



VENTURE LIGHTING®



HORIZONTAL

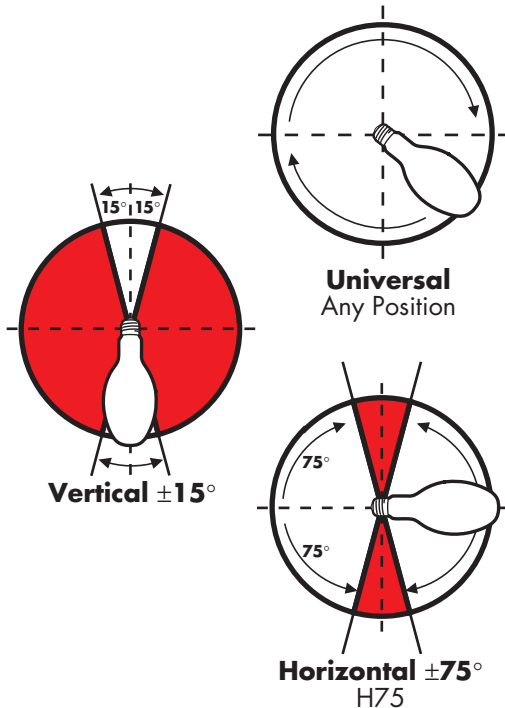
PULSE START



VENTURE®
LIGHTING

Expect More from the Horizontal Position

Positions of Operation



Performance is Everything

For lighting applications, performance is everything. It is important that lighting fixtures provide top performance in terms of light and heat management, and appearance. The lamp and ballast are expected to provide uniform, bright light as well as great lumen maintenance and long life. So why, in most horizontal lighting applications, do we continue to sacrifice light and life in our lamp choices?

Published catalog lumens of Universal lamps are based on operation in the Vertical burning position. When these lamps are burned horizontally, the lamp will lose as much as 25% of lamp life and 10% of its initial and mean lumens.

Thanks to the introduction of Venture's Horizontal Pulse Start lamp series, sacrificing lamp performance in a horizontal burning position is no longer necessary.

There are several types of burn positions posted by all manufacturers. First, there is the Universal or "U". Then there is the Vertical or "V". Then we have Base Up or BU. Lastly, we have the Horizontal or "HOR".

Position Descriptions U (Universal)

This lamp can be burned in any position within a lighting fixture. Lumens and life vary based on which way the lamp is positioned or burned.

BU (Base-Up)

This lamp must only be positioned with the base up.

V (Vertical)

This lamp can be burned base-up or base-down but must be in a vertical position in the fixture.

HOR (Horizontal)

This lamp requires a position oriented mogul (POM) base and socket for the proper position of the arc tube. The lamp base pin and unique socket with slot must be aligned for proper positioning.

H75 (Horizontal +/- 75°)

This pulse start lamp is designed to operate in a horizontal + or - 75 degree position in the fixture without the need for a POM base and socket. This design offers long life as well as exceptional lumen output.



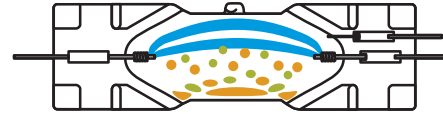
Universal (U)

When you turn a metal halide lamp sideways, two things occur: loss of lamp life as well as loss of lamp lumens. All lamp manufacturers publish these ratings. When the lamp burns on its side, gravity intervenes and the arc between the electrodes begins to bow upwards. As this happens, the bow of the arc overheats on the upper quartz wall of the arc tube. This shortens the life of the lamp, and can result in non-passive failures.

The bow in the arc also reduces lumen output. The metal halide salts used in the chemistry of the arc tube lay at the bottom of the arc tube in the horizontal burning position, resulting in the creation of a cool pool of halides. This pool affects the performance of the lamp, resulting in lower lumen output.

In order for the lamp to achieve greatest lumen output, the halide pool needs to be at a high temperature, which cannot be easily achieved in the horizontal position.

