

PAX-10M™

10-Watt Precision-Aligned, Modular, Xenon Light Source



PAX Family of Precision-Aligned Xenon Light Sources

Features and Benefits

- Precision alignment-arc position precisely located (+/- 0.05 mm, 0.002 inches) relative to datum feature on the mounting surface
- Ease of installation and convenient “plug and play” field replaceable lamp module
- Long Life: >1.0 x 10⁹ flashes
- 10 Watts average power
- Spectral range from 190 to 2000+ nm
- Compact system with remote flash head
- Flexible arc orientation and mounting
- User selectable analog or digital intensity control
- Internal pulse generator for self check
- CE Marked & RoHS compliant

Overview

The PAX-10M by Excelitas is the newest addition to the PAX family of Precision-Aligned Pulsed Xenon Light Sources. It offers a full 10 Watts of power in a compact, modular design with a remote flash head. This allows for easier integration in space-limited applications.

The PAX-10M features a pre-aligned arc position precisely located relative to a datum feature on the mounting surface of the case. This pre-aligned arc position allows for “plug and play” field replacement, eliminating alignment time and reducing OEMs’ costs and machine down time.

The PAX-10M utilizes Excelitas’ proven pulsed Xenon flash lamp technology, delivering high radiant intensity over a continuous spectrum from the ultraviolet to the infrared. It provides a long life rating over a billion flashes and is available with user-selectable analog or digital intensity control.

The PAX-10 Family is the ideal pulsed Xenon light source for clinical diagnostics, invitro diagnostics, life sciences, drug discovery, proteomics, and analytical instrumentation applications.

Applications

- Absorption analysis
- Immunoassay modules
- Fluorimetry
- Spectroradiometry
- Liquid Chromatography
- Colorimetry
- UV/VIS/NIR applications

PAX- 10M

Input Specifications

Parameter	Specification
Voltage	11-28 VDC
DC Current	2 A maximum
Inrush Current	4 A peak maximum
Trigger ¹	+5 V, 20-50 mA peak input, 10-100 μ s pulse width, leading edge trigger
Vref (Vo/Vref = 210)	1.9 - 4.76 VDC or 12 Bit serial interface
Analog or Digital Control	External switch selectable
Internal/External Intensity Adjust	External switch selectable
Input Connector	9-pin D-sub

NOTE 1: Optically Isolated: Internal series resistor = 150 Ω

Part Number Configuration PAX-10MA-B

A = Lamp Type	1 - 1.5 mm arc length, 225-2000+ nm 2 - 1.5 mm arc length, 190-2000+ nm 4 - 3.0 mm arc length, 225-2000+ nm 5 - 3.0 mm arc length, 190-2000+ nm
B = Discharge Capacitor	1 - 0.10 μ F 2 - 0.15 μ F 3 - 0.22 μ F 4 - 0.33 μ F

* Part Number Example: PAX-10M2-1 = 1.5 mm arc length with 190 nm cut off and 0.10 μ F capacitor

Electrical Output

Parameter	Specification
Main Discharge Voltage	400-1000 VDC +/- 2%
Power	10 Watts
Standard Discharge Capacitors	0.10, 0.15, 0.22, 0.33 μ F
Flash Rate (Hz)	Fmax = 10/E where E = 1/2CV

Light Output

Parameter	Specification
Spectral Range	190-2000+ nm
Stability ²	<1% CV
Life time	> 1 x 10 ⁹ Flashes

NOTE 2:
Operating conditions:
0.33 μ F discharge capacitor. 600 VDC discharge voltage. Connector cable length of 15". 10 Hz flash rate.

Environmental

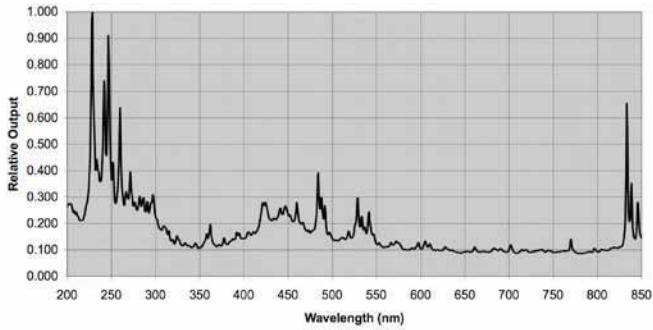
Parameter	Specification
Operating temperature	0 to 40 °C
Storage temperature	-40 to 90 °C
Humidity	95% RH, non-condensing
Safety Compliance	EU Low Voltage Directive 73/23/EEC, EN61010-1:2001-02

Operating Conditions

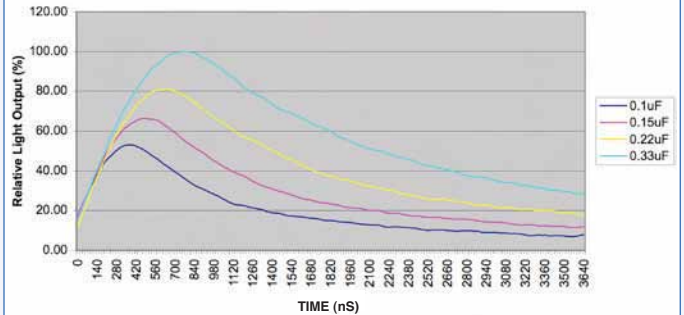
Part Number	Main Discharge Capacitor (μ F)	Main Discharge Voltage (V)	Maximum Input Energy per Flash (mJ)	Maximum Repetition Rate (Hz)	Maximum Average Power (W)
PAX-10MA-1	0.1	400	8	1250	10
		600	18	556	
		1000	50	200	
PAX-10MA-2	0.15	400	12	833	10
		600	27	370	
		1000	75	133	
PAX-10MA-3	0.22	400	18	568	10
		600	40	252	
		1000	110	291	
PAX-10MA-4	0.33	400	26	378	10
		600	60	168	
		1000	165	60	

