

## Arktis Laser Product Datasheet

### LLD-0830 Low-Noise Collimated Diode Laser System



#### Series Specifications:

Nominal Wavelength	830 nm
Output Type	CW
Laser Source Type	Diode

#### Overview:

The LLD-0830 Series of Low-Noise Collimated Diode Lasers are ideal for applications requiring less than 1% noise and output power levels from 10 mW to 2000 mW. These 830 nm NIR 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 J83-RL, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to J83-RL have been highlighted below in **red + bold**.

Output Power (mW)	<b>&gt;10, &gt;50, &gt;100</b>	>100, >200, >300, >500, >1000, >2000
Output Power Stability (%RMS/4h)	<b>&lt;1, &lt;3, &lt;5</b>	<1, <3
Central Wavelength (nm)	<b>830</b>	830
Wavelength Tolerance (+/- nm)	<b>10</b>	5
Divergence (mrad, full angle)	<b>&lt;1</b>	<2.5
Beam Dimensions (mm, 1/e <sup>2</sup> )	<b>3</b>	5x8
Warm-up Time (minutes)	<b>5</b>	5
Optical Noise Amplitude (%RMS @ 20 Hz - 20 MHz)	<b>&lt;1</b>	<1
Polarization Ratio		>50
Operating Temperature Range (°C)	<b>10 to 35</b>	10 to 35
Max. Analog Modulation Freq. (Hz)	<b>30000</b>	30000
Max. TTL Modulation Freq. (Hz)	<b>30000</b>	30000
Modulation Input Signal	<b>0-5 VDC</b>	0-5 VDC
Max. Power Input Duty Cycle	<b>100%</b>	100%
Standard Warranty (months)	<b>12</b>	12
MTTF (operational hours)	<b>10000</b>	10000
Weight of Product or Laser Head (kg)	<b>0.6</b>	0.6
Beam Height from Base Plate (mm)	<b>24.8</b>	24.8
Dimensions of Product or Laser Head (mm)	<b>140.7 (l) x 73 (w) x 46.2 (h)</b>	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.

<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 (J83-RL) requires the following safety label(s):



Dimensional Drawing - Laser Form Factor: RL:



Dimensional Drawing - Power Supply Form Factor: FR:



**Accessories:**

The most popular accessories for model J83-RL are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

Part Number	Description	
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**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.