Arktis Laser Product Datasheet

LRS-1177 DPSS Laser System



Series Specifications:

Nominal Wavelength	1177 nm
Output Type	CW
Laser Source Type	DPSS

Overview:

The LRS-1177 Series of Diode-Pumped Solid-State (DPSS) Lasers are ideal for applications requiring 10 mW to 100 mW of 1177 nm laser light 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 various scientific applications such as measurement, communications research, spectral analysis, 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 both on-board 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 DPSS technology runs on standard AC power (85 - 264 V, 47 - 63 Hz)
- >10,000 hours continuous maintenance-free operating life
- TTL and Analog modulation (input via BNC connector) *lab-spec models only*
- Adjustable output power (via lockable dial) *lab-spec models only*
- LED display showing LD current, laser cavity temperature *lab-spec models only*
- 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 RB7-M, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to RB7-M have been highlighted below in **red + bold**.

Output Power (mW)	**>10**, **>50**, **>100**
Output Power Stability (%RMS/4h)	**<1**, **<3**, **<5**, **<10**
Central Wavelength (nm)	**1177**
Wavelength Tolerance (+/- nm)	**1**
Divergence (mrad, full angle)	**<1.5**
Beam Dimensions (mm, 1/e²)	**1.5**
Warm-up Time (minutes)	**10**
M^2	**<1.5**
Polarization Ratio	**>100**
Beam Pointing Stability (mrad)	**<0.05**
Operating Temperature Range (°C)	**10 to 35**
Max. Analog Modulation Freq. (Hz)	**30000**
Max. TTL Modulation Freq. (Hz)	**10000**, **30000**
Modulation Input Signal	**0-5 VDC**
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)	**140.8 (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:	**FM**
	Input Power	**85v to 264v**
	Power Supply Weight (kg)	**1.5**
	Dimensions (mm)	**154 (l) x 155 (w) x 95 (h)**

FDA-Compliant Standard 	Power Supply Type:	**SM**
	Input Power	85v to 264v
	Power Supply Weight (kg)	1.2
	Dimensions (mm)	133 (l) x 130 (w) x 65 (h)

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

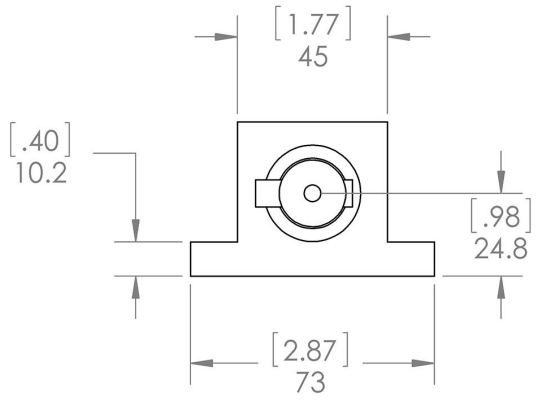
*Dimensions for fiber-integrated (I_) include laser head packaged inside.

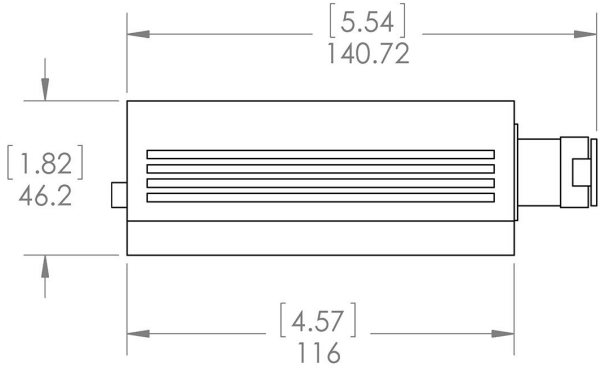
Regulatory Classification:

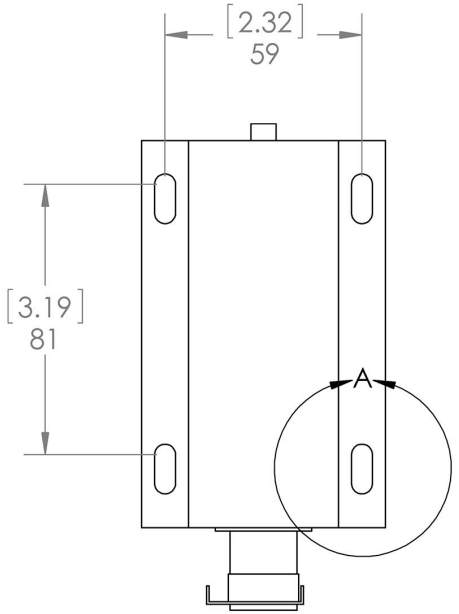
The model you have selected (RB7-M) requires the following safety label(s):

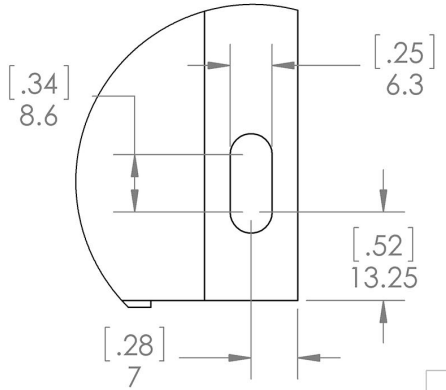


Dimensional Drawing - Laser Form Factor: M:

