



Philips Pulse Start  
Metal Halide Lamps

*Ideal for industrial and  
retail high/low bays and  
parking lots*

Metal Halide

## High performance, low total cost of ownership

**Philips Pulse Start Metal Halide Lamps** offer an optimized metal halide system for greater efficiency and lumen maintenance.

### **Better option over standard metal halide lamps**

- Up to 25% increase in maintained light output over standard metal halide
- Increased efficacy (up to 120 lpw) equals low total cost of ownership
- Up to 50% faster warm-up and restrike time
- Up to 50% increase in life when compared to switch start metal halide (for 175W and 250W versions)

**250W and 400W available for universal operation**

**New 175W available in medium base**

# PHILIPS

sense and simplicity

# Philips Pulse Start Metal Halide Lamps

## Ordering, Electrical and Technical Data

Product Number	Ordering Code	ANSI Code	Bulb Size	Bulb Finish	MOL (In.)	LCL (In.)	Rated Avg. Life (Hrs.) <sup>1</sup>	Initial Lumens <sup>2</sup>	Mean Lumens <sup>3</sup>	CCT (K)	CRI
23249-6	MS175/M/BU/PS	M152/M137/E	ED-17	Clear	5 $\frac{1}{8}$	3 $\frac{3}{8}$	15,000	17,500	12,250	4000K	68
27662-6	MS175/BU/PS	M152/M137/E	ED-28	Clear	8 $\frac{1}{8}$	5	15,000	16,000	11,200	3700K	62
14913-8	MS175/C/BU/PS	M152/M137/E	ED-28	Coated	8 $\frac{1}{8}$	—	15,000	16,000	11,200	3900K	62
20751-4	MS175/HOR/PS	M152/M137/E	ED-28	Clear	8 $\frac{1}{8}$	5	11,500	12,800	8960	4200K	62
23250-4	MS200/BU/PS	M136/E	ED-28	Clear	8 $\frac{1}{8}$	5	15,000	21,000	14,700	4000K	68
23251-2	MS200/HOR/T15/PS	M136/E	T-15	Clear	8 $\frac{1}{8}$	5	15,000	19,000	13,300	4000K	68
27661-8	MS250/BU/PS	M153/M138/E	ED-28	Clear	8 $\frac{1}{8}$	5	15,000	23,750	16,625	4300K	65
23280-1	MS250/U/PS	M153/M138/E	ED-28	Clear	8 $\frac{1}{8}$	5	12,000	22,000	14,000	4000K	60
38381-0	MS320/U/PS	M154/M132/E	ED-28	Clear	8 $\frac{1}{8}$	5	20,000	30,000	21,000	4100K	62
38386-9	MS320/C/U/PS	M154/M132/E	ED-28	Coated	8 $\frac{1}{8}$	—	20,000	29,000	20,300	3600K	70
38387-7	MS350/BU/PS	M131/E	ED-37	Clear	11 $\frac{1}{2}$	7	20,000	36,000	25,200	4000K	62
38388-5	MS350/C/BU/PS	M131/E	ED-37	Coated	11 $\frac{1}{2}$	—	20,000	35,000	24,500	3600K	65
20753-0	MS350/HOR/PS	M131/E	ED-37	Clear	11 $\frac{1}{2}$	7	15,000	33,000	23,100	4000K	62
23252-0	MS400/BU/ED28/PS	M155/M128/M135/E	ED-28	Clear	8 $\frac{1}{8}$	5	20,000	44,000	30,800	4000K	68
23253-8	MS400/HOR/ED28/PS	M155/M128/M135/E	ED-28	Clear	8 $\frac{1}{8}$	5	20,000	40,000	28,000	4000K	68
27816-8	MS400/BU/PS	M155/M128/M135/S	ED-37	Clear	11 $\frac{1}{2}$	7	20,000	42,600	29,820	4100K	62
28362-2	MS400/C/BU/PS	M155/M128/M135/S	ED-37	Coated	11 $\frac{1}{2}$	—	20,000	41,500	29,050	3700K	66
23283-5	MS400/U/PS	M155/M128/M135/E	ED-37	Clear	11 $\frac{1}{2}$	7	15,000	40,000	25,760	4300K	65
13540-0	MS750/BU/BT37/PS	M149/E	BT-37	Clear	11 $\frac{1}{2}$	7	16,000	82,000	61,500	4000K	65
20754-8	MS750/HOR/PS	M149/E	BT-37	Clear	11 $\frac{1}{2}$	7	12,000	68,000	47,600	4000K	65
36019-8	MS1000/BU/PS	M141/E	BT-37	Clear	11 $\frac{1}{2}$	7	15,000	120,000	96,000	3700K	65

1) Rated average life is the life obtained, on the average, from large representative groups of lamps in laboratory tests under controlled conditions at 10 or more operating hours per start. It is based on survival of at least 50% of the lamps and allows for individual lamps or groups of lamps to vary considerably from the average.

2) Approximate lumen values are listed for vertical operation of the lamp for "BU" and "U" lamps. The approximate lumen values for "HOR" lamps are listed for horizontal operation of the lamp.

3) Approximate lumen output at 40% of lamp rated average life.

Above specifications subject to change without notice.

The following warning applies to Pulse Start Metal Halide Lamps, Enclosed Fixtures Only Unless Noted; Base Up Operation  $\pm 15^\circ$  Unless Noted.

### Warnings, Cautions and Operating Instructions

**R** "WARNING: These lamps 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. 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 21 CFR subchapter J, (USA: 21 CFR 1040.30 Canada: SOR/DORS/80-381)

**If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous shortwave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.**

**WARNING:** The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000°C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

**Certain lamps that will retain all the glass particles should inner arc-tube rupture occur are commercially available from Philips Lighting Company.**

**RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE. Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.**

CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING **LAMP OPERATING INSTRUCTIONS** MUST BE FOLLOWED:

### LAMP OPERATING INSTRUCTIONS:

- Turn off lamps at least once a week for at least 15 minutes in systems which are operating on a continuous basis (24 hours/day-7days/week). FAILURE TO TURN OFF LAMPS FOR THE MINIMUM RECOMMENDED TIME MAY INCREASE THE POSSIBILITY OF AN INNER ARC-TUBE RUPTURE.
- RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE. Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
- Use only in an enclosed fixture capable of withstanding particles of glass having temperatures up to 1000°C, unless otherwise noted.
- Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
- Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
  - Operate lamp only within specified limits of operation.
  - For total supply load refer to ballast manufacturers electrical data.
  - All Pulse Start mogul based lamps require a socket rated to withstand a 4,000 volt pulse.
- Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
- If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
- Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
- Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock, and color appearance may vary between individual lamps.
- Lamps may require 2 to 4 minutes to relight if there is a power interruption.
  - Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.
  - Use this lamp only in fixtures that contain a Pulse Start metal halide ballast and are specifically designed for use with Pulse Start metal halide lamps.



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