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DATASHEET
Lighting Solutions

1100 Series
FlashPacs



1100 Series FlashPacs from Excelitas are ideal sources for UV-VIS-NIR applications.

Key Features

- Compact
- 10 or 20 Watts average power
- High radiant intensity
- Continuous spectrum UV-VIS-NIR
- User adjustable charge voltage
- Selection of flashlamps
- Selection of discharge capacitors
- Microsecond flash duration
- Simple fiber optic coupling

Applications

- Absorption analysis
- Immunoassay modules
- Fluorimetry
- Spectroradiometry
- Liquid and gas chromatography
- Colorimetry
- UV-VIS-NIR applications
- Machine vision

1100 Series FlashPacs from Excelitas Technologies have been designed to combine state-of-the-art circuitry and components into a packaged light source which provides microsecond-duration pulses of broadband light with exceptional arc stability. 1100 Series FlashPacs utilize the PS-1110 and PS-1120 variable output power supplies in conjunction with the appropriate Lite-Pac® trigger module to operate several types of flashlamps.

A fully shielded steel case and EMI suppression circuitry combine to diminish the radiated and conducted noise normally associated with high peak discharge currents.

FlashPacs can be ordered with a wide range of discharge capacitance values and several types of the 1100 Series flashlamps. These systems make ideal sources of pulsed light for ultraviolet-visible absorption spectroscopy, HPLC, blood analyzers, colorimetry, machine vision and ultraviolet applications.

EXCELITAS
TECHNOLOGIES

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1100 Series FlashPacs

Electrical Inputs		
	LS-1102	**LS-1130**
Voltage	11-28 VDC	15-28 VDC
DC Current	1.3 Amps @ 12 VDC	1.4 Amps @ 24 VDC
Peak Current	3.5 Amps @ 12 VDC	3.5 Amps @ 24 VDC
Trigger	+5V, 20-50mA peak input, 10-100µs pulse width, leading edge trigger. Optically isolated internal series resistor = 150Ω.	
V_{ref} (V_0/V_{ref} = 100)	4.5 – 6.0 VDC	4-10 VDC
EMI Supression	Yes[1]	Yes[2]

[1] Inductor and filter capacitor for power input. All inputs through shielded 9-PIN "D" connector.

[2] Common-mode inductor and filter capacitor in power input. All inputs through shielded 9-PIN "D" connector.

Electrical Outputs (Discharge)		
	LS-1102	**LS-1130**
Voltage (V_0)	450-600 ± 2% VDC	400-1000 ± 2% VDC
Power Output	10 Watts max.	20 Watts max.
Charge Rate, minimum	10j/sec (12V input , 600V output)	20j/sec (24V input , 600V output)
Line Regulation	1%	
Ripple[1]	0.5%	
Internal Discharge Capacitor	0.1µF Standard. See charts following for other vaules availavble	
Recharge Delay	200µsec	

[1] Peak to peak maximum with 0.10 µF internal discharge capacitor at maximum output.

LS-1102 FlashPac Specifications			
Model Number	**Discharge Capacitor**	**Maximum Input Energy Per Flash**	**Maximum Flash Rate @ 600 VDC**
LS-1102-1	0.10 µF - Standard	18 mJ	550 Hz
LS-1102-2	0.22 µF	40 mJ	250 Hz
LS-1102-3	0.47 µF	85 mJ	118 Hz
LS-1102-4	1.0 µF	180 mJ	55 Hz
LS-1102-5	2.0 µF	360 mJ	28 Hz