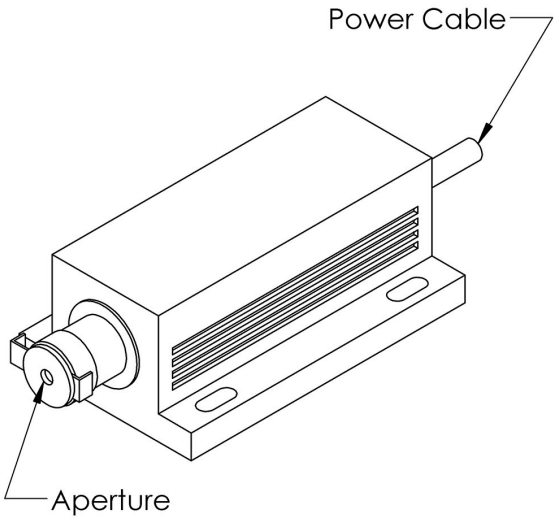








DETAIL A
SCALE 1 : 1



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UNLESS OTHERWISE SPECIFIED:

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

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TITLE:

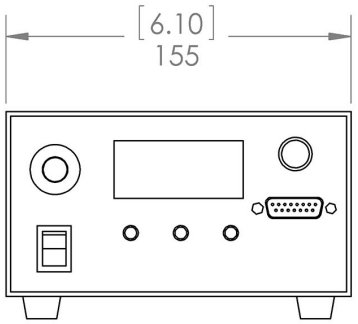
Lab/OEM M/R Housing

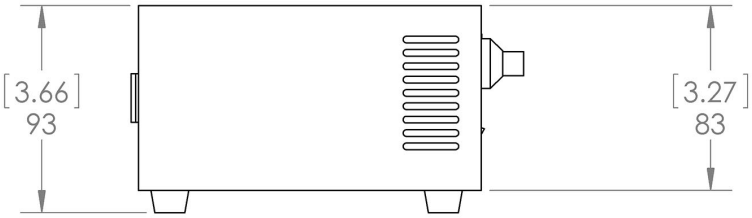
REV 1

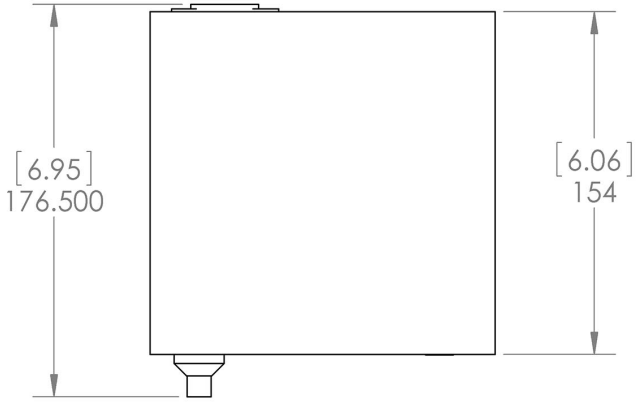
SCALE: 1:2

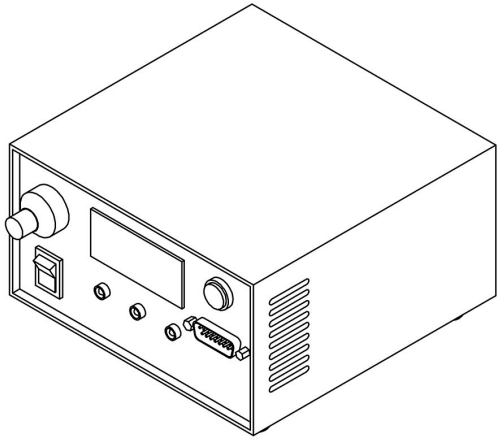
SHEET 1 OF 1

Dimensional Drawing - Power Supply Form Factor: FM:









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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 RB7-M are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

Part Number	Description	
 ACFMIRHXA	FC/PC Fiber Coupler/Collimator for IR wavelengths (1000 to 1300 nm) (installed and aligned) 11mm diameter input lens Full Details: www.arktislaser.com/ACF	
 ACSMIRHXA	SMA-905 Fiber Coupler/Collimator for IR wavelengths (1000 to 1300 nm) (installed and aligned) 11mm diameter input lens Full Details: www.arktislaser.com/ACS	
 ACALBMXXX	Carrying Case-102 Holds Lab/OEM M, R and S size, standard or LabSpec laser Full Details: www.arktislaser.com/ACA	Included With Laser
 AFF2002XX	Armored Fiber With FC/PC Connectors 200um Core Multimode 2m length Full Details: www.arktislaser.com/AFF	
 AFS2002XX	Armored Fiber With SMA 905 Connectors 200um Core Multimode 2 m length Full Details: www.arktislaser.com/AFS	
 AGFMIR4XX	LSG-MIR-NF-4 Fit-Over Safety Goggles Mid-IR Range Output: OD 4+ at 945-10600 nm CE Certified Full Details: www.arktislaser.com/AGF	
 TBK	Complete optics kits with breadboard mounting hardware. External modulators, variable attenuators, free-space fiber launch systems Full Details: www.arktislaser.com/TBK	

FOR MORE INFORMATION PLEASE CONTACT:

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