METALARC® PULSE START

High Lumen Maintenance, Reduced Color Shift, Premium Metal Halide Lamps

SYLVANIA METALARC® PULSE START 175, 250, 320, 400, 750 and 1000 watt lamps provide less color shift, high lumen maintenance and a long life. Their premium performance provides opportunities for higher maintained illumination levels and substantial energy savings. Additional increases in optical efficiency may be gained by fixture designs using compact outer jacket configurations. All high wattage pulse start lamps are lead free.

SYLVANIA METALARC PULSE START lamps combine proven metal halide lamp technology and ignitor technology. The result is a more transparent arc tube over life yielding less color shift and high lumen maintenance.

Key Features & Benefits

METALARC PULSE START Lamps

- Excellent lumen maintenance
- Quicker hot restrike*
- Long average rated life

175 Watt PULSE START

- 50% longer life than standard 175 watt
- 21% higher initial lumens and 38% higher mean lumens than standard product
- Available in universal operating position

250 Watt PULSE START

- 18,000 hour life rating for MS types (doubles the life of standard 250 watt)
- MP type has 50% longer life than standard 250 watt
- Available with PRO-TECH® design for open fixture use
- Available in universal operating position

320 Watt PULSE START

- May be operated base-up through horizontal
- Compact ED28 size allows higher luminaire efficiency

400 Watt PULSE START

- Available in PRO-TECH design for open fixture use
- Available with Compact ED28 version for higher luminaire efficiency
- Available in universal operating position

750 Watt PULSE START

- 25% energy savings over standard 1000 watt metal halide
- Compact BT37 outer jacket

1000 Watt PULSE START

- Compact BT37 outer jacket
- Available in universal operating position

*Compared to standard metal halide lamps.



Product Offering

Product	Lamp Finish	Fixture Type
M175/PS/U/ED28	Clear	Enclosed fixture only
MP250/PS/BU-ONLY	Clear	Open or enclosed
MS250/PS/BU-ONLY/ED28	Clear	Enclosed fixture only
M250/PS/U/ED28	Clear	Enclosed fixture only
MS320/PS/BU-HOR/ED28	Clear	Enclosed fixture only
MP400/PS/BU-ONLY	Clear & Coated	Open or enclosed
MS400/PS/BU-ONLY/ED37	Clear	Enclosed fixture only
M400/PS/U//ED28	Clear	Enclosed fixture only
M400/PS/U/ED37	Clear	Enclosed fixture only
MS750/PS/BU-HOR/BT37	Clear	Enclosed fixture only
M1000/U/PS/BT37	Clear	Enclosed fixture only



Application Information

Applications

- Ambient lighting: Industrial and Commercial
- Canopy lighting
- Flood lighting
- Parking lots
- Security lighting

Application Notes

Operating orientation: Base-up only within 15° of vertical. 320W and 750W lamps may be operated base-up through horizontal. M250/PS/U/ED28, M400/PS/U/ED37, M400/PS/U/ED28 and M1000/U/PS/BT37 may be operated in any operating position.

Socket Information

Lamps operate in standard mogul HID sockets rated to withstand 4000 volt pulses. Exclusionary mogul sockets are recommended for the METALARC PRO-TECH (MP) versions.

Ballast Information

All lamps will operate on ANSI Pulse Start ballasts with ignitors for metal halide lamps as noted in the Ordering and Specification Information section (page 3 of this PIB).

Fixtures

Consult your local fixture agent for available fixtures.

Lamp Comparison

Lamp Type	Initial Lumens	Mean Lumens	Hot Restrike	Average Rated Life (hrs.)
400 Watt PULSE START MS400/PS/BU-ONLY/ED37	42,000	29,500	5 to 7 min.	20,000
400 Watt SUPER METALARC MS400/BU-ONLY/ED37	42,000	26,000	7 to 12 min.	20,000
400 Watt Standard	36,000	23,500	7 to 12 min.	20,000

^{• 14%} higher mean lumens than the 400 Watt SUPER METALARC lamps

^{• 26%} higher mean lumens than the standard 400 Watt METALARC lamps

Specification Data

Project Comments Prepared by	Catalog #	Туре
	Project	
Prepared by	Comments	
	Prepared by	

Ordering Guide

MS	320	1	_	1	PS	1	BU-ONLY
M = METALARC	Wattage:		Finish:		PULSE		BU-ONLY = Base up only
Metal Halide	175, 250,		= Clear		START		U = Universal
S = SUPER high output	320, 400,		C = Coated				BU-HOR = Base up - Horizontal
P = METALARC PRO-TECH®	750 or						
open fixture rated	1000 watts						

