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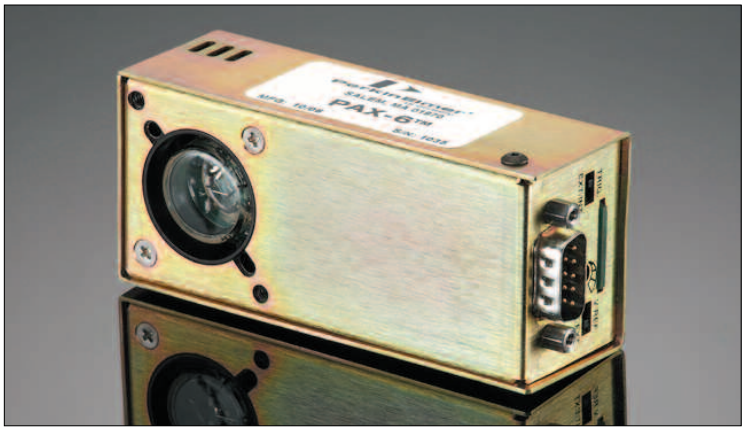
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Find the *Perkin Elmer PAX-602-2* at our website: ***Click HERE***

ANALYTICAL SOLUTIONS

DATASHEET

PAX-6™
by PerkinElmer
6-Watt Precision-Aligned Pulsed Xenon Light Source



The PAX-6 provides OEMs with convenient “plug and play” field replacement.

Overview

The PAX-6™ by PerkinElmer is a 6 Watt Precision-Aligned Pulsed Xenon Light Source which is 50% more compact than existing flash lamp systems. The compact, integrated solution contains the flash lamp, trigger circuit, and power supply in an EMI suppressant enclosure.

The PAX-6 was designed specifically in response to OEMs’ needs for precision alignment and features a pre-aligned arc position precisely located relative to a datum feature on the mounting surface of the case. Available in two arc orientations, the PAX-6’s pre-aligned arc position allows for “plug and play” field replacement, eliminating alignment time and reducing OEMs’ costs and machine down time.

The PAX-6 offers a wide range of flash energy levels and 6 Watts average power in a compact, pre-aligned module. It utilizes PerkinElmer’s high stability short arc Xenon flash lamps. Known for their stability and long life characteristics, these Xenon lamps generate light over a continuous spectrum from ultraviolet to infrared.

The PAX family of compact, precision-aligned Xenon light sources are the ideal choice for clinical diagnostic, invitro diagnostics, life sciences, drug discovery, proteomics, and analytical instrumentation applications.

Features and Benefits

- Precision alignment — arc position precisely located (+/- 0.05 mm, .002 inches) relative to a datum feature on the mounting surface
- Ease of installation and convenient “plug and play” field replacement
- 50% more compact than existing flash lamp systems
- Long life: > 2.0 x 10^9 flashes
- Spectral range from 120 to 2000+ nm
- Available in two arc orientations
- 6 Watts average power
- Integrated package — flash lamp, trigger circuit and power supply, all in a compact, EMI suppressant enclosure
- Flexible mounting
- Highest flash rate over full power range
- CE marked and RoHS compliant

Applications

- Absorption analysis
- Immunoassay modules
- Fluorimitry
- Spectroradiometry
- Liquid and gas chromatography
- Colorimetry
- UV/VIS/NIR applications

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PAX-6™ Technical Specifications

Input Specifications

Parameter	Specification
Voltage	11–28 VDC
DC current	1 Amp avg.
Inrush current	4 Amps peak
Trigger[1]	+5 V, 20–50 mA peak input, 10–100 µs pulse width, leading edge trigger
Vref (Vo/Vref = 127)	3.15 to 4.73 VDC
Internal/external intensity adjust	Switch selectable
Input connector	9-pin D-sub

[1] Optically Isolated: Internal series resistor = 150 Ohms

Electrical Output

Parameter	Specification
Main discharge voltage	400–600 VDC +/- 2%
Power	6 Watts
Standard discharge capacitors	0.047, 0.10, 0.22, 0.27 µF
Flash rate (Hz)	Fmax = 6/E where E = 1/2CV^2

Light Output

Parameter	Specification
Spectral range	120–2000 + nm
Stability[2]	0.13% CV, 2.2% p-p Typical
Life time	> 2 x 10^9 Flashes

[2] Operating conditions: 0.22 µF discharge capacitor. 600 VDC discharge voltage. 10 Hz flash rate.