Characteristics

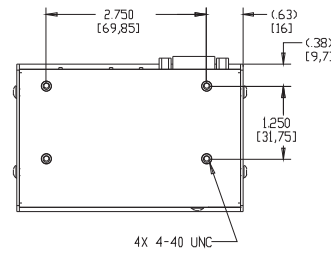
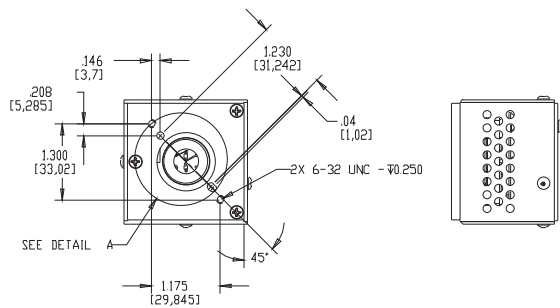
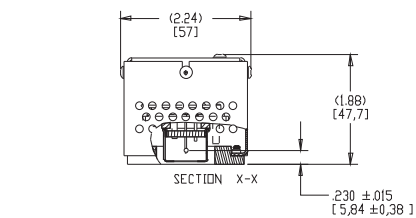
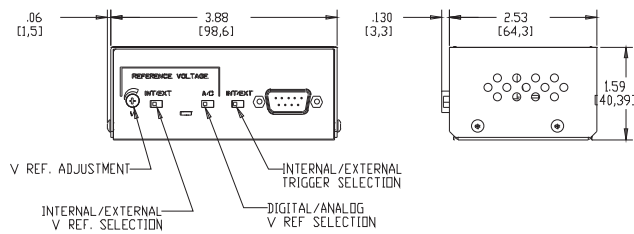
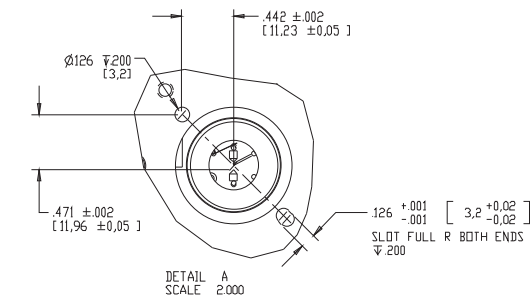
Spectral Distribution (typ.)



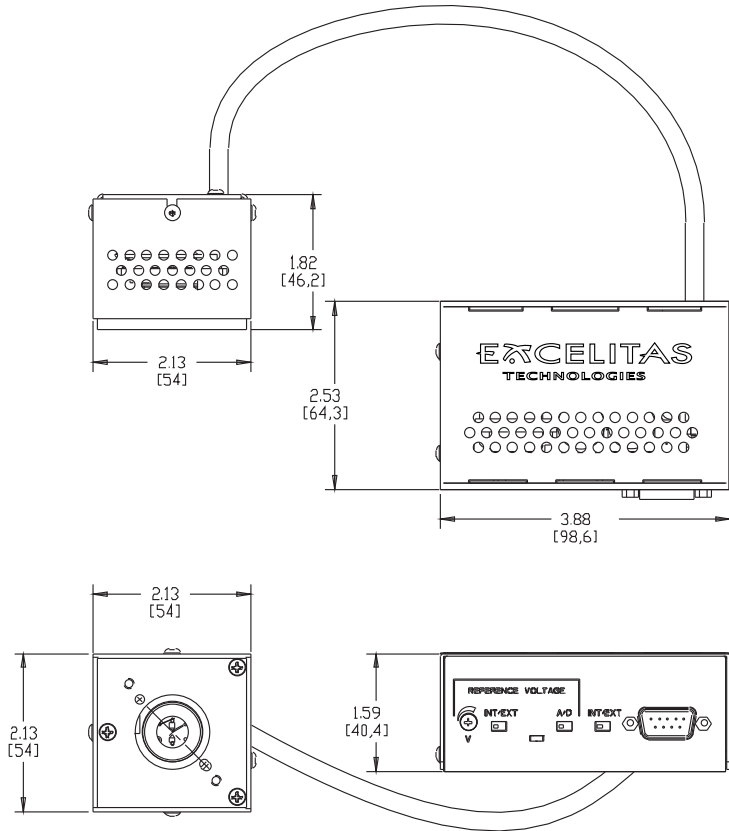
FLASH PULSE WAVEFORM (typ.)



Precision Arc Alignment and Mounting



Mechanical Outline



NOTE: Standard cable length is 15 inches.
Alternate cable lengths available upon request.

Ordering Information

To request additional information, receive a quote, or place an order for the PAX-10M, please contact your Customer Support team or visit our website at www.excelitas.com.

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

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