

## Arktis Laser Product Datasheet

### LLS-0473 Low-Noise DPSS Laser System



#### Series Specifications:

|                    |        |
|--------------------|--------|
| Nominal Wavelength | 473 nm |
| Output Type        | CW     |
| Laser Source Type  | DPSS   |

#### Overview:

The LLS-0473 Series of Low-Noise Diode-Pumped Solid-State (DPSS) Lasers are ideal for applications requiring less than 1% noise (high frequency power variations) and output power levels from 5 mW to >500 mW. These 473 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 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
- Keys, Safety Interlock
- Hard-shell Carrying Case

## Specifications:

This spec sheet has been generated specifically for part number L47-UU, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to L47-UU have been highlighted below in **red + bold**.


|   |  |  |
|---|--|--|
| Output Power (mW)                               | <b>&lt;5, &gt;10, &gt;20, &gt;50, &gt;100, &gt;200</b> | <5, >30, >50, >100, >200, >300, >400, >500 |
| Output Power Stability (%RMS/4h)                | <b>&lt;1, &lt;2, &lt;3, &lt;5</b>                      | <2, <3, <5                                 |
| Central Wavelength (nm)                         | <b>472.58</b>  | 472.58                                     |
| Wavelength Tolerance (+/- nm)                   | <b>1</b>   | 1  |
| Divergence (mrad, full angle)                   | <b>&lt;1.5</b>   | <1.5                                       |
| Beam Dimensions (mm, 1/e <sup>2</sup> )         | <b>0.7, 1.5</b>  | 2, 3                                       |
| Warm-up Time (minutes)                          | <b>10</b>  | 10   |
| Optical Noise Amplitude (%RMS @ 20 Hz - 20 MHz) | <b>&lt;0.5</b>   | <1   |
| Spectral Linewidth (nm)                         | <b>&lt;0.003</b>                                       | <0.2                                       |
| M <sup>2</sup>                                  | <b>&lt;1.2</b>   | <1.5                                       |
| Polarization Ratio                              | <b>&gt;100</b>   | >100                                       |
| Beam Pointing Stability (mrad)                  | <b>&lt;0.05</b>  | <0.05                                      |
| Operating Temperature Range (°C)                | <b>10 to 40</b>  | 10 to 35                                   |
| Total Power Consumption (W)                     | <b>22</b>  | 22, 32, 80                                 |
| 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>1</b>   | 2  |
| Beam Height from Base Plate (mm)                | <b>27.4</b>  | 27.4                                       |
| Dimensions of Product or Laser Head (mm)        | <b>142.5 (l) x 60 (w) x 50 (h)</b>                     | 197 (l) x 70 (w) x 50 (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:       | SH                          | SO                          |
|---|--------------------------|-----------------------------|-----------------------------|
| <br>FDA-Compliant Standard | Input Power              | 85v to 264v                 | 85v to 264v                 |
|   | Power Supply Weight (kg) | 2.3                         | 2.3                         |
|   | Dimensions (mm)          | 238 (l) x 146 (w) x 102 (h) | 238 (l) x 146 (w) x 102 (h) |

