



DATASHEET Lighting Solutions

PE700C-13F and PE700C-13UV CERMAX® XENON SHORT-ARC LAMPS

CERMAX

Key Features

- High-intensity, focused illumination - 21000 Lumens
- Up to 17 Watts of UV output (<390 nm)
- Power range of 600-750 Watts
- 1000 hours life
- Broad spectral range with 5900° Kelvin color temperature

Applications

- Medical and industrial fiber optic illuminators
- Machine vision
- Infrared and visible spotlights/beacons
- Spectroscopy
- Microscopy
- UV Curing
- Video projection
- Solar simulation
- Stage and studio
- Wafer inspection



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

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

Cermax® Xenon lamps, Models PE700C-13F and PE700C-13UV, have an integrated elliptical 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. This makes them 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 lamp's internal reflector.

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

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TECHNOLOGIES

PE700C-13F and PE700C-13UV

CERMAX® XENON SHORT-ARC LAMPS

PE700C-13F and PE700C-13UV

Operational Specifications		
Description	Nominal	Range
Power	700 Watts	600-750 Watts
Current	41.5 amps (DC)	35-46 amps (DC)
Operating Voltage	16 volts (DC)	15.5-18 volts (DC)
Ignition Voltage	23-35 kilovolts (system dependent)	
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	PE700C-13F	PE700C-13UV
Radiant Output*	190 Watts	190 Watts
UV Output*	8.5 Watts	17 Watts
IR Output*	100 Watts	97 Watts
Visible Output*	21000 Lumens	18600 Lumens
Color Temperature	5900° Kelvin	5050° Kelvin
Peak Instabilities	4%	
Spot Size at Crossover at 50% pts.	0.1 inch (3 mm)	
Spot Size at Crossover at 10% pts.	0.2 inch (6 mm)	

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

Physical Specifications	
Description	Specification
Focal Distance "A"	1.10 inch (28 mm)
Weight	196 grams
Window Diameter	1.0 inch (25.4 mm)

PE700C-13F and PE700C-13UV

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PE700C-13F

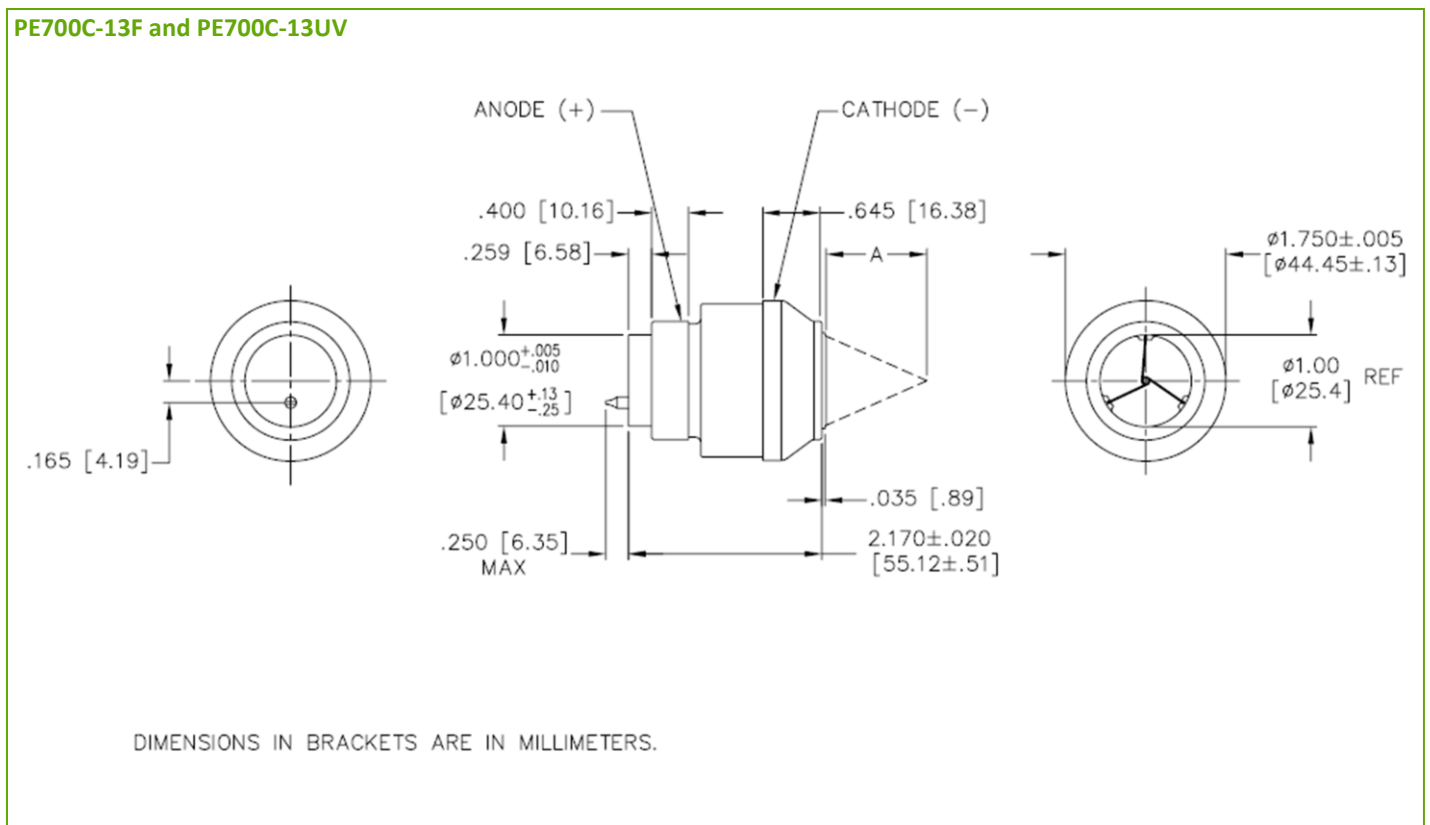
Focused Output		
Description	Visible Output	Total Output*
3 mm aperture	6500 Lumens	60 Watts
6 mm aperture	11200 Lumens	109 Watts
12 mm aperture	18500 Lumens	180 Watts