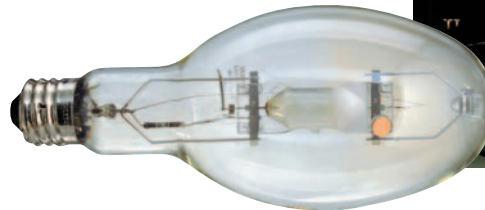
It is the halide chemistry inside the arc tube in each lamp that creates proper light levels and color temperature, resulting in better lumen output and color uniformity.



Universal position lamp's probe start arc tube in Horizontal operation

■ Arc Stream

■ Metal Halide Salts



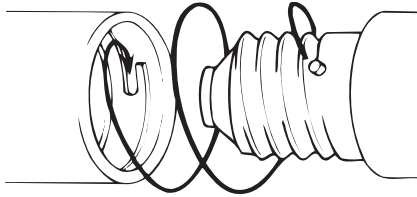
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Probe start HOR arc tube

 Arc Stream

 Metal Halide Salts



Position Oriented Mogul (POM) base and socket,
which is **NOT** required for Venture's H75 Series



Horizontal (HOR)

A design technique used by Venture as well as other manufacturers with HOR lamp arc tubes to help correct lumen output and lamp life loss by the usage of POM bases and sockets. The electrodes in this arc tube design are moved down to the bottom of the arc tube. In this design, as the arc bows, it does not position itself as close to the top of the arc tube, thus assisting in improved lamp life.

In addition, with the electrodes positioned lower, the pool of halides that fall due to the gravity draw are now closer to the arc stream, keeping the overall light output high.

This design has resulted in many problems in lighting applications. Initially, engineers must be certain to specify the POM base and socket. Then, the manufacturer has to ensure that the POM socket is correctly installed in the fixture, and the proper HOR lamp with the POM base has to be ordered. Additionally, the pin and the channel on the socket must align perfectly. All of these elements rarely occur. As a result, early failures, color shift and lumen miscalculations are a common occurrence. Venture's Horizontal Pulse Start Series is a practical and needed improvement to help alleviate these problems.



Horizontal +/- 75° (H75)

What makes Venture's Horizontal Pulse Start systems so unique? In typical fashion, Venture went back to our basics - the Uni-Form® arc tube. Venture Lighting understands the practical need to remove the POM base and socket requirement. In order to allow this to happen, Venture found a way to keep the electrodes at the center of the arc tube at all times; the install positioning has now become irrelevant.

Benefits Life

The walls of the arc tube have been substantially thickened with quartz material. This results in more uniform heating of the upper side of the arc tube, which in turn results in longer overall lamp life.



Lumens

Venture has also modified the *Uni-Form* shape to offer better lumens. In addition, we have changed the chemistry of the metal halide lamp's arc tube to produce the lumens that meet the standard V or BU versions of the lamp. This also has resulted in greater mean lumens of this product line.

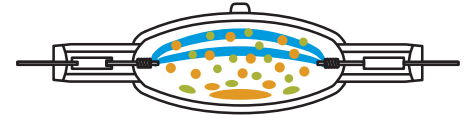
Venture has created a horizontal pulse start lamp line that now offers long life and high lumens based on a better arc tube. This line of lamps is free of the problems associated with the POM base lamps and is offered in a variety of jacket sizes and wattages.

Dimming Capabilities



For even greater energy savings, Venture Lighting's Horizontal pulse start metal halide lamps can be step or bi-level dimmed by the switched capacitance method on a CWA or CWI ballast, or continuously dimmed on an electronic ballast. Lamps cannot be dimmed below 50% of the rated lamp wattage at 90% input voltage. Dimming is not recommended for Venture's Natural White® horizontal products. Contact Venture Lighting for further information.