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

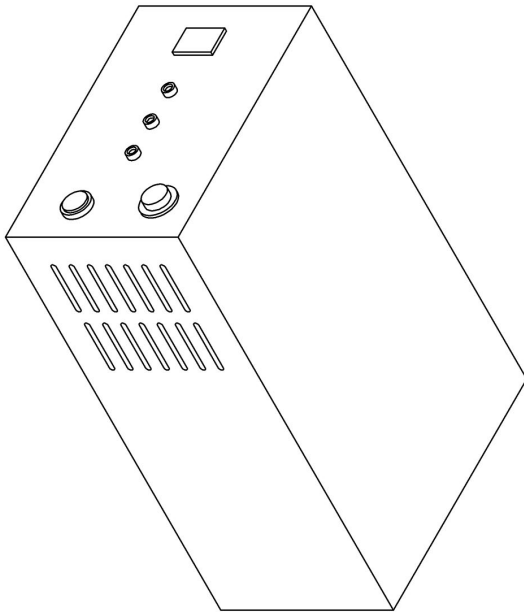
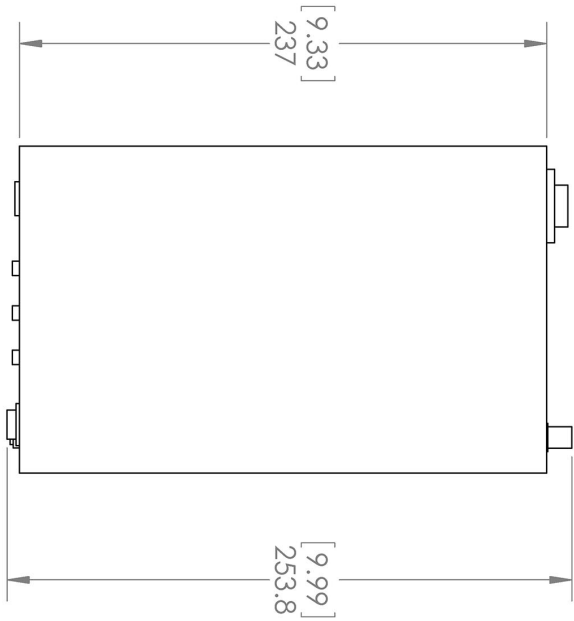
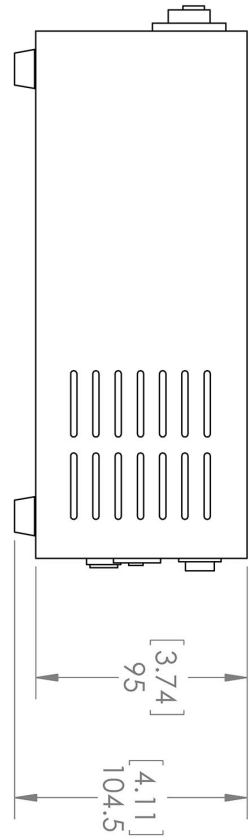
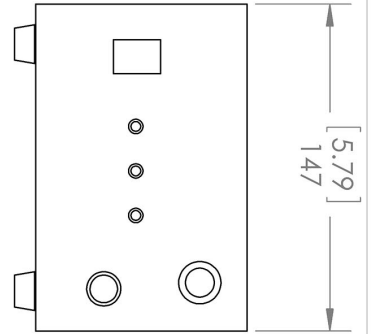
\*Dimensions for fiber-integrated (I\_) include laser head packaged inside.

## Regulatory Classification:

The model you have selected (L47-UU) requires the following safety label(s):



**Dimensional Drawing - Power Supply Form Factor: SH:**



UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN MILLIMETER  
 TOLERANCES: +/- 0.75 MM

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**Laserglow Technologies**

TITLE:

**Power Supply  
 SH/SF/SN**








REV  
**1**

SCALE: 1:3

SHEET 1 OF 1

## Accessories:

The most popular accessories for model L47-UU are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

| Part Number   | Description  |                     |
|---|--|---------------------|
| <br>AGF5327XX   | LSG-532-NF-7 Fit-Over Safety Goggles 532nm<br>Output: OD 7+ at 190-532 nm<br>CE Certified<br>Full Details: <a href="http://www.arktislaser.com/AGF">www.arktislaser.com/AGF</a>  |                     |
| <br>ACFVISHXA   | FC/PC Fiber Coupler/Collimator for visible spectrum wavelengths (400 to 700 nm)<br>(installed and aligned)<br>11mm diameter input lens<br>Full Details: <a href="http://www.arktislaser.com/ACF">www.arktislaser.com/ACF</a>   |                     |
| <br>ACSVISHXA   | SMA-905 Fiber Coupler/Collimator for visible spectrum wavelengths (400 to 700 nm)<br>(installed and aligned)<br>11mm diameter input lens<br>Full Details: <a href="http://www.arktislaser.com/ACS">www.arktislaser.com/ACS</a> |                     |
| <br>ACALBHFXX   | Carrying Case-103<br>Holds Lab/OEM H, F and O size Standard/LabSpec laser<br>Full Details: <a href="http://www.arktislaser.com/ACA">www.arktislaser.com/ACA</a>  | Included With Laser |
| <br>AFS2002XX | Armored Fiber With SMA 905 Connectors 200um Core Multimode 2 m length<br>Full Details: <a href="http://www.arktislaser.com/AFS">www.arktislaser.com/AFS</a>  |                     |
| <br>AFF2002XX | Armored Fiber With FC/PC Connectors 200um Core Multimode 2m length<br>Full Details: <a href="http://www.arktislaser.com/AFF">www.arktislaser.com/AFF</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.arktislaser.com/TBK">www.arktislaser.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.