

## Laserglow Product Datasheet

### LLS-1112 Low-Noise DPSS Laser System



#### Series Specifications:

Nominal Wavelength	1112 nm
Output Type	CW
Laser Source Type	DPSS

#### Overview:

The LLS-1112 Series of Low-Noise Diode-Pumped Solid-State (DPSS) Lasers are ideal for applications requiring less than 1% noise and output power levels from 20 mW to 100 mW. These 1112 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 various scientific purposes such as biological experiments, communications 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.

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
- Keys, Safety Interlock
- Hard-shell Carrying Case

## Specifications:

This spec sheet has been generated specifically for part number LB1-M, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to LB1-M have been highlighted below in **red + bold**.

Output Power (mW)	<b>&gt;20, &gt;50, &gt;100</b>
Output Power Stability (%RMS/4h)	<b>&lt;3, &lt;5</b>
Wavelength Tolerance (+/- nm)	<b>3</b>
Divergence (mrad, full angle)	<b>&lt;1.5</b>
Beam Dimensions (mm, 1/e <sup>2</sup> )	<b>1.5</b>
Warm-up Time (minutes)	<b>10</b>
Optical Noise Amplitude (%RMS @ 20 Hz - 20 MHz)	<b>&lt;1</b>
M <sup>2</sup>	<b>&lt;1.5</b>
Beam Pointing Stability (mrad)	<b>&lt;0.05</b>
Operating Temperature Range (°C)	<b>10 to 35</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>140.8 (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 Standard</div> <div></div>	Power Supply Type:	<b>SM</b>
	Input Power	<b>85v to 264v</b>
	Power Supply Weight (kg)	<b>1.2</b>
	Dimensions (mm)	<b>133 (l) x 130 (w) x 65 (h)</b>

\*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.

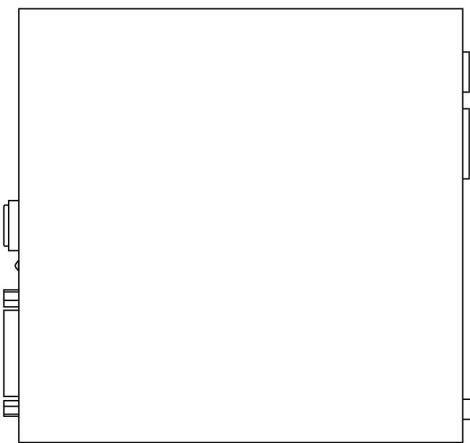
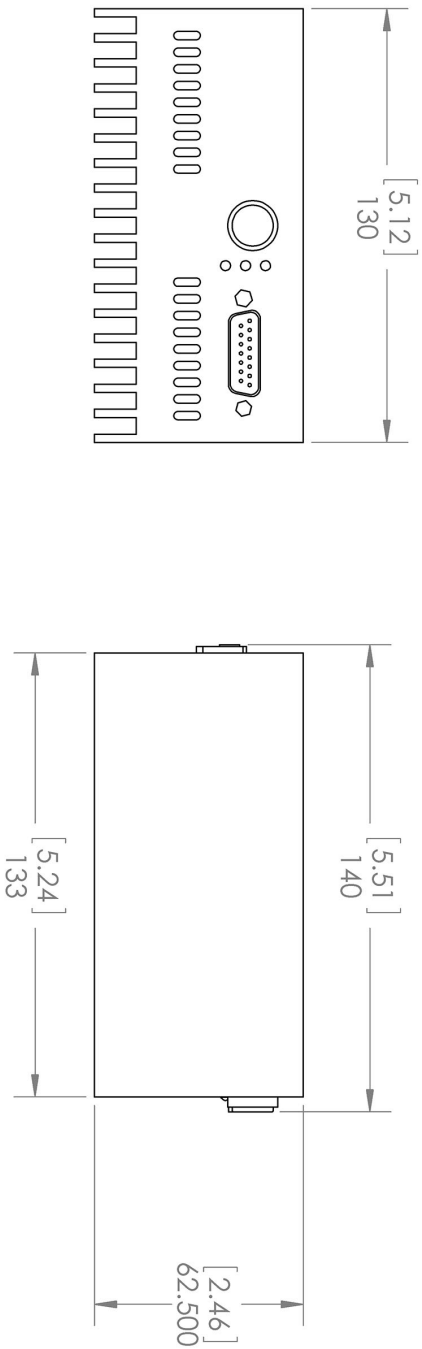
## Regulatory Classification:

The model you have selected (LB1-M) requires the following safety label(s):





Dimensional Drawing - Power Supply Form Factor: SM:



UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MM(INCH)  
TOLERANCES: +/- 0.75 MM

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Laserglow Technologies

TITLE:

Power Supply  
SM/SR








REV  
1

SCALE: 1:2

SHEET 1 OF 1

## Accessories:

The most popular accessories for model LB1-M 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
 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>	
 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>	
 ACSMIRHXX	SMA-905 Fiber Coupler/Collimator for IR wavelengths (1000 to 1300 nm) 11mm diameter input lens Full Details: <a href="http://www.laserglow.com/ACS">www.laserglow.com/ACS</a>	
 ACFMIRHXX	FC/PC Fiber Coupler/Collimator for IR wavelengths (1000 to 1300 nm) 11mm diameter input lens Full Details: <a href="http://www.laserglow.com/ACF">www.laserglow.com/ACF</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>	
 TBK	Complete optics kits with breadboard mounting hardware. External modulators, variable attenuators, free-space fiber launch systems Full Details: <a href="http://www.laserglow.com/TBK">www.laserglow.com/TBK</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.