Environmental

Parameter	Specification
Operating temperature	0 to 40ºC
Storage temperature	-40 to 90ºC
Humidity	95% RH, non-condensing
Safety compliance	CE Marked

Part Number Configuration PAX-6AB-C*

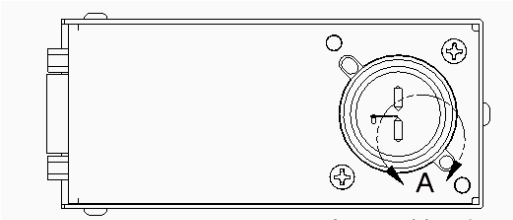
Parameter		Specification
Arc orientation **A**:	0	vertical
	1	horizontal
Lamp type **B**:	1	1.5 mm arc length, 225 nm cutoff
	2	1.5 mm arc length, 190 nm cutoff
	3	1.5 mm arc length, 120 nm cutoff
	4	3.0 mm arc length, 225 nm cutoff
	5	3.0 mm arc length, 190 nm cutoff
	6	3.0 mm arc length, 120 nm cutoff
Discharge capacitor **C**:	1	0.047 µF
	2	0.10 µF
	3	0.22 µF
	4	0.27 µF

*Part Number Example: PAX-603-1 = vertical arc, 1.5 mm arc length with 120 nm cutoff and 0.047 µF capacitor

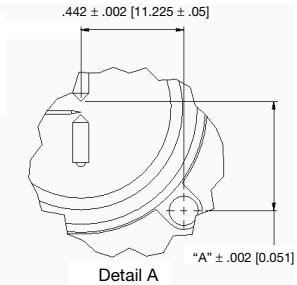
PAX-6 Precision Arc Alignment

Arc size	A in [mm]	B in [mm]
1.50 mm	.472 [11.989]	.412 [10.465]
3.00 mm	.501 [12.725]	.383 [9.728]

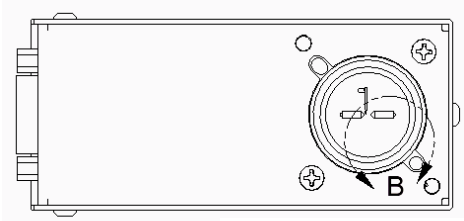
Notes
1. Precision mounting requires dowel pins (dia = .1250"/.1252").
2. Mounting kits available as an accessory.
3. Alignment provided from pin center to theoretical intersection of electrode tip as shown.



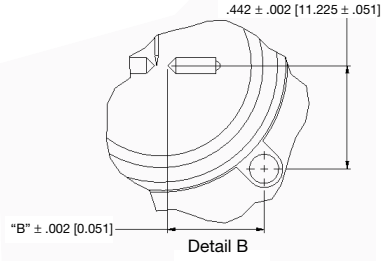
Arc position 0
"PAX-6OB-C"



Detail A



Arc position 1
"PAX-61B-C"



Detail B

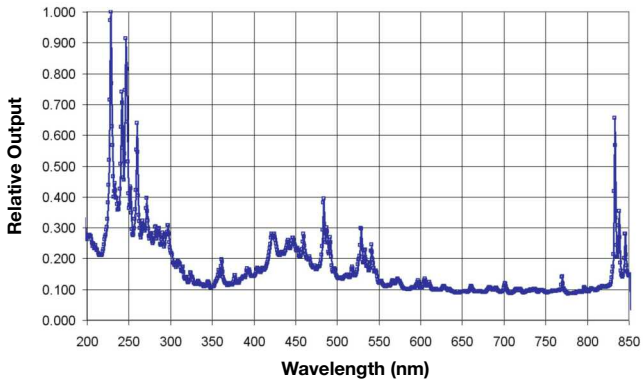
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Operating Conditions