Ordering Information

Item	Ordering					ANSI	Average Rated	Initial	Mean		Color	Lamp Efficacy
Number	Abbreviation	Watts	Finish	Bulb	Base ¹	Code	Life (hrs.)	Lumens	Lumens	CRI	Temp	(LPW)
64043	M175/PS/U/ED28	175	Clear	ED28	E39	M152/E ²	12,000V	13,500V	9,300V	65	4000K	77V
							9,000H	11,800H	7,650H			67H
64789	MP250/PS/BU-ONLY	250	Clear	BT28	EX39	M153/0 ²	15,000	22,000	15,500	65	4200K	88
64047	MS250/PS/BU-ONLY/ED28	250	Clear	ED28	E39	M153/E ²	18,000	21,500	16,000	65	4000K	86
64046	M250/U/PS/U/ED28	250	Clear	ED28	E39	M153/E ²	15,000V	21,000V	15,400V	65	4000K	88V
							12,000H	17,000H	10,500H			68H
64049	MS320/PS/BU-HOR/ED28	320	Clear	ED28	E39	M154/E ²	18,000V	30,000V	21,000V	65	4000K	94V
							15,000H	28,000H	19,700H			88H
64055	MS400/PS/BU-ONLY/ED37	400	Clear	ED37	E39	M155/E	20,000	42,000	29,500	65	4000K	105
64051	M400/PS/U/ED28	400	Clear	ED28	E39	M155/E	20,000V	36,000V	25,500V	65	4000K	90V
							15,000H	31,000H	22,400H			78H
64054	M400/PS/U/ED37	400	Clear	ED37	E39	M155/E	20,000V	36,000V	25,500V	65	4000K	90V
							15,000H	31,000H	22,400H			78H
65109*	MP400/PS/BU-ONLY	400	Clear	BT37	EX39	M155/0	20,000	40,000	24,500	65	3500K	100
64787	MS750/PS/BU-HOR/BT37	750	Clear	BT37	E39	M149/E ³	20,000V	78,000V	57,000V	65	4000K	104V
							9,000H	68,000H	50,000H			91H
64351	M1000/U/PS/BT37	1000	Clear	BT37	E39	M141/E	15,000V	110,000V	86,000V	65	4000K	110V
							9,000H	107,800H	84,000H			108H

 $^{^\}star \textsc{Contact}$ your local LEDVANCE sales representative for availability.

Notes:

1. For lamp wattages of 360W and greater, it is recommended that lampholders with nickel-plated copper alloy center contacts (with spring) should be used rather than electrical contacts made of stainless steel.

2. When operated on ballasts having a sustaining voltage less than 270V, lamp life may be significantly reduced.

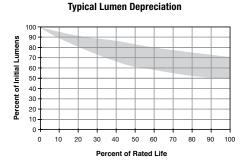
3. When operated on ballasts having a sustaining voltage less than 310V, lamp life may be significantly reduced.

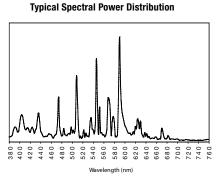
E = Lamps classified as E-type are to be used ONLY in suitably enclosed luminaires. See lamp warning.

O = Lamps classified as O-type, comply with ANSI standard C78.389 for containment testing and may be used in open and enclosed luminaires. See lamp warning.

Technical Information

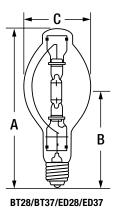
Typical Mortality Curve 100 90 80 Percent Survival 70 60 50 30 10 20 70 0 10 30 40 50 60 80 90 Percent of Lamp Life





Lamp Dimensions

Ordering Abbreviation	(A) MOL	(B) LCL	(C) Bulb Diameter"
BT28/ED28	8.31"	5.0"	3.5"
BT37/ED37	11.5"	7.0"	4.63"



Sample Specification

400 Watt: Lamp(s) shall be (a) 400W METALARC® PULSE START lamp(s) exhibiting initial lumens of 42,000 with a 74% mean lumen maintenance and capable of operating on a M155 ballast. Lamp construction shall include a lead-free base.

Safety Information

WARNING! These lamps can cause serious skin burn and eye inflammation from short-wave ultraviolet radiation if the 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 punctured or broken are commercially available.

This product conforms to the following federal regulations: U.S.A.: 21 CFR 1040.30 and CANADA: SOR/80-381.

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