PE300BF and PE300BUV

CERMAX® XENON SHORT ARC LAMPS

Cermax Xenon short arc lamps from Excelitas are ideal for applications that require a high degree of illumination control.

CERMAX

Key Features

- High-intensity illumination - 5000 Lumens
- Up to 6.6 Watts of UV output (<390 nm)
- Power range of 180-320 Watts
- 1000 hours lamp lifetime
- Broad spectral range with 5900° Kelvin color temperature

Applications

- Medical fiber optic illuminators
- Industrial fiber optic illuminators
- Machine vision
- Infrared and visible spotlights/beacons
- Spectroscopy
- Microscopy
- UV Curing
- Video projection

The Cermax® Xenon short arc lamp from Excelitas Technologies is an innovative lamp design in the specialty lighting industry. Cermax Xenon lamps were introduced in the early 1980s and are now used in diagnostic endoscopes in most major hospitals worldwide, in high brightness projection display systems, and for a wide variety of other high-performance applications.

The Cermax® Xenon lamps, Models PE300BF and PE300BUV, have an integrated parabolic reflector, enabling high intensity, focused output of ultraviolet, visible, and infrared radiation. With their internal reflector and rugged ceramic body construction, Cermax® Xenon lamps are the safest and most compact alternative to conventional quartz xenon lamps. Cermax lamps are ideal for applications that require a high degree of illumination control.

Current-regulated or power-regulated power supplies with output ripples of less than 5% are recommended. Single shot ignition pulses are advised because radio frequency starters may damage the lamps internal reflector.

In addition to lamps, Excelitas Technologies manufactures power supplies for Cermax® Xenon arc lamps, lamp holders, OEM lighting systems, and fiber optic light sources.

EXCELITAS TECHNOLOGIES

www.excelitas.com

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Operational Specifications		
Description	**Nominal**	**Range**
Power	300 Watts	180-320 watts
Current	21 amps (DC)	10-22 amps (DC)
Operating Voltage	14 volts (DC)	13-16 volts (DC)
Ignition Voltage	23 kilovolts (recommended minimum)	
Temperature	150° C (Maximum)	
Lifetime*	1000 hours typical	

* End of life is defined as 50% of initial output

Initial Output at Nominal Power		
F= UV Filtered Output	**UV= UV Enhanced Output**	
Description	**PE300BF**	**PE300BUV**
Peak Intensity	$515x10^3$ candelas	$460x10^3$ candelas
Radiant Output*	50 Watts	50 Watts
UV Output*	2.6 Watts	6.6 Watts
IR Output*	28.8 Watts	26.8 Watts
Visible Output*	5000 Lumens	4500 Lumens
Color Temperature	5900 Kelvin	5050 Kelvin
Peak Instabilities	4%	4%
Beam Geometry**	5°/6°/7°	

* These values indicate total output in all directions. Wavelengths = UV<390 nm, IR>770 nm, Visible: 390 nm-770 nm

** Beam Geometry defined as the half angle at 10% PTS after 01/100/1000 hours

Physical Specifications	
Description	**Specification**
Arc Gap	0.049 inch (1.24 mm)
Reflector Geometry	Parabolic $Y^2 = 0.5$ X (inch)
Weight	132 grams
Window Diameter	1.0 inch (25.4 mm)

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PE300BF

Focused Output with F/1.0 Lens		
Description	**Visible Output**	**Total Output***
6 mm aperture	1410 Lumens	14 Watts
8 mm aperture	3130 Lumens	29 Watts

* Nominal values at 300 Watts after 2 hour burn-in.

NOTES:

