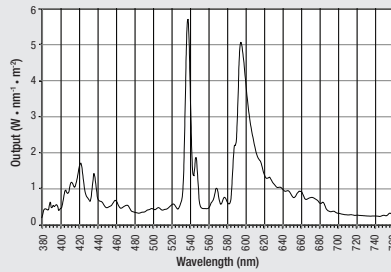


Operating Characteristics

Approx. Initial Lumens	1220
Approx. Mean Lumens	900
Average Rated Life (hrs) ¹	12,000
Correlated Color Temp. (CCT)	3000K
CIE Chromaticity Approx.	X=0.432, y=0.391
Color Rendering Index (CRI)	82
Beam Angle (at 50% of MBCP)	10°/15°/25°/40°

1. Average Rated Life: An average rating, in hours, indicating when 50% of a large group of lamps have failed when operated at nominal lamp voltage and current; minimum 10 hours per start.

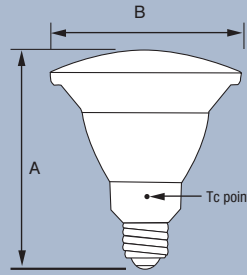
Typical Spectral Power Distribution



Physical Characteristics

Bulb Size	PAR38
Bulb Finish	Clear
Base	Medium
Max. Overall Length ² (A)	5.52" (140.1 mm)
Max. Diameter (B)	4.86" (123.4 mm)
Arc Tube Material	Polycrystalline Alumina
Max. Case Temp. (Tc point) ^{3,4}	100°C max
Arc Tube to Base Eccentricity	3° max

- MOL exceeds ANSI standard by 2 mm along center line only. Lamp length at edge of lens is within ANSI limits.
- Average rated life will be reduced for applications in which case temperature, at the Tc point, exceeds 100°C.
- Applications in which the maximum case temperature is exceeded voids all performance warranties, either express or implied.



Electrical and Technical Data

Wattage	24W
Nominal Input Voltage	120V
Nominal Frequency	50/60Hz
Input Current ⁵	0.35A
Warm-up to 80% Full Brightness	< 5 minutes
Hot re-strike ⁶	< 10 minutes
Minimum Operating Temp.	-20°C (-4°F)
Power Factor	0.6 minimum

- Caution: New construction specifications should account for the current draw of these lamps. The lamp uses 0.35A of current with a capacitive "lead" power.
- Open air measurement.

Safety Information

THE FOLLOWING INSTRUCTIONS MUST BE COMPLIED WITH TO AVOID RISK OF PERSONAL INJURY, PROPERTY DAMAGE AND POOR LAMP PERFORMANCE.

I. **ULTRAVIOLET RADIATION EXPOSURE - WARNING:** This lamp can cause serious skin burns and eye inflammation from shortwave 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 broken or punctured are commercially available. This product conforms to the following federal regulations: U.S.A.: 21 CFR 1040.30 and CANADA: SOR/80-381.

II. **RUPTURE RISKS:** This Metal Halide lamp is constructed of an outer glass bulb with an internal arc-tube. Metal Halide arc-tubes operate at high pressure and at very high temperatures and can unexpectedly rupture due to internal causes or external factors such as a ballast failure or misapplication. An arc-tube rupture can burst and shatter the outer glass bulb resulting in the discharge of glass fragments and extremely hot particles. In the event of such rupture, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

NOTES:

- This lamp is intended for use in open fixtures since it was designed to contain a ruptured arc-tube and thereby minimize the resultant risks of personal injury, property damage, burns and fire.
- This lamp contains an arc tube with a fill gas containing less than 10 nCi of Kr-85 and is distributed by OSRAM SYLVANIA Products Inc., 100 Endicott St., Danvers, MA 01923.

Sample Specification

Lamps shall be METALARC® POWERBALL® EL, MCP24EL/PAR38/U/830/SP10/ECO lamp(s), and shall be constructed with a ceramic POWERBALL arc tube and integrated electronic ballast with initial lumens of 1220. Lamp(s) shall have CRI of 82, CCT of 3000K. Lamps shall be rated for open fixture use.

United States

OSRAM SYLVANIA
100 Endicott Street
Danvers, MA 01923

Trade

Phone: 1-800-255-5042
Fax: 1-800-255-5043

National Accounts

Phone: 1-800-562-4671
Fax: 1-800-562-4674

OEM/Special Markets

Phone: 1-800-762-7191
Fax: 1-800-762-7192

Display/Optic

Phone: 1-888-677-2627
Fax: 1-800-762-7192

Canada

OSRAM SYLVANIA LTD.
2001 Drew Road
Mississauga, ON L5S 1S4

Trade

Phone: 1-800-263-2852
Fax: 1-800-667-6772

OEM/Special Markets/Display/Optic

Phone: 1-800-265-2852
Fax: 1-800-667-6772

METALARC® POWERBALL® EL ECOLOGIC®

24W PAR38 Ceramic Metal Halide with Integrated Electronic Ballast



METALARC POWERBALL EL Ceramic PAR lamps meet today's color critical needs of retail applications while providing desired characteristics such as high efficacy, long life, improved lamp to lamp color consistency and high CRI.

