

# Arktis Laser Product Datasheet

## LRS-0946 DPSS Laser System



### Series Specifications:

|                    |        |
|--------------------|--------|
| Nominal Wavelength | 946 nm |
| Output Type        | CW     |
| Laser Source Type  | DPSS   |

### Overview:

The LRS-0946 Series of Diode-Pumped Solid-State (DPSS) Lasers are ideal for applications requiring 50 mW to >800 mW of 946 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 IIb / 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 R94-H, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to R94-H have been highlighted below in **red + bold**.

|                                          |                               |                                  |
|------------------------------------------|-------------------------------|----------------------------------|
| Output Power (mW)                        | >50, >100, >200, >300         | <b>&gt;500, &gt;800</b>          |
| Output Power Stability (%RMS/4h)         | <3, <5, <10                   | <b>&lt;3, &lt;5, &lt;10</b>      |
| Central Wavelength (nm)                  | 945.16                        | <b>945.16</b>                    |
| Wavelength Tolerance (+/- nm)            | 1                             | <b>1</b>                         |
| Divergence (mrad, full angle)            | <1.5                          | <b>&lt;2</b>                     |
| Beam Dimensions (mm, 1/e <sup>2</sup> )  | 1.5                           | <b>3</b>                         |
| Warm-up Time (minutes)                   | 10                            | <b>10</b>                        |
| M <sup>2</sup>                           | <1.5                          | <b>&lt;2</b>                     |
| Beam Pointing Stability (mrad)           | <0.05                         | <b>&lt;0.05</b>                  |
| Operating Temperature Range (°C)         | 10 to 35                      | <b>10 to 35</b>                  |
| Max. Analog Modulation Freq. (Hz)        | 500                           | <b>500</b>                       |
| Max. TTL Modulation Freq. (Hz)           | 500                           | <b>500</b>                       |
| Modulation Input Signal                  | 0-5 VDC                       | <b>0-5 VDC</b>                   |
| Total Power Consumption (W)              | 28, 30                        |                                  |
| Max. Power Input Duty Cycle              | 100%                          | <b>100%</b>                      |
| Standard Warranty (months)               | 12                            | <b>12</b>                        |
| MTTF (operational hours)                 | 10000                         | <b>10000</b>                     |
| Weight of Product or Laser Head (kg)     | 0.6                           | <b>0.9</b>                       |
| Beam Height from Base Plate (mm)         | 24.8                          | <b>29</b>                        |
| Dimensions of Product or Laser Head (mm) | 140.8 (l) x 73 (w) x 46.2 (h) | <b>155 (l) x 77 (w) x 60 (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.

|                                                                                                            | Power Supply Type:       | FM                         | FH                          |
|------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------|-----------------------------|
| FDA-Compliant LabSpec<br> | Input Power              | 85v to 264v                | 85v to 264v                 |
|                                                                                                            | Power Supply Weight (kg) | 1.5                        | 2.6                         |
|                                                                                                            | Dimensions (mm)          | 154 (l) x 155 (w) x 95 (h) | 268 (l) x 145 (w) x 106 (h) |

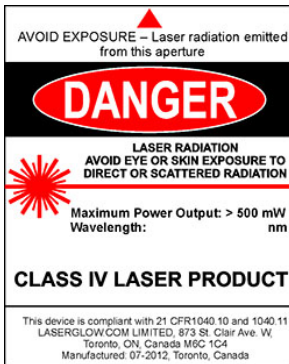
|                                                                                                             | Power Supply Type:       | SM                         | SH                          |
|-------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------|-----------------------------|
| FDA-Compliant Standard<br> | Input Power              | 85v to 264v                | 85v to 264v                 |
|                                                                                                             | Power Supply Weight (kg) | 1.2                        | 2.3                         |
|                                                                                                             | Dimensions (mm)          | 133 (l) x 130 (w) x 65 (h) | 238 (l) x 146 (w) x 102 (h) |