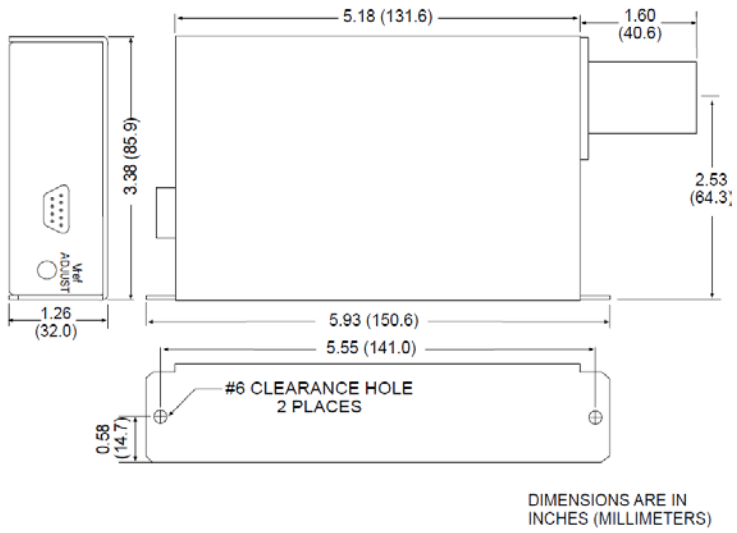
LS-1130 FlashPac Specifications			
Model Number	**Discharge Capacitor**	**Maximum Input Energy Per Flash**	**Maximum Flash Rate @ 1000 VDC**
LS-1130-1	0.10 µF - Standard	50 mJ	400 Hz
LS-1130-2	0.22 µF	110 mJ	180 Hz
LS-1130-3	0.47 µF	235 mJ	85 Hz
LS-1130-4	1.0 µF	500 mJ	40 Hz

Environmental		
	LS-1102	**LS-1130**
Operating Temperature	+32°F to +104°F (0°C to +40°C)	
Storage Temperature	-40°F to +194°F (-40°C to +90°C)	

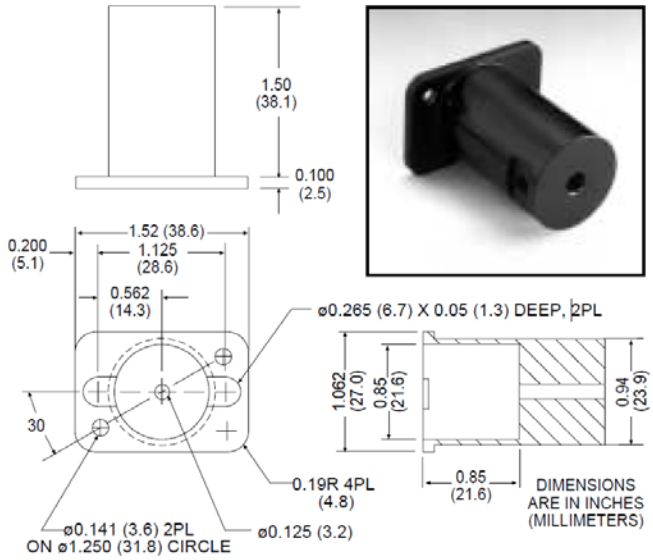
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Mechanical Dimensions