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Venture's Horizontal pulse start arc tube

-  Arc Stream
-  Metal Halide Salts



Horizontal Pulse Start Lamps

Enclosed Rated LAMPS ANSI Type-E Mogul Base for Horizontal $\pm 75^\circ$ Operation, LLD factor 0.86

Watts	Lamp Description	Product No.	ANSI Code	Photopic Lumens	Efficacy ¹	50% Survival Rate Hours	CCT (K)	Warm-Up (Min)	Restrike (Min)	CRI	Finish	Fig.	Case Qty
200	MS 200W/H75/T15/PS/740	70764	M136/E	19000	95	15000	4000	1-2	2-4	68	Clear	A	12
250	MS 250W/H75/PS/740	81054	M153/E	22000	88	15000	4000	2-3	3-5	68	Clear	C	12
250	MS 250W/H75/T15/PS/740	57625	M153/E	22000	88	15000	4000	2-3	3-5	68	Clear	A	12
320	MS 320W/H75/ED28/PS/740	47549	M154/E	30000	94	26000	4000	2-3	4-6	68	Clear	C	12
320	MS 320W/H75/T15/L/PS/740	79710	M154/E	30000	94	26000	4000	2-3	4-6	68	Clear	B	12
320	MS 320W/H75/T15/S/PS/740	57626	M154/E	30000	94	26000	4000	2-3	4-6	68	Clear	A	12
320	MS 320W/C/H75/ED28/PS/737	12758	M154/E	27000	84	26000	3700	2-3	4-6	70	Coated	C	12
350	MS 350W/C/H75/PS/737	64866	M131/E	31000	89	26000	3700	2-3	4-6	70	Coated	D	6
350	MS 350W/H75/ED28/PS/740	46959	M131/E	33000	94	26000	4000	2-3	4-6	68	Clear	C	12
350	MS 350W/H75/T15/S/PS/740	60258	M131/E	33000	94	26000	4000	2-3	4-6	68	Clear	E	12
350	MS 350W/H75/T15/L/PS/740	93749	M131/E	33000	94	26000	4000	2-3	4-6	68	Clear	F	12
400	MS 400W/H75/PS/740	58788	M155/E	40000	100	26000	4000	2-3	4-6	68	Clear	D	6
400	MS 400W/H75/ED28/PS/740	40124	M155/E	40000	100	26000	4000	2-3	4-6	68	Clear	C	12
400	MS 400W/C/H75/ED28/PS/737	55459	M155/E	38000	95	26000	3700	2-3	4-6	70	Coated	C	12
400	MS 400W/H75/T15/S/PS/740	60260	M155/E	40000	100	26000	4000	2-3	4-6	68	Clear	E	12
400	MS 400W/H75/T15/L/PS/740	74151	M155/E	40000	100	26000	4000	2-3	4-6	68	Clear	F	12

Notes: 1 Efficacy = Lamp lumens per watt



Dia. = 1.9" (46mm)
MOL = 8.3" (211mm)
LCL = 5.0" (127mm)
Base = E39
Bulb Shape = T15



Dia. = 1.9" (46mm)
MOL = 11.5" (292mm)
LCL = 7.0" (178mm)
Base = E39
Bulb Shape = T15



Dia. = 3.5" (90mm)
MOL = 8.3" (211mm)
LCL = 5.0" (127mm)
Base = E39
Bulb Shape = ED28



Dia. = 4.6" (120mm)
MOL = 11.5" (292mm)
LCL = 7.0" (178mm)
Base = E39
Bulb Shape = ED37



Dia. = 2.0" (52mm)
MOL = 8.3" (211mm)
LCL = 5.0" (127mm)
Base = E39
Bulb Shape = T15



Dia. = 2.0" (52mm)
MOL = 11.5" (292mm)
LCL = 7.0" (178mm)
Base = E39
Bulb Shape = T15



800-451-2606

Fax (800) 451-2605 **VentureLighting.com**



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Open Rated LAMPS ANSI Type-O Mogul Base for Horizontal $\pm 75^\circ$ Operation, LLD factor 0.86

