Laserglow Product Datasheet

LLD-0442 Low-Noise Collimated Diode Laser System

Laserglow Part Number: J4E0303FX



Similar Products:

For information about the other lasers in this product family visit:

http://www.laserglow.com/J4E

Ordering:

Order Online Now or Request Quote:

http://www.laserglow.com/J4E0303FX

Series Specifications:

Nominal Wavelength	442 nm
Output Type	CW
Laser Source Type	Diode

Overview:

The LLD-0442 Series of Low-Noise Collimated Diode Lasers are ideal for applications requiring less than 1% noise and output power levels from 5 mW to 50 mW. These 442 nm lasers maintain a high level of long-term output power stability and long operating lifetime at an aggressively competitive cost.

These lasers are commonly used for fluorescence excitation, PIV, Raman Spectroscopy, and a broad spectrum of other applications. The driver is available as a complete FDA-compliant system or as an O.E.M. component with significantly reduced dimensions.

Laserglow products are currently being used by some of the World's top universities and other prominent research facilities.

Key Features:

- 1% optical noise (20 Hz-20 MHz)
- Air cooled - no need for water cooling or external chiller
- Lightweight, compact design
- Efficient DPSS technology runs on standard AC power (85 - 264 V, 47 - 63 Hz)
- >10,000 hours continuous maintenance-free operating life
- FDA CDRH Compliant Class IIIb / Class IV enclosure
- 48-hour replacement coverage available for an additional fee on specific models

Package Includes:

- Laser Head
- Driver/Power Supply
- Power Cable
- BNC Connector (LabSpec models only)
- Keys, Safety Interlock

- Hard-shell Carrying Case

Specifications:

This spec sheet has been generated specifically for part number J4E0303FX, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to J4E0303FX have been highlighted below in **red + bold**.

Output Power (mW)	<5, >10, **>30**, >50
Output Power Stability (%RMS/4h)	<1, **<3**, <5
Central Wavelength (nm)	**442**
Wavelength Tolerance (+/- nm)	**5**
Divergence (mrad, full angle)	**<1**
Beam Dimensions (mm, $1/e^2$)	**2.5**
Warm-up Time (minutes)	**5**
Optical Noise Amplitude (%RMS @ 20 Hz - 20 MHz)	**<1**
M^2	**<1.5**
Polarization Ratio	**>50**
Beam Pointing Stability (mrad)	**<0.05**
Operating Temperature Range (°C)	**10 to 35**
Max. Analog Modulation Freq. (Hz)	**30000**
Max. TTL Modulation Freq. (Hz)	**30000**
Modulation Input Signal	**0-5 VDC**
Total Power Consumption (W)	**8**
Max. Power Input Duty Cycle	**100%**
Standard Warranty (months)	**12**
MTTF (operational hours)	**10000**
Weight of Product or Laser Head (kg)	**0.6**
Beam Height from Base Plate (mm)	**24.8**
Dimensions of Product or Laser Head (mm)	**140.7 (l) x 73 (w) x 46.2 (h)**

CW: All specifications are based on performance at full output power and after the specified warmup period. Output characteristics may change if the laser is run at a different power level.
Q-Switched: Specifications are based on the laser pulsing at the specified design frequency. Output characteristics may change if the laser is run at a different frequency.

Power Supply Options:

These lasers are available with several different power supply options. The model that you have selected is highlighted below, and any other options are shown for easy reference.

FDA-Compliant LabSpec 	Power Supply Type:	**FR**
	Input Power	**85v to 264v**
	Power Supply Weight (kg)	**1.5**
	Dimensions (mm)	**154 (l) x 155 (w) x 95 (h)**

*Power supply may not be exactly as shown, see dimensional drawings on next 2 pages.

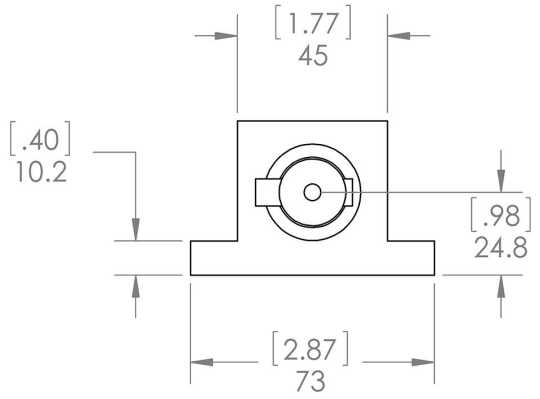
*Dimensions for fiber-integrated (I_) include laser head packaged inside.

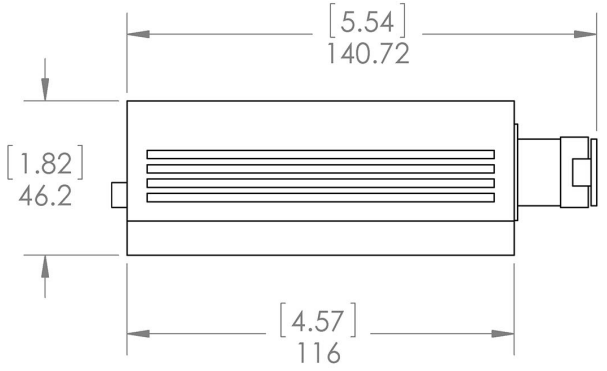
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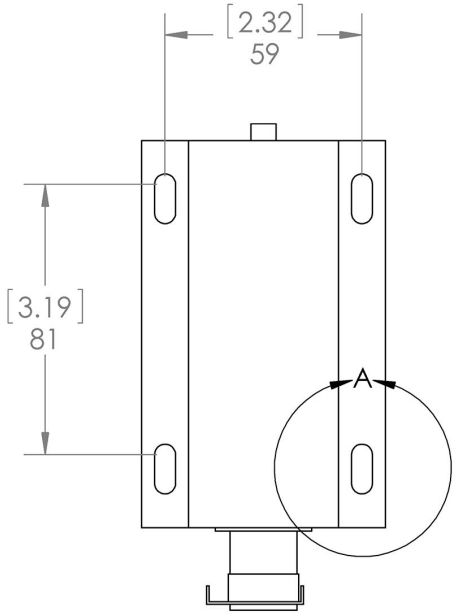
The model you have selected (J4E0303FX) requires the following safety label(s):