METALARC POWERBALL EL Ceramic lamps are ideal replacements for halogen or incandescent lamps where significant energy savings and superior light quality are desired. The integrated electronic HID ballast and medium base allow the compact POWERBALL EL lamps to be used in conventional line voltage fixtures in almost any application.

Key Features & Benefits

- Exclusive POWERBALL Pulse Start arc tube technology
 - High CRI and excellent red rendering yields more natural and vibrant colors and crisp whites
 - Superior color stability over life of the lamp and through various operating positions
 - Long life: 12,000 hours average rated life (>3X longer than halogen PAR38)
- METALARC PRO-TECH® design for open fixture applications
- Integrated electronic ballast:
 - Direct replacement of tungsten halogen PAR lamps without a fixture change
 - Low input voltage shutdown and end-of-life protection
- UV-Stop technology significantly reduces UV output, minimizing discoloration and fading
- QUICK 60+®

ECOLOGIC® is a comprehensive program of OSRAM SYLVANIA focused on addressing environmental issues at all stages of lamp life.

SYLVANIA METALARC POWERBALL EL ECOLOGIC lamps are designed to pass the Federal Toxic Characteristic Leaching Procedure (TCLP¹) criteria for classification as non-hazardous waste in most states.²

¹ TCLP test results are based on NEMA LL Series standards and are available on request.
² Regulations may vary. Check your local and state regulations



Product Offering

Ordering Abbreviation	Beam Angle	MBCP (cd)
MCP24EL/PAR38/U/830/SP10/ECO	10°	26,000
MCP24EL/PAR38/U/830/WSP15/ECO	15°	12,600
MCP24EL/PAR38/U/830/NFL25/ECO	25°	5,600
MCP24EL/PAR38/U/830/FL40/ECO	40°	2,100

Application Information

Applications

- Accent lighting
- Display lighting
- Lobbies
- Malls
- Office areas
- Retail stores
- Studio lighting

Fixtures

- Recessed downlights
- Track lights

Applications Notes

UL1993 listed suitable for dry and damp indoor and outdoor applications.



Specification Data

Fixture Description:	Type
Project/Job:	
SYLVANIA lamp:	
Notes:	

Operating Instructions

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

1. Re-lamp fixture 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. (See catalog for rated life.)
2. Only operate with compatible fixture at 120V input.
3. This lamp is not intended for use with emergency fixtures or emergency exit lights.
4. Do not operate with an external ballast as ballast is integrated into the lamp.
5. Do not use with dimmers. Do not use on electronic timers, photocells, lighted switches or any other switches that do not meet UL20 Sec. 7.6.15.
6. Before lamp installation or replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
7. Do not use lamp if lens, reflector or housing is visibly damaged.
8. Do not use in totally enclosed, recessed fixture.
9. Protect lamp, lamp socket and wiring against moisture, corrosive atmosphere and excessive heat.
10. Suitable for dry and damp locations. Risk of electric shock - Do not use where directly exposed to water.
11. Time should be allowed for lamp color to stabilize when turned on for the first time. All lamp ratings are based on 100 hours of operation. Movement or vibration may cause variation in color and appearance.
12. Lamps may require 10-15 minutes to re-light if there is a loss of power to the socket. Actual time may vary depending on the fixture type.
13. Take care in handling and disposing of this lamp. If arc-tube is broken, avoid skin contact with any of the contents and fragments.
See Product Safety Data Sheet for further details.
14. This product complies with the requirements of FCC 47 CFR §18 non-consumer. This product may cause interference to radios, televisions, wireless telephones and remote controls. If interference occurs, move the product away from these devices or plug into a different outlet. Do not install this near maritime safety communications equipment or other critical navigation or communications equipment operating between 0.45-30 MHz. For additional product information, call 1-800-LIGHTBULB (1-800-544-4828).
15. This Class A RFLD complies with the Canadian standard ICES-005.

Ordering Information

Item Number	Ordering Abbreviation	Watts	Bulb	Base	Initial Lumens	MBCP ¹	Beam Angle	Avg. Rated Life (hrs.)	CCT	CRI	Lamp Efficacy (LPW)
64305	MCP24EL/PAR38/U/830/SP10/ECO	24	PAR38	E26 Med	1220	26,000	10°	12,000	3000K	82	51
64237	MCP24EL/PAR38/U/830/WSP15/ECO	24	PAR38	E26 Med	1220	12,600	15°	12,000	3000K	82	51
64306	MCP24EL/PAR38/U/830/NFL25/ECO	24	PAR38	E26 Med	1220	5,600	25°	12,000	3000K	82	51
64783	MCP24EL/PAR38/U/830/FL40/ECO	24	PAR38	E26 Med	1220	2,100	40°	12,000	3000K	82	51