Watts	Lamp Description	Product No.	ANSI Code	Photopic Lumens	Efficacy ¹	50% Survival Rate Hours	CCT (K)	Warm-Up (Min)	Restrike (Min)	CRI	Finish	Fig.	Case Qty
250	MP 250W/H75/UVS/PS/740	49822	M153/O	21300	85	15000	4000	2-3	4-6	68	Clear	I	12
350	MP 350W/H75/UVS/PS/740	65218	M131/O	32000	91	26000	4000	2-3	5-8	68	Clear	J	6
400	MP 400W/H75/UVS/PS/740	17611	M155/O	38000	95	26000	4000	2-3	5-8	68	Clear	J	6

Notes: 1 Efficacy = Lamp lumens per watt

Natural White® High CRI, High CCT LAMPS Mogul Base for Horizontal $\pm 75^\circ$ Operation, LLD factor 0.90

Watts	Lamp Description	Product No.	ANSI Code	Photopic Lumens	Efficacy ¹	Scotopic Lumens ²	50% Survival Rate Hours	CCT (K)	Warm-Up (Min)	Restrike (Min)	CRI	Finish	Fig.	Case Qty
320	MP 320W/H75/T15/S/UVS/PS/EM/950	95320	M154/O	24000	76	50500	26000	5000	2-3	5-8	90+	Clear	G	12
320	MP 320W/H75/T15/L/UVS/PS/EM/950	95321	M154/O	24000	76	50500	26000	5000	2-3	5-8	90+	Clear	H	12
775	MS 775W/H75/BT37/PS/950	24999	M181/E	60000	77	126000	15000	5000	3-5	8-12	90+	Clear	K	6

Notes: 1 Efficacy = Lamp lumens per watt

2 Scotopic Lumens = Light measured under dark nighttime conditions. Scotopic lumens can be calculated by multiplying Photopic lumens by the S/P ratio (5000K light sources S/P = 2.1)



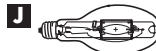
Dia. = 2.0" (52mm)
MOL = 8.3" (211mm)
LCL = 5.0" (127mm)
Base = EX39
Bulb Shape = T15



Dia. = 2.0" (52mm)
MOL = 11.5" (292mm)
LCL = 7.0" (178mm)
Base = EX39
Bulb Shape = T15



Dia. = 3.5" (90mm)
MOL = 8.3" (211mm)
LCL = 5.0" (127mm)
Base = EX39
Bulb Shape = ED28



Dia. = 4.6" (120mm)
MOL = 11.5" (292mm)
LCL = 7.0" (178mm)
Base = EX39
Bulb Shape = ED37



Dia. = 4.6" (120mm)
MOL = 11.5" (292mm)
LCL = 7.0" (178mm)
Base = E39
Bulb Shape = BT37



Horizontal Pulse Start Lamps

UNI-FORM® PULSE START METAL HALIDE LIGHTING SYSTEMS FOR HORIZONTAL OPERATION

COMPARE, SWITCH AND SAVE!

Probe Start Fixture	Horizontal Pulse Start Upgrade	System Watts Saved ¹	Total Annual Savings Per Fixture ²	Increased Light Levels ³	Increased Lamp Life in Hours
1000W	775W	235	\$103	29%	6000
400W	400W	20	\$9	39%	11000
	350W	75	\$33	23%	11000
	320W	106	\$46	14%	11000
250W	250W	15	\$7	40%	3750
	200W	70	\$31	47%	3750

Notes: Based on Horizontal Operation

1 Based on use of CWA ballasts for probe start systems and 277V Hybrid ballasts for Horizontal pulse start systems

2 Based upon 12 hours per day, \$0.10 per kWh

3 Lumen depreciation compared at mean lumen point for pulse start lamps

Benefits

- **Longer life and Higher lumen output** compared to both HOR and universal lamps in horizontal operation
- **No POM base and socket** required
- Variety of tubular and elliptical outer jacket shapes and sizes for full cut-off fixtures

Application Targets

Venture's Horizontal Pulse Start series is targeted at the mid-range wattages as well as the enclosed fixture.

- **Parking Garages**
- **Car Dealerships**
- **Site Lighting**
- **Wall Wash Applications**
- **Gas Station Canopy**
- **Area Lighting**
- **Parking Lot Lighting**

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