

# Laserglow Product Datasheet

## LLD-1450 Low-Noise Collimated Diode Laser System



### Series Specifications:

Nominal Wavelength	1450 nm
Output Type	CW
Laser Source Type	Diode

### Overview:

The LLD-1450 Series of Low-Noise Collimated Diode Lasers are ideal for applications requiring less than 1% noise and output power levels from 100 mW to 500 mW. These 1450 nm IR 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 JE5-R, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to JE5-R have been highlighted below in **red + bold**.


Output Power (mW)	<b>&gt;100, &gt;300, &gt;500</b>
Output Power Stability (%RMS/4h)	<b>&lt;1, &lt;3, &lt;5</b>
Central Wavelength (nm)	<b>1450</b>
Wavelength Tolerance (+/- nm)	<b>10</b>
Divergence (mrad, full angle)	<b>&lt;3</b>
Beam Dimensions (mm, 1/e <sup>2</sup> )	<b>5x8</b>
Warm-up Time (minutes)	<b>5</b>
Optical Noise Amplitude (%RMS @ 20 Hz - 20 MHz)	<b>&lt;1</b>
M <sup>2</sup>	<b>&lt;20</b>
Polarization Ratio	<b>&gt;50</b>
Beam Pointing Stability (mrad)	<b>&lt;0.05</b>
Operating Temperature Range (°C)	<b>10 to 35</b>
Max. Analog Modulation Freq. (Hz)	<b>30000</b>
Max. TTL Modulation Freq. (Hz)	<b>30000</b>
Modulation Input Signal	<b>0-5 VDC</b>
Max. Power Input Duty Cycle	<b>100%</b>
Standard Warranty (months)	<b>12</b>
MTTF (operational hours)	<b>10000</b>
Weight of Product or Laser Head (kg)	<b>0.6</b>
Beam Height from Base Plate (mm)	<b>24.8</b>
Dimensions of Product or Laser Head (mm)	<b>140.7 (l) x 73 (w) x 46.2 (h)</b>

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.

<div>FDA-Compliant LabSpec</div> <div></div>	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.

## Regulatory Classification:

The model you have selected (JE5-R) requires the following safety label(s):



Dimensional Drawing - Laser Form Factor: R:



Dimensional Drawing - Power Supply Form Factor: FR:



Laserglow Technologies

TITLE:

Power Supply  
FM/FR

REV  
1

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MM(INCH)

TOLERANCES: +/- 0.75 MM







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SCALE: 1:3

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## Accessories:

The most popular accessories for model JE5-R are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

Part Number	Description	
 ACALBMXXX	Carrying Case-102 Holds Lab/OEM M, R and S size, standard or LabSpec laser Full Details: <a href="http://www.laserglow.com/ACA">www.laserglow.com/ACA</a>	Included With Laser
 ACFLIRHXA	FC/PC Fiber Coupler/Collimator for IR wavelengths (1300 to 1600 nm) (installed and aligned) 11 mm diameter input lens Full Details: <a href="http://www.laserglow.com/ACF">www.laserglow.com/ACF</a>	
 ACSLIRHXA	SMA-905 Fiber Coupler/Collimator for IR wavelengths (1300 to 1600 nm) (installed and aligned) 11 mm diameter input lens Full Details: <a href="http://www.laserglow.com/ACS">www.laserglow.com/ACS</a>	
 AFF2002XX	Armored Fiber With FC/PC Connectors 200um Core Multimode 2m length Full Details: <a href="http://www.laserglow.com/AFF">www.laserglow.com/AFF</a>	
 AFS2002XX	Armored Fiber With SMA 905 Connectors 200um Core Multimode 2 m length Full Details: <a href="http://www.laserglow.com/AFS">www.laserglow.com/AFS</a>	
 AGFMIR4XX	LSG-MIR-NF-4 Fit-Over Safety Goggles Mid-IR Range Output: OD 4+ at 945-10600 nm CE Certified Full Details: <a href="http://www.laserglow.com/AGF">www.laserglow.com/AGF</a>	

## FOR MORE INFORMATION PLEASE CONTACT:

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E&OE: Data included in this sheet may be subject to change without notice.

Please confirm critical specifications with our staff prior to ordering.