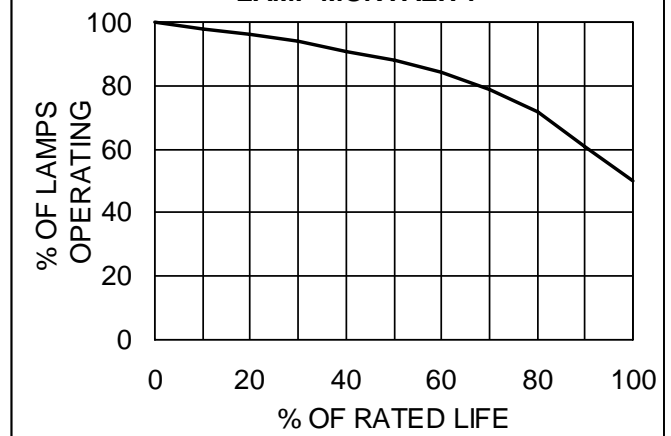
Nominal lamp wattage	400	W
Nominal lamp voltage	100	V
Nominal lamp current	4.6	A <sub>rms</sub>
Maximum current crest factor	1.8	-
Maximum starting current	7.5	A <sub>rms</sub>
Minimum starting current	4.6	A <sub>rms</sub>
Ballast requirements	Use with ballast rated for ANSI S51 lamp	
Open circuit voltage (CWA) -30°C (-22°F)	175	V <sub>rms</sub>
	248	V <sub>peak</sub>
Lampholder voltage rating	4	kV
<b>IGNITOR REQUIREMENTS</b>		
Min. Pulse Height	2500	v
Max. Pulse Height	4000	v
Min. Pulse Width	1.0@2250	µsec@V
Min. Pulse repetition	1	half cycle
Pulse Positions	60-90	degrees
	240-270	

### PHYSICAL DESCRIPTION

Maximum overall length	291 (11.45)	mm (in)
Light center length	178 (7.0)	mm (in)
Bulb diameter	117 (4.63)	mm (in)
Max. base - bulb eccentricity	3	deg
Maximum base temperature	210 (410)	°C (°F)
Maximum bulb temperature	400 (752)	°C (°F)
Bulb designation	BT37	
Bulb material	Borosilicate (Hard Glass)	
Arc tube material	Quartz	
Effective arc length	42 (1.65)	mm (in)
Bulb finish	Clear	
Base designation	E39 Mogul	



### LAMP MORTALITY



### LUMEN MAINTENANCE



### FIXTURE REQUIREMENT

- E Rated-Enclosed, universal burning position
- S Rated-Open fixture, base up or base down +/- 15°



**EYE LIGHTING INTERNATIONAL  
OF NORTH AMERICA, INC.**  
A SUBSIDIARY OF IWASAKI ELECTRIC CO., LTD.

Address: 9150 Hendricks Rd., Mentor, OH 44060  
 Phone: 888-66-LAMPS Fax: 800-811-7395 E-Mail: sales@eyelighting.com  
 Phone: (440) 350-7000 Fax: (440) 350-7001 Web: www.eyelighting.com  
 www.eyehortilux.com



**⚠ WARNING**

This lamp 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. Lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available.

**RISK OF ELECTRIC SHOCK**

·Turn power off before inspection, installation or removal ·Protect lamp from direct contact with liquids to avoid breakage from thermal shock

**RISK OF FIRE**

·Keep combustible materials away from lamp during operation

**UNEXPECTED LAMP RUPTURE MAY CAUSE INJURY, FIRE, OR PROPERTY DAMAGE**

·Do not exceed rated ballast voltage ·Do not use lamp if outer glass is scratched or broken.  
·Do not use beyond rated life ·Do not turn on lamp until fully installed ·Use only with a fixture and ballast rated for this product ·Turn lamp off at least once a week for 15 minutes  
·Electrically insulate any metal to glass support in fixture

**⚠ CAUTION**

**RISK OF BURN**

·Allow lamp to cool before handling.

**LAMP MAY SHATTER AND CAUSE INJURY**

·Do not use excessive force when installing lamp ·Dispose of lamp in a closed container

**LAMP OPERATING INSTRUCTIONS**

This is a discharge lamp and requires some time to restart and come up to full brightness after a power interruption. If power supply dips or is interrupted, lamps may extinguish and not restart. Turn off power supply for 10-15 minutes and allow lamp to fully cool. Lamp will restart when power is restored.

**R**

Conforms to:  
USA: 21CFR1040.30

**Hg-LAMP CONTAINS MERCURY**

Manage in Accord with Disposal Laws  
See: [www.lamprecycle.org](http://www.lamprecycle.org) or 1-888-665-2677