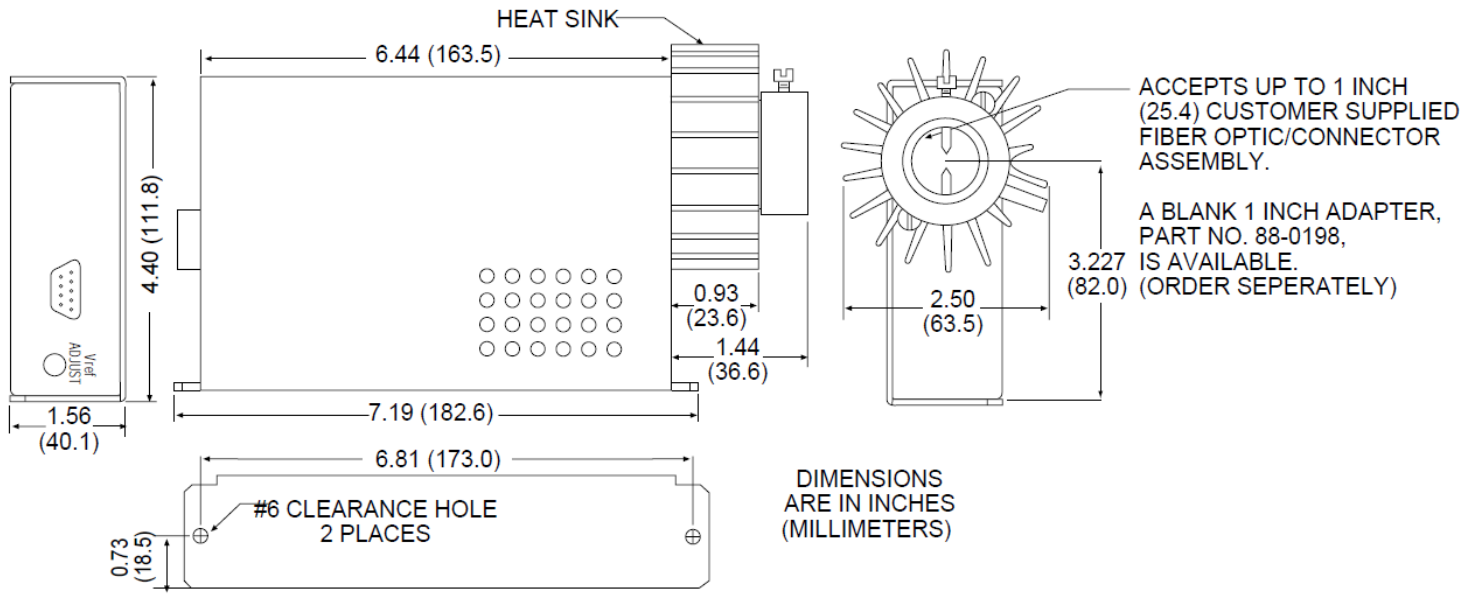
LS-1102 Outline



LS-1102 Optical Connector – Included with unit

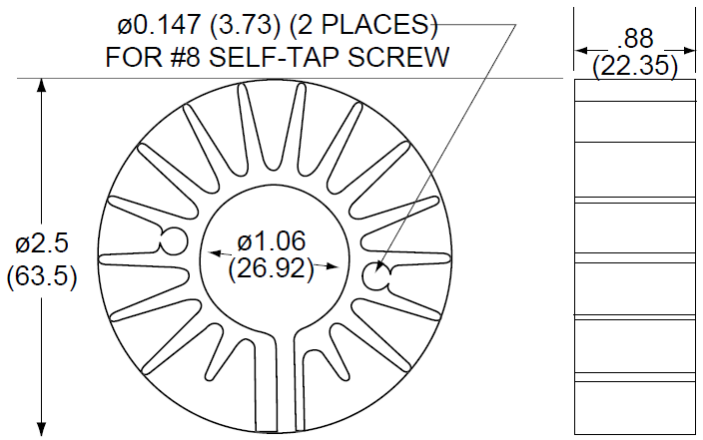


LS-1130 Outline

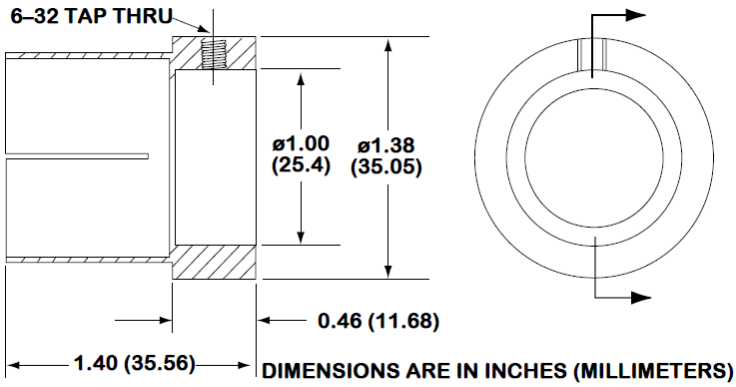


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LS-1130 Heat Sink (p/n: MVS-15) – Included with unit