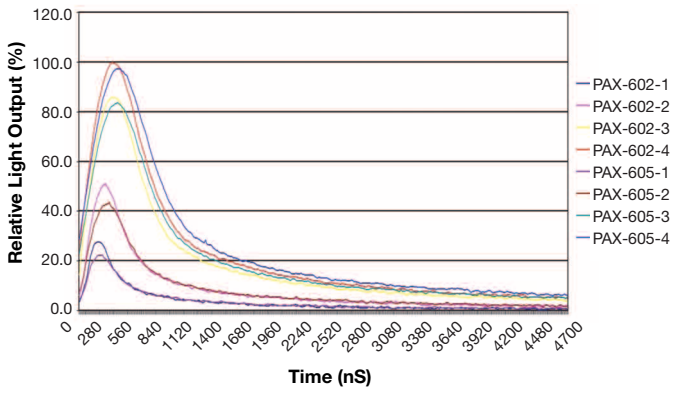
Part No.	Main Discharge Capacitor (µF)	Main Discharge Voltage (V)	Max. Average Input Energy per Flash (mJ)	Max. Repetition Rate (Hz)	Max. Average Power (W)
PAX-6AB-1	0.047	400	3.8	1579	6
		500	5.9	1016	6
		600	8.5	705	6
PAX-6AB-2	0.10	400	8	750	6
		500	12.5	480	6
		600	18	333	6
PAX-6AB-3	0.22	400	17.6	341	6
		500	27.5	218	6
		600	39.6	151	6
PAX-6AB-4	0.27	400	21.6	278	6
		500	33.7	178	6
		600	48.6	123	6