Ordering Guide

MCP	24	EL	/	PAR38	/	U	/	830	/	SP	10	/	ECO
M=METALARC® C=CERAMIC P=Protected (METALARC PRO-TECH®)	Wattage: 24 Watts	Electronic Integrated Ballast		Bulb Shape: PAR38		Universal		8 = 82 CRI 30 = 3000K CCT		Beam Spread SP=Spot, FL=Flood, NFL=Narrow Flood, WSP=Wide Spot	Beam Angle 10°, 15°, 25° 40°		ECOLOGIC®

System Comparison

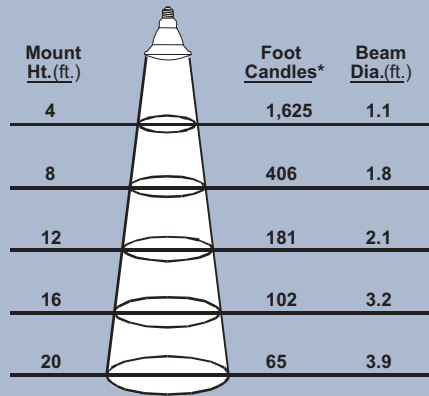
Type	Watts	Avg. Rated Life (hrs.)	Lumen	MBCP ¹	Beam Angle	Energy Savings Watts	Energy Savings Dollars*
METALARC POWERBALL® EL /SP10	24	12,000	1220	26,000	10°	-	-
Halogen PAR38 Spot	120	3,000	1800	22,500	10°	96	\$115
Halogen PAR38 Spot	90	3,000	1310	20,000	9°	66	\$79
Halogen PAR38 Spot	75	3,000	1060	19,200	9°	51	\$61
Halogen PAR38 Spot	60	3,000	850	16,000	9°	36	\$43

* Energy savings per lamp, over life, @ \$0.10/kWh

1. MBCP: Maximum Beam Candle Power measured in candela.

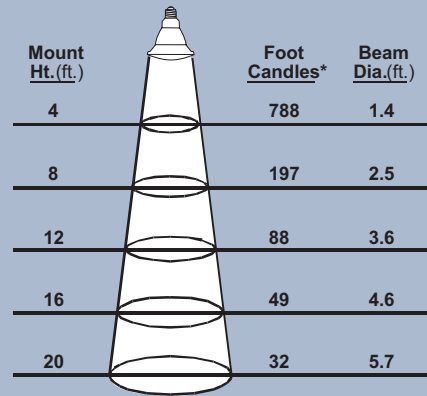
Illuminance Cone Diagrams

64305 - MCP24EL/PAR38/U/830/SP10/ECO



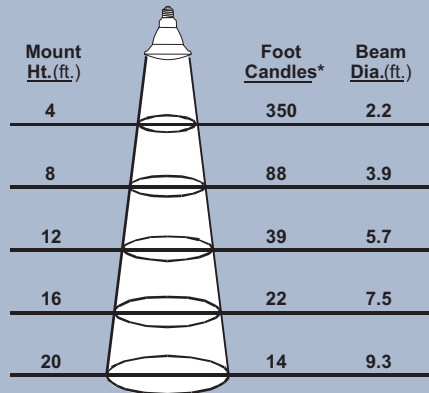
* Approximate footcandle values

64237 - MCP24EL/PAR38/U/830/WSP15/ECO



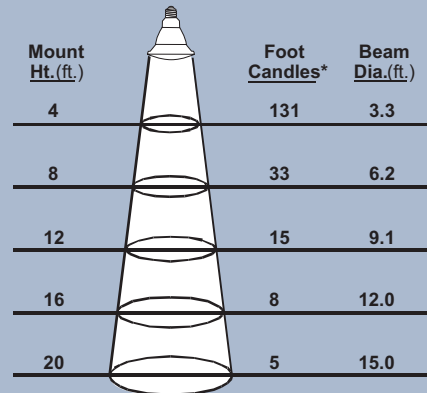
* Approximate footcandle values

64306 - MCP24EL/PAR38/U/830/NFL25/ECO



* Approximate footcandle values

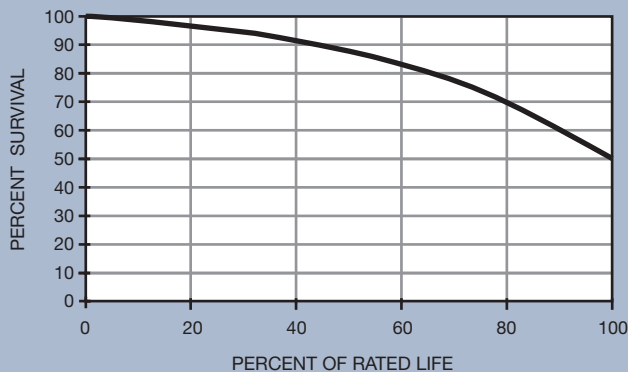
64783 - MCP24EL/PAR38/U/830/FL40/ECO



* Approximate footcandle values

Technical Information

Typical Mortality Curve



Typical Lumen Maintenance Curve

