

## Laserglow Product Datasheet

### LLS-1319 Low-Noise DPSS Laser System



#### Series Specifications:

|                    |         |
|--------------------|---------|
| Nominal Wavelength | 1319 nm |
| Output Type        | CW      |
| Laser Source Type  | DPSS    |

#### Overview:

The LLS-1319 Series of Low-Noise Diode-Pumped Solid-State (DPSS) Lasers are ideal for applications requiring less than 1% noise and output power levels from 50 mW to 1 W. These 1319 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 LD1-M, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to LD1-M have been highlighted below in **red + bold**.


|   |  |                           |
|---|--|---------------------------|
| Output Power (mW)                               | <b>&gt;50, &gt;100, &gt;300, &gt;500</b> | >800, >1000               |
| Output Power Stability (%RMS/4h)                | <b>&lt;1, &lt;3, &lt;5</b>               | <1, <3, <5                |
| Central Wavelength (nm)                         | <b>1319</b>                              | 1319                      |
| Wavelength Tolerance (+/- nm)                   | <b>1</b>                                 | 1                         |
| Divergence (mrad, full angle)                   | <b>&lt;1.5</b>                           | <2                        |
| Beam Dimensions (mm, 1/e <sup>2</sup> )         | <b>1.5</b>                               | 3                         |
| Warm-up Time (minutes)                          | <b>10</b>                                | 10                        |
| Optical Noise Amplitude (%RMS @ 20 Hz - 20 MHz) | <b>&lt;1</b>                             | <1                        |
| M <sup>2</sup>                                  | <b>&lt;1.5</b>                           | <2                        |
| Beam Pointing Stability (mrad)                  | <b>&lt;0.05</b>                          | <0.05                     |
| Operating Temperature Range (°C)                | <b>10 to 35</b>                          | 10 to 35                  |
| 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>                               | 0.9                       |
| Beam Height from Base Plate (mm)                | <b>24.8</b>                              | 29                        |
| Dimensions of Product or Laser Head (mm)        | <b>140.8 (l) x 73 (w) x 46.2 (h)</b>     | 155 (l) x 77 (w) x 60 (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.

|   |                          |                                   |                             |
|---|--------------------------|-----------------------------------|-----------------------------|
|  | Power Supply Type:       | <b>SM</b>                         | <b>SH</b>                   |
|   | Input Power              | <b>85v to 264v</b>                | 85v to 264v                 |
|   | Power Supply Weight (kg) | <b>1.2</b>                        | 2.3                         |
|   | Dimensions (mm)          | <b>133 (l) x 130 (w) x 65 (h)</b> | 238 (l) x 146 (w) x 102 (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 (LD1-M) requires the following safety label(s):





Dimensional Drawing - Power Supply Form Factor: SM:



Laserglow Technologies

TITLE:

Power Supply  
SM/SR

REV  
1

UNLESS OTHERWISE SPECIFIED:

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








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SCALE: 1:2

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## Accessories:

The most popular accessories for model LD1-M are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

| Part Number   | Description   |                     |
|---|---|---------------------|
| <br>ACALBMXXX  | Carrying Case-102<br>Holds Lab/OEM M, R and S size, standard or LabSpec laser<br>Full Details: <a href="http://www.laserglow.com/ACA">www.laserglow.com/ACA</a>   | Included With Laser |
| <br>ACSLIRHXX  | SMA-905 Fiber Coupler/Collimator for IR wavelengths (1300 to 1600 nm)<br>11 mm diameter input lens<br>Full Details: <a href="http://www.laserglow.com/ACS">www.laserglow.com/ACS</a>                                    |                     |
| <br>ACFLIRHXX  | FC/PC Fiber Coupler/Collimator for IR wavelengths (1300 to 1600 nm)<br>11 mm diameter input lens<br>Full Details: <a href="http://www.laserglow.com/ACF">www.laserglow.com/ACF</a>                                      |                     |
| <br>AFS2002XX  | Armored Fiber With SMA 905 Connectors 200um Core Multimode 2 m length<br>Full Details: <a href="http://www.laserglow.com/AFS">www.laserglow.com/AFS</a>   |                     |
| <br>AFF2002XX | Armored Fiber With FC/PC Connectors 200um Core Multimode 2m length<br>Full Details: <a href="http://www.laserglow.com/AFF">www.laserglow.com/AFF</a>  |                     |
| <br>AGFMIR4XX | LSG-MIR-NF-4 Fit-Over Safety Goggles Mid-IR Range<br>Output: OD 4+ at 945-10600 nm<br>CE Certified<br>Full Details: <a href="http://www.laserglow.com/AGF">www.laserglow.com/AGF</a>                                    |                     |
| <br>TBK       | Complete optics kits with breadboard mounting hardware.<br>External modulators, variable attenuators, free-space fiber launch systems<br>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.