Characteristics

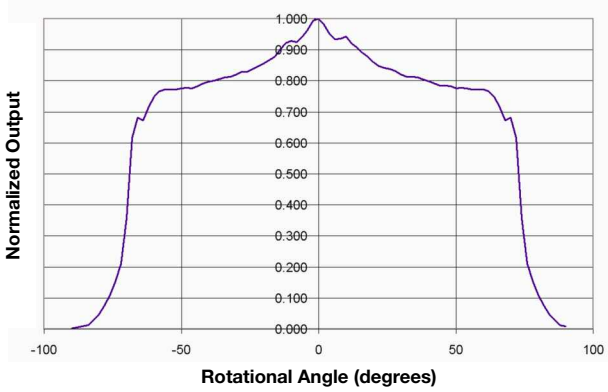
Spectral Distribution



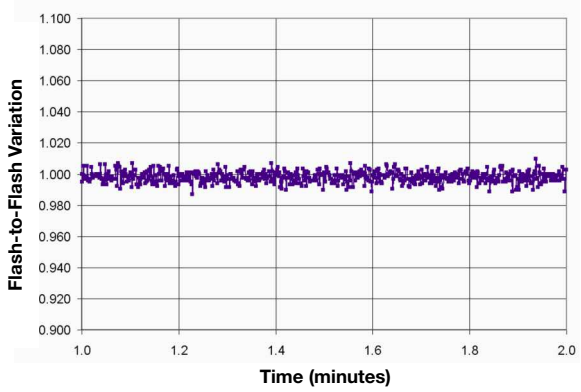
Flash Pulse Waveform



Rotational Distribution

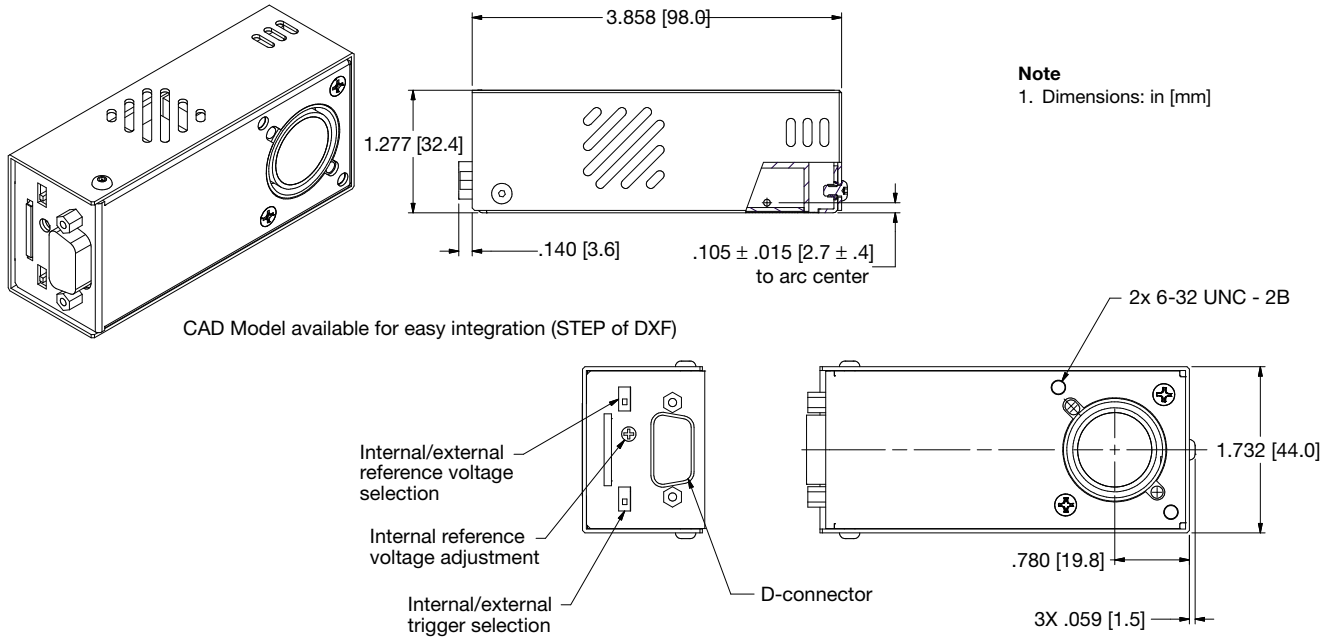


Stability

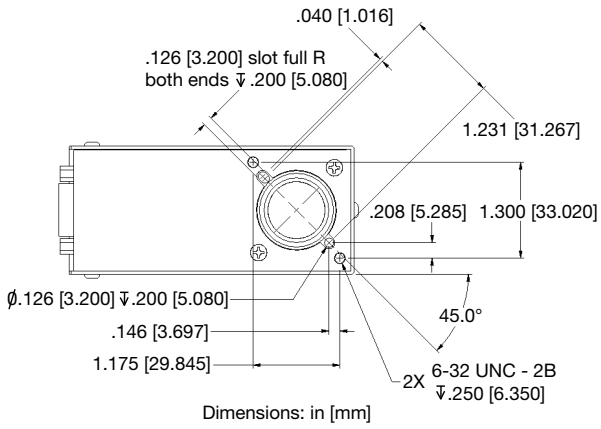


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Mechanical Outline

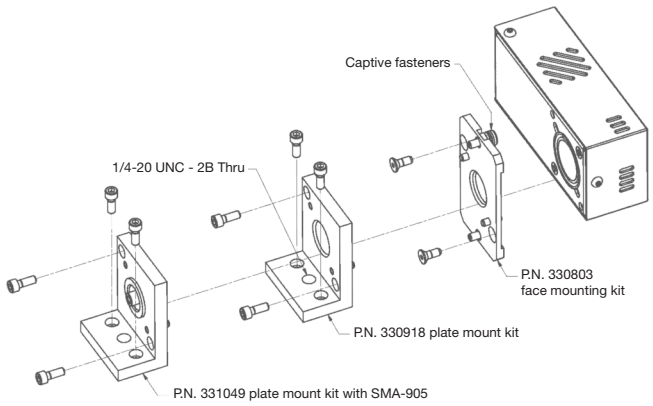


Mechanical Dimensions



Mechanical Mounting Kits (optional)

Notes
1. Both kits contain fasteners for mounting.
2. CAD model(s) available for easy integration. (STEP, ACIS or DXF).



PerkinElmer has designed an easy to use Evaluation Kit for testing the PAX-6 in your application. Please contact us for additional information or to place an order at one of the offices listed below.

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