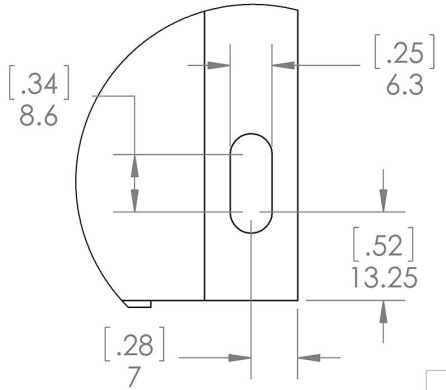


Dimensional Drawing - Laser Form Factor: R:

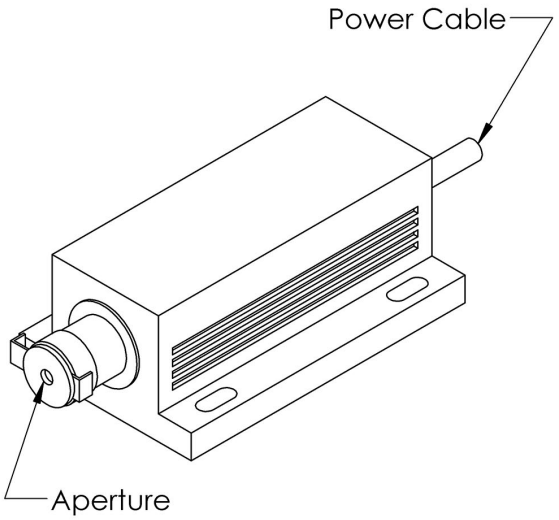








DETAIL A
SCALE 1 : 1



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UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MM[INCH]
TOLERANCES: +/- 0.75 MM

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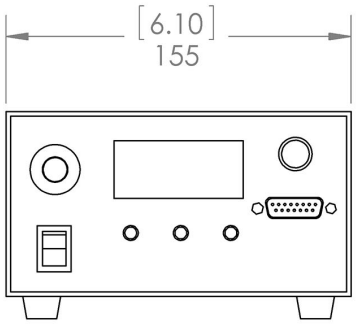
Lab/OEM M/R Housing

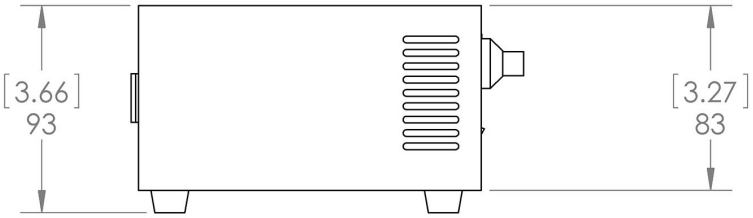
REV 1

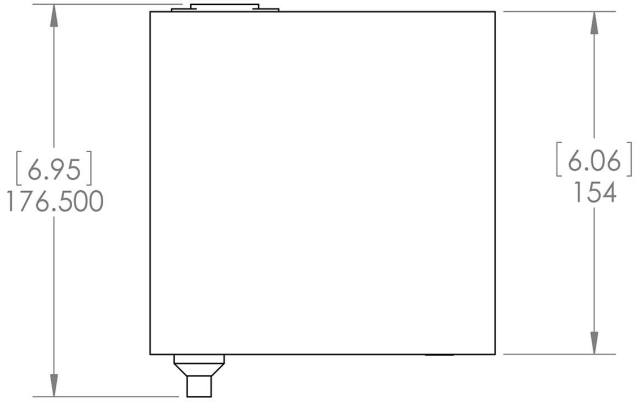
SCALE: 1:2

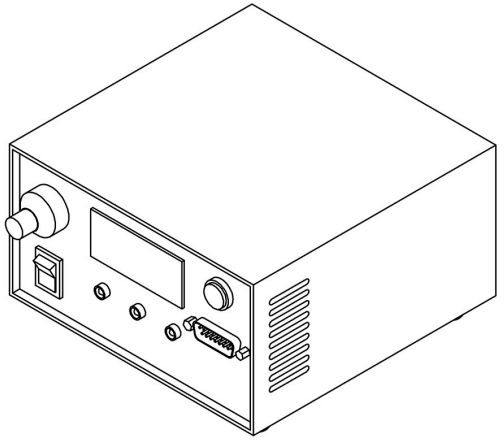
SHEET 1 OF 1

Dimensional Drawing - Power Supply Form Factor: FR:









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UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MM[INCH]
TOLERANCES: +/- 0.75 MM

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TITLE:

Power Supply FM/FR

REV 1

SCALE: 1:3

SHEET 1 OF 1

Accessories:

The most popular accessories for model J4E0303FX are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

Part Number	Description	

FOR MORE INFORMATION PLEASE CONTACT:

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Please confirm critical specifications with our staff prior to ordering.