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

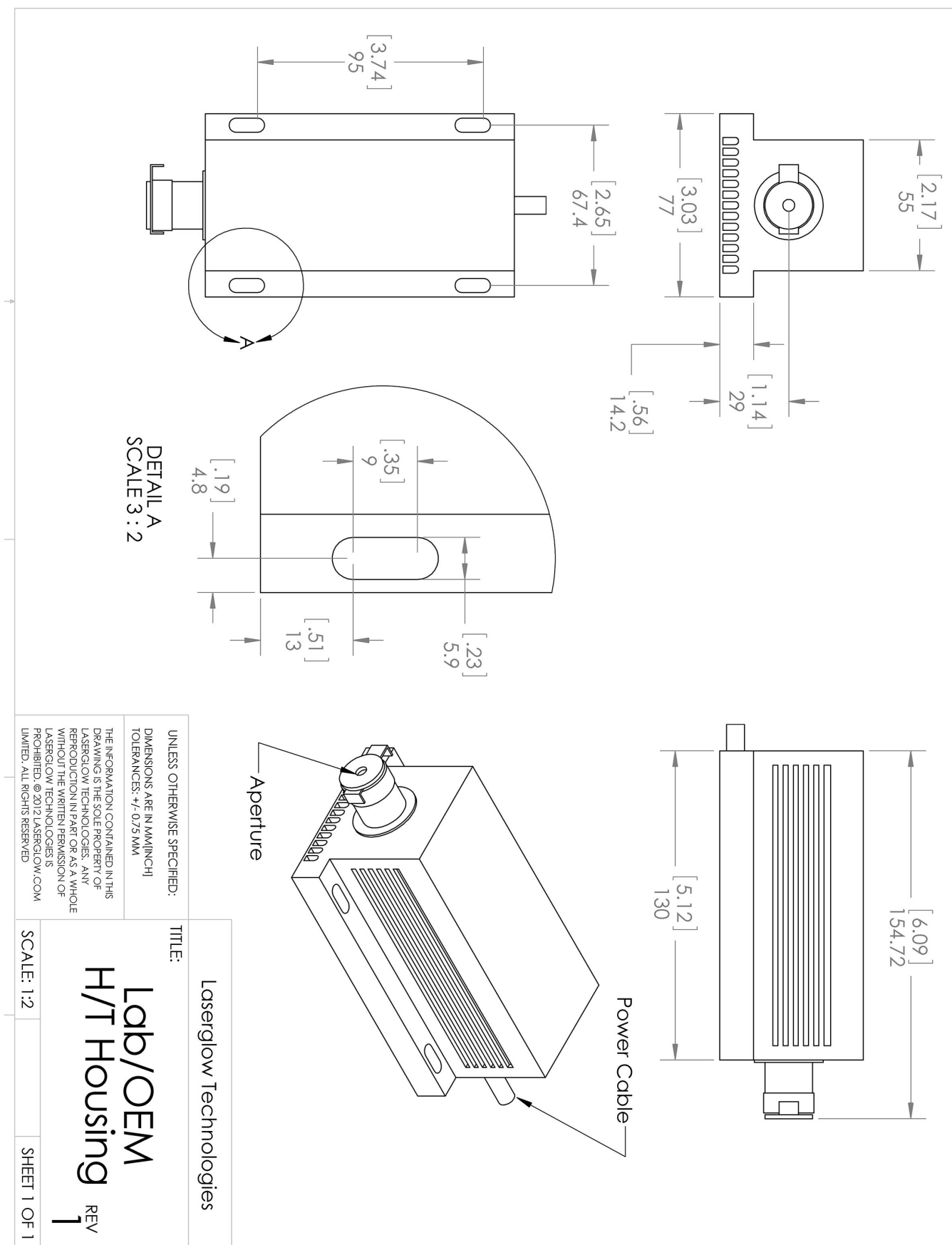
\*Dimensions for fiber-integrated (I\_) include laser head packaged inside.

