Laserglow Product Datasheet

LRD-0905 Collimated Diode Laser System

Series Specifications:

Nominal Wavelength	905 nm
Output Type	CW
Laser Source Type	Diode

Overview:

The LRD-0905 Series of Collimated Diode (Semiconductor) Lasers are ideal for applications requiring a wavelength of around 915 nm and a wide range of output power levels from 10 mW to 200 mW with a high level of long-term output power stability and long operating lifetime at an aggressively competitive cost.

These lasers are commonly used for communications research as well as scientific applications involving spectral analysis, biology research, 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.

Available with onboard and remote on/off control as well as a wide array of output power and stability levels, Laserglow products are currently being used by some of the world's top universities and other prominent research facilities.

Key Features:

- Air cooled - no need for water cooling or external chiller
- Lightweight, compact design
- Efficient Diode Laser 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 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 D90-RL, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to D90-RL have been highlighted below in **red + bold**.

Laser Form Factor	R	**RL**
Output Power (mW)	>10, >50, >100, >200, >400	**>10**, **>50**
Output Power Stability (%RMS/4h)	<1, <3	**<1**, **<3**
FDA Safety Class	IIIb	**IIIb**
Central Wavelength (nm)	905	**905**
Wavelength Tolerance (+/- nm)	10	**5**
Divergence (mrad, full angle)	<2.5	**<1**
Beam Dimensions (mm, $1/e^2$)	5x8	**3.5**
Transverse Mode	Multimode	**Near TEM00**
Longitudinal Modes	Multiple	**Multiple**
Warm-up Time (minutes)	10	**5**
Beam Pointing Stability (mrad)		**<0.05**
Operating Temperature Range (°C)	10 to 35	**10 to 35**
Storage Temperature Range (°C)	-10 to	**-10 to 50**
Max. Analog Modulation Freq. (Hz)	30000	**30000**
Max. TTL Modulation Freq. (Hz)	30000	**30000**
Modulation Input Signal	0-5 VDC	**0-5 VDC**
Max. Power Input Duty Cycle	100%	**100%**
Cooling Method	TEC	**TEC**
Standard Warranty (months)	12	**12**
MTTF (operational hours)	10000	**10000**
Weight of Product or Laser Head (kg)	0.6	**0.6**
Beam Height from Base Plate (mm)	24.8	**24.8**
Dimensions of Product or Laser Head (mm)	140.7 (l) x 73 (w) x 46.2 (h)	**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.

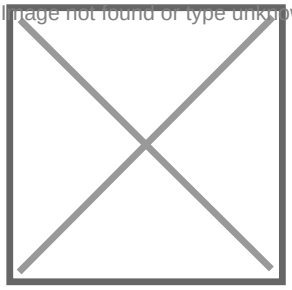
FDA-Compliant LabSpec 	Power Supply Type:	**FR**
	Input Power	**85v to 264v**
	Power Supply Weight (kg)	**1.5**
	Dimensions (mm)	**154 (l) x 155 (w) x 95 (h)**

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

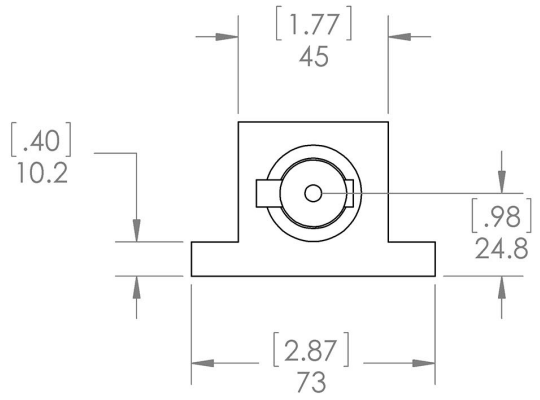
*Dimensions for fiber-integrated (I_) include laser head packaged inside.

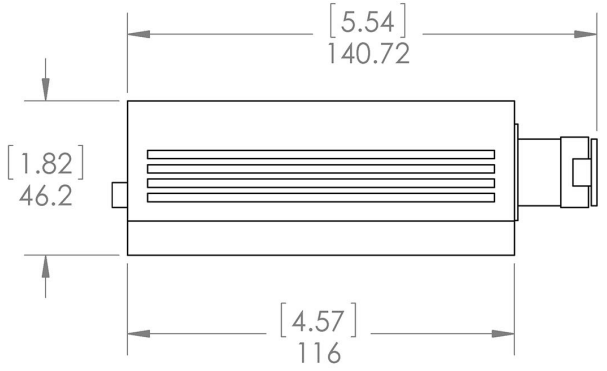
Regulatory Classification:

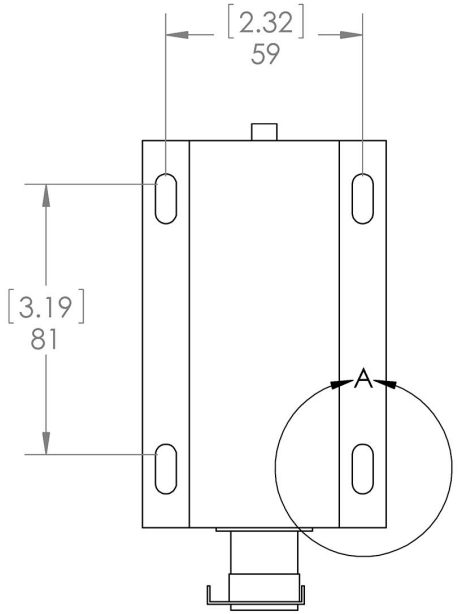
The model you have selected (D90-RL) requires the following safety label(s):