1. Lamp must not be operated with window facing upwards within 45º of vertical.

2. Seal temperature must not exceed 150º C.

3. Current/power regulated power supplies and Excelitas lamp housing units are recommended.

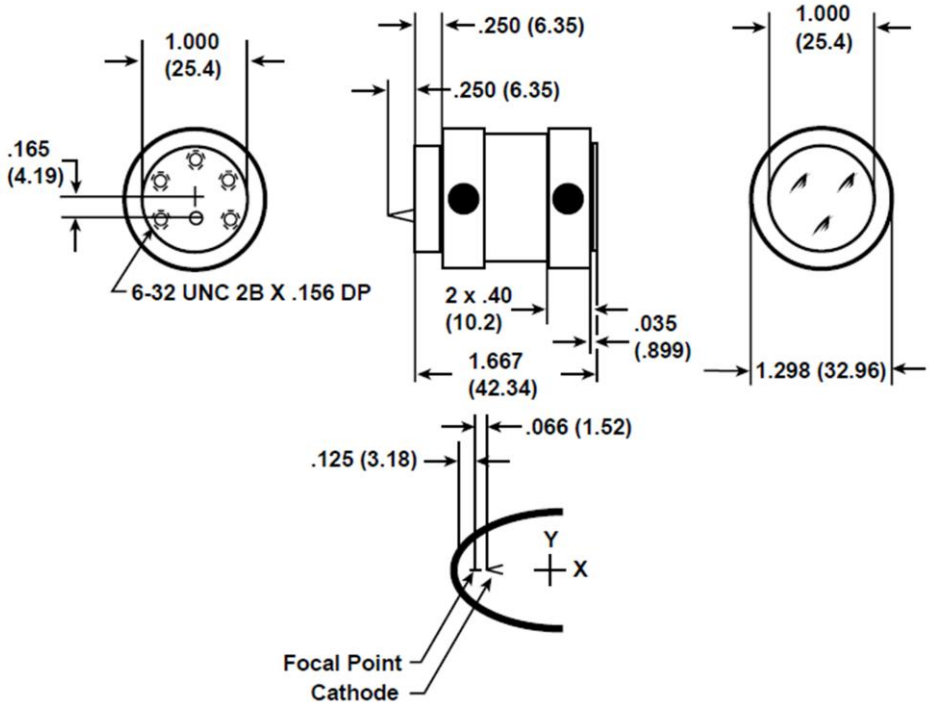
4. Lamp must be operated within recommended current and power range. Over powering may lead to arc instability, hard starting and premature aging.

5. Hot mirror assembly is available for IR filtering.

6. CERMAX lamps are much safer lamps to use than their quartz xenon arc lamp equivalents. However, caution must be practiced when operating lamps because they are under high pressure, require high voltage, reach temperatures up to 200º C, and their IR and UV radiation can cause skin burns and eye damage. Read hazard sheet included with each lamp shipment.

Mechanical Dimensions

PE300BF and PE300BUV



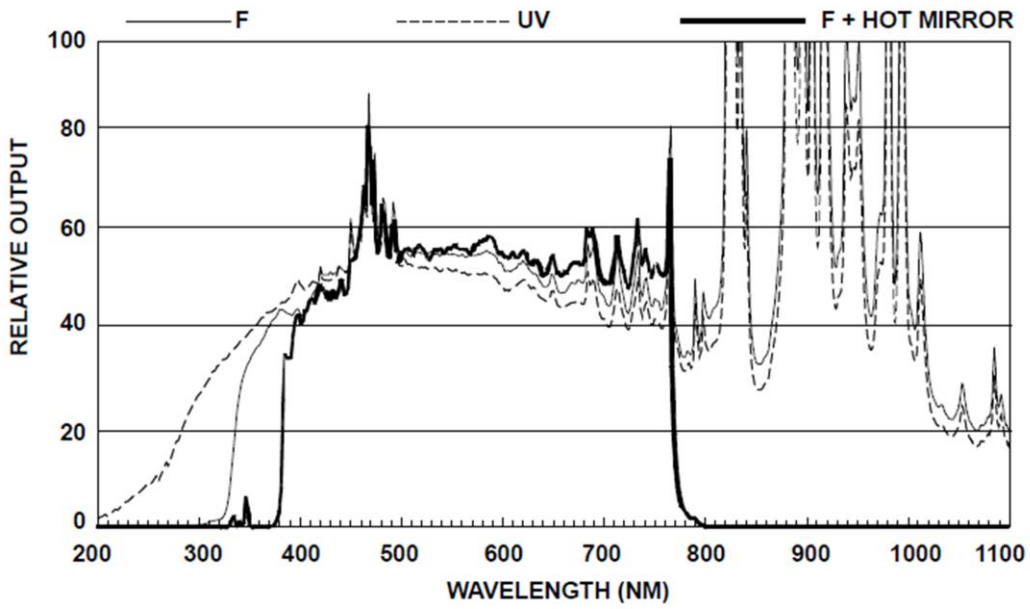
Dimensions in parentheses are in millimeters.

PE300BF and PE300BUV

CERMAX® XENON ARC LAMPS

Spectral Output

PE300BF and PE300BUV



About Excelitas Technologies

Excelitas Technologies is a global technology leader focused on delivering innovative, customized solutions to meet the lighting, detection and other high-performance technology needs of OEM customers.

From medical lighting to analytical instrumentation, clinical diagnostics, industrial, safety and security, and aerospace and defense applications, Excelitas Technologies is committed to enabling our customers' success in their specialty end-markets. Excelitas Technologies has approximately 3,000 employees in North America, Europe and Asia, serving customers across the world.

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