* Nominal values at 750 watts after 2 hour burn-in.

NOTES:

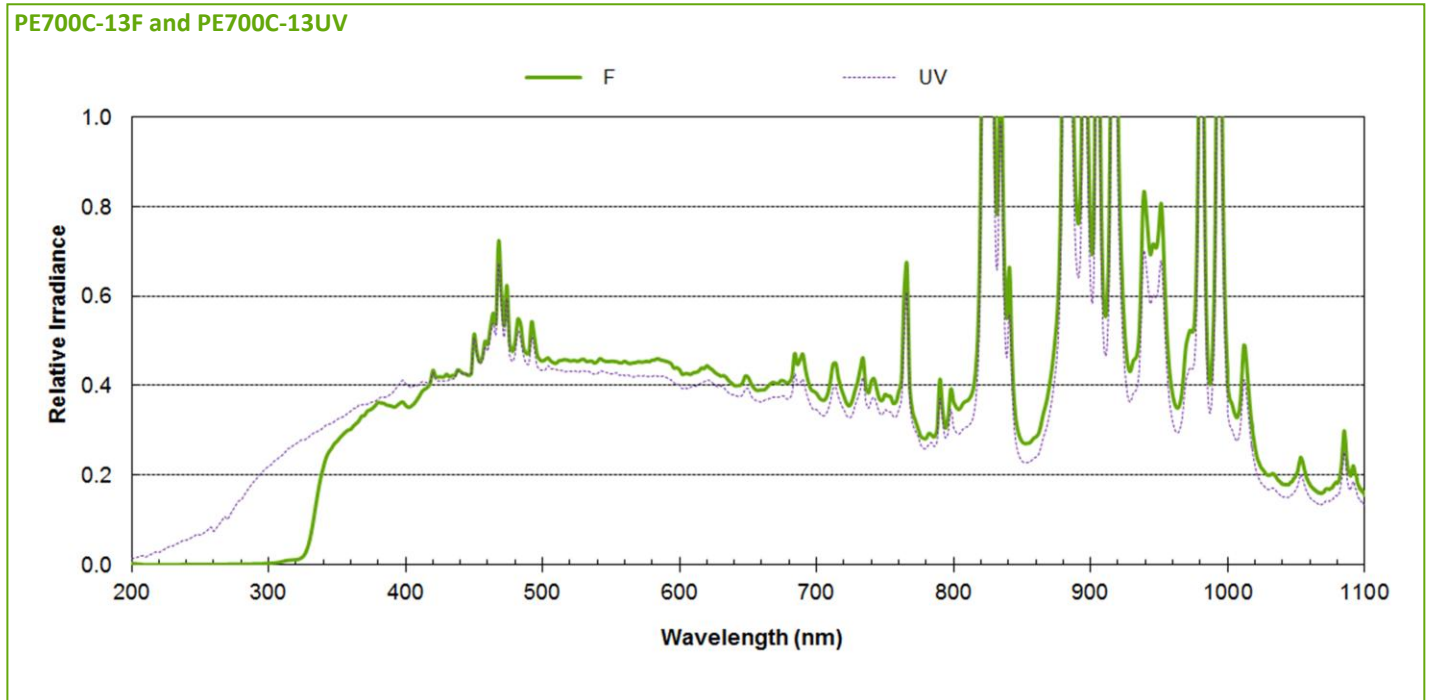
1. Lamp must not be operated with window facing upwards within 45° of vertical.
2. Seal temperature must not exceed 150° C.
3. Current/power regulated power supplies and Excelitas lamp housing units are recommended.
4. Lamp must be operated within recommended current and power range. Over powering may lead to arc instability, hard starting and premature aging.
5. Cermax® Xenon 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 200° C, and their IR and UV radiation can cause skin burns and eye damage. Please read the Hazard Sheet included with each lamp shipment.

Mechanical Dimensions



PE700C-13F and PE700C-13UV CERMAX® XENON SHORT-ARC LAMPS

Spectral Output



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, aerospace and defense, and safety and security 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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