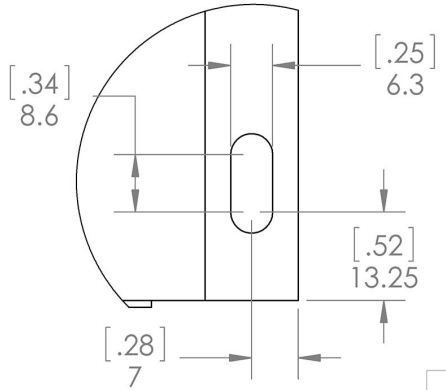


Dimensional Drawing - Laser Form Factor: RL:

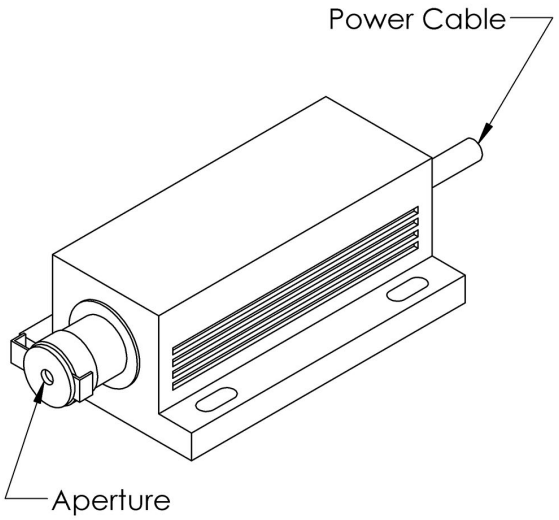








DETAIL A
SCALE 1 : 1



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UNLESS OTHERWISE SPECIFIED:

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

TITLE:

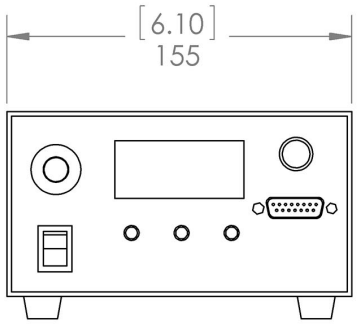
Lab/OEM M/R Housing

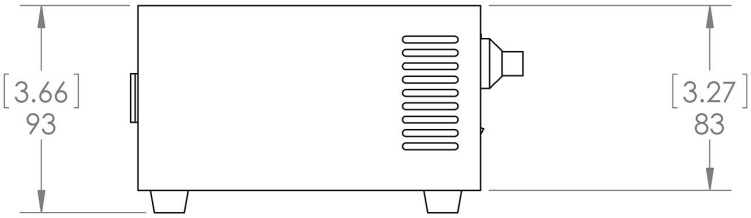
REV 1

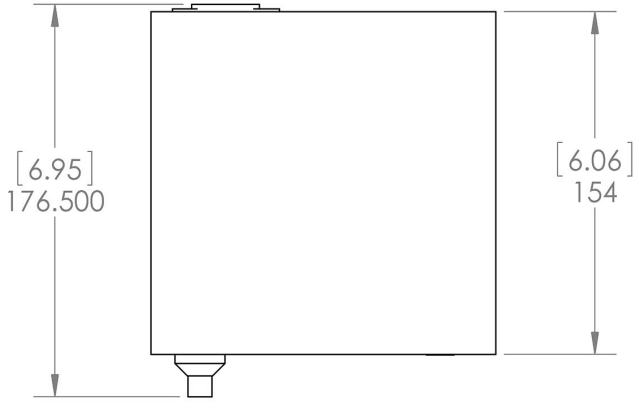
SCALE: 1:2

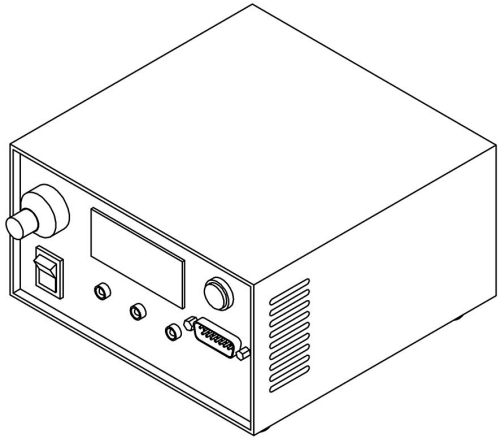
SHEET 1 OF 1

Dimensional Drawing - Power Supply Form Factor: FR:









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UNLESS OTHERWISE SPECIFIED:

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

TITLE:

Power Supply FM/FR

REV 1

SCALE: 1:3

SHEET 1 OF 1

Accessories:

The most popular accessories for model D90-RL 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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