

## Arktis Laser Product Datasheet

### LRD-0462 Collimated Diode Laser System



#### Series Specifications:

|                    |        |
|--------------------|--------|
| Nominal Wavelength | 462 nm |
| Output Type        | CW     |
| Laser Source Type  | Diode  |

#### Overview:

The LRD-0462 Series of Collimated Diode (Semiconductor) Lasers are ideal for applications requiring a short wavelength of 462 nm and output power levels of 5 mW to 2500 mW with a high level of long-term output power stability and long operating lifetime at a very competitive cost.

These lasers are commonly used for various scientific applications involving fluorescence excitation, as well as PIV, 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 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 IIIa / 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 D46-R, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to D46-R have been highlighted below in **red + bold**.


|  |   |                             |
|--|---|-----------------------------|
| Output Power (mW)                        | <b>&lt;5, &gt;10, &gt;50, &gt;100, &gt;200, &gt;300, &gt;500, &gt;800</b> | >1000, >1500, >2000, >2500  |
| Output Power Stability (%RMS/4h)         | <b>&lt;1, &lt;3</b>   | <1, <3                      |
| Central Wavelength (nm)                  | <b>462</b>  |                             |
| Wavelength Tolerance (+/- nm)            | <b>5</b>  |                             |
| Divergence (mrad, full angle)            | <b>&lt;2.5x0.2</b>  | <2.5x0.2                    |
| Beam Dimensions (mm, 1/e <sup>2</sup> )  | <b>2x5</b>  | 2x5                         |
| Warm-up Time (minutes)                   | <b>5</b>  |                             |
| Beam Pointing Stability (mrad)           | <b>&lt;0.05</b>   |                             |
| Operating Temperature Range (°C)         | <b>10 to 35</b>   |                             |
| Max. Analog Modulation Freq. (Hz)        | <b>30000</b>  | 30000                       |
| Max. TTL Modulation Freq. (Hz)           | <b>30000</b>  | 30000                       |
| Modulation Input Signal                  | <b>0-5 VDC</b>  | 0-5 VDC                     |
| 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>  | 1.6                         |
| Beam Height from Base Plate (mm)         | <b>24.8</b>   | 45                          |
| Dimensions of Product or Laser Head (mm) | <b>140.7 (l) x 73 (w) x 46.2 (h)</b>                                      | 211.5 (l) x 88 (w) x 74 (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>FR</b>                         | <b>FF</b>                   |
|--|--------------------------|-----------------------------------|-----------------------------|
| FDA-Compliant LabSpec<br> | Input Power              | <b>85v to 264v</b>                | 85v to 264v                 |
|  | Power Supply Weight (kg) | <b>1.5</b>                        | 2.6                         |
|  | Dimensions (mm)          | <b>154 (l) x 155 (w) x 95 (h)</b> | 268 (l) x 145 (w) x 106 (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 (D46-R) requires the following safety label(s):



**Dimensional Drawing - Laser Form Factor: R:**



DETAIL A  
SCALE 1 : 1

TITLE:

Laserglow Technologies

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MM(INCH)

TOLERANCES: +/- 0.75 MM

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Lab/OEM  
M/R Housing REV 1

SCALE: 1:2

SHEET 1 OF 1

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



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

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**Laserglow Technologies**

TITLE:

**Power Supply**  
**FM/FR**







REV  
**1**

SCALE: 1:3

SHEET 1 OF 1

## Accessories:

The most popular accessories for model D46-R are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

| Part Number  | Description  |                     |
|--|--|---------------------|
| <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>AGF5322XX   | LSG-532-NF-2 Fit-Over Safety Goggles 532nm<br>Output: OD 2+ at 400-532 nm<br>CE Certified<br>Full Details: <a href="http://www.arktislaser.com/AGF">www.arktislaser.com/AGF</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>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>ACALBMXXX | Carrying Case-102<br>Holds Lab/OEM M, R and S size, standard or LabSpec laser<br>Full Details: <a href="http://www.arktislaser.com/ACA">www.arktislaser.com/ACA</a>  | Included With Laser |

## FOR MORE INFORMATION PLEASE CONTACT:

Arktis Laser  
112 Elizabeth St, Unit 5-331, Toronto, ON, Canada M5G 1P5  
Tel. 1-416-886-1178 Fax 1-647-874-7129  
[sales@arktislaser.com](mailto:sales@arktislaser.com) [www.arktislaser.com](http://www.arktislaser.com)

E&OE: Data included in this sheet may be subject to change without notice.

Please confirm critical specifications with our staff prior to ordering.