

PE500DF and PE500DUV

CERMAX® XENON ARC LAMPS



Description

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

The PE500DF and PE500DUV Cermax® lamps 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® 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 lamps internal reflector.

In addition to lamps, PerkinElmer Optoelectronics manufactures Cermax® arc lamp power supplies, lamp holders, OEM lighting systems, and fiber optic light sources.

Applications

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

Operational Specifications

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

$$F = \text{UV Filtered Output} / \text{UV} = \text{UV Enhanced Output}$$

*These values indicate total output in all directions.

Wavelengths = UV<390nm, IR>770nm, Visible 390nm to 770nm.

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

.22 (5.59)

2.00 (50.8)

8-32 UNC 2B x .25 DP
3 Holes EQ SP on A
1.60 (40.64) BC

2 x .60 (15.2)

.273 (6.93)

2.858 (72.59)

.066 (1.52)

.20 (5.08)

2.00 (50.8)

2.592 (65.84)

Focal Point

Cathode

X

Y

Dimensions in parentheses are in millimeters.

Description	Specification
Arc Gap	.09 inch (2.28mm)
Reflector Geometry	Parabolic $Y^2 = 0.8 \times (\text{inch})$
Weight	664 grams
Window Diameter	2 inch (50.8 mm)

* Nominal values at 500 watts after 2 hour burn-in.

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 PerkinElmer 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 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. Read hazard sheet included with each lamp shipment.

For more information e-mail us at opto@perkinelmer.com or visit our web site at www.perkinelmer.com/opto.

All values are nominal; specifications subject to change without notice.

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