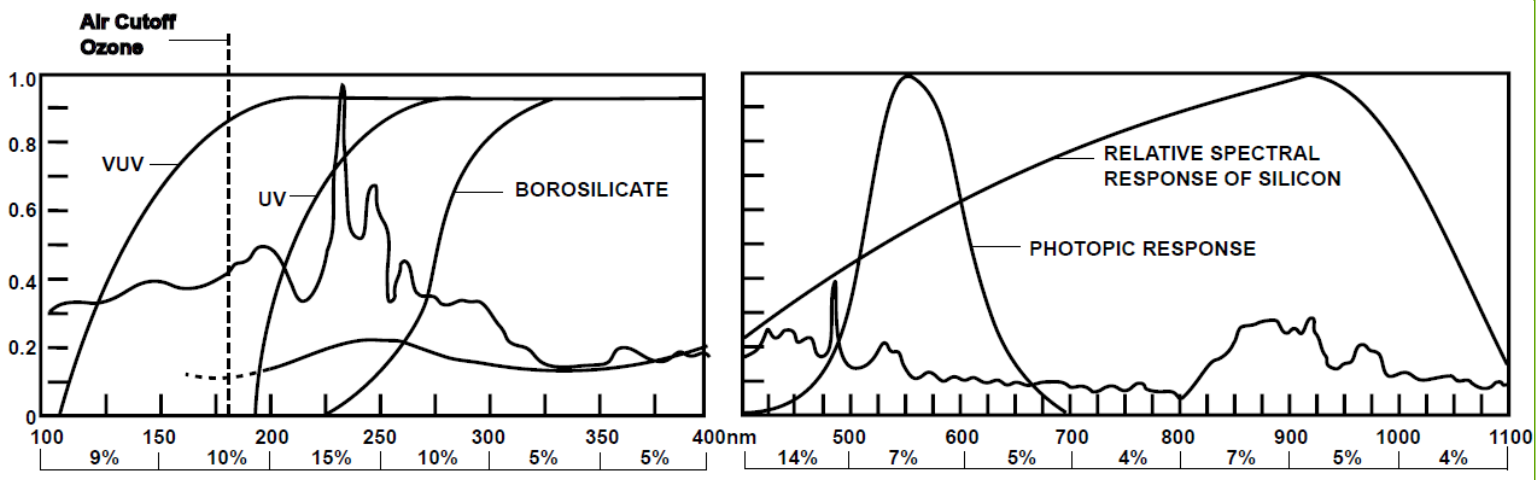
LS-1130 Optical Adapter (p/n: MVS-14-1) – Included with unit



Type	Arc Length (mm)	Spectral Distribution (nm)	Window Material	Average Power (watts)	Life (flashes)	Stability
Flashlamps available for LS-1102 FlashPacs (Order flashlamps separately)						
FX-1101	1.5	225-1100+	Borosilicate	10	>1x10^9	<1%CV
FX-1102		190-1100+	UV Glass			
FX-1103		120-1100+	MgF_2			
FX-1104	3.0	225-1100+	Borosilicate	10	>1x10^9	<1%CV
FX-1105		190-1100+	UV Glass			
FX-1106		120-1100+	MgF_2			
Flashlamps available for LS-1130 FlashPacs (Order flashlamps separtely)						
FX-1150	1.5	225-1100+	Borosilicate	20	>1x10^9	<1%CV
FX-1151		190-1100+	UV Glass			
FX-1152		120-1100+	MgF_2			
FX-1153	3.0	225-1100+	Borosilicate	20	>1x10^9	<1%CV
FX-1154		190-1100+	UV Glass			
FX-1155		120-1100+	MgF_2			
High output reflector flashlamps available for LS-1130 FlashPacs (Order flashlamps separtely)						
FX-1160	1.5	225-1100+	Borosilicate	20	>1x10^9	<1%CV
FX-1161		190-1100+	UV Glass			
FX-1162		120-1100+	MgF_2			
FX-1163	3.0	225-1100+	Borosilicate	20	>1x10^9	<1%CV
FX-1164		190-1100+	UV Glass			
FX-1165		120-1100+	MgF_2			

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Spectral Distribution of Xenon Flashlamps and Window Transmittance



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

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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