## Regulatory Classification:

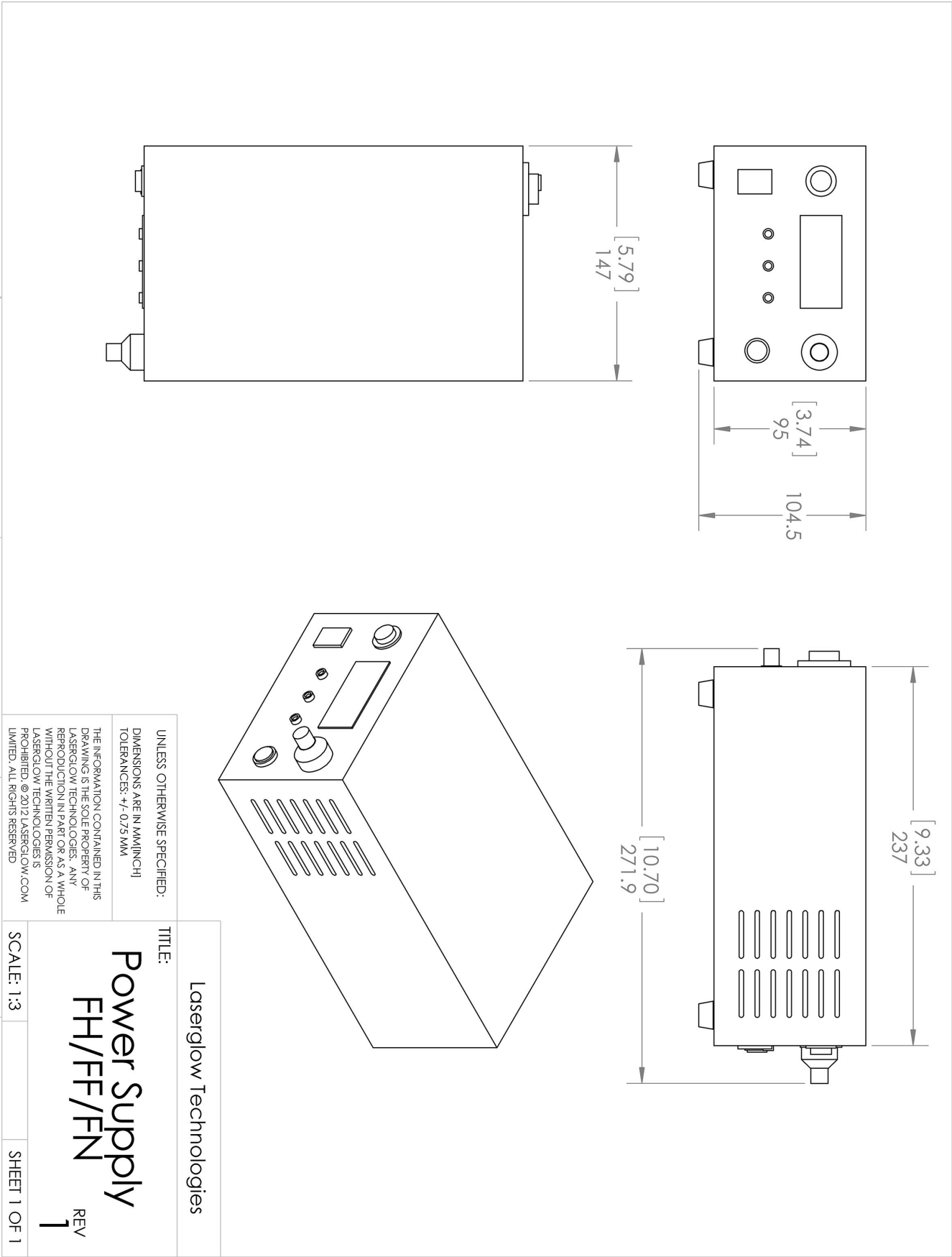
The model you have selected (R94-H) requires the following safety label(s):



### Dimensional Drawing - Laser Form Factor: H:



Dimensional Drawing - Power Supply Form Factor: FH:



## Accessories:

The most popular accessories for model R94-H are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

| Part Number                                                                                      | Description                                                                                                                                                                                                                 |                     |
|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <br>AGFA647XX    | LSG-1064-NF-7 Fit-Over Safety Goggles 1064nm<br>Output: OD 7+ at 950-1070 nm<br>CE Certified<br>Full Details: <a href="http://www.arktislaser.com/AGF">www.arktislaser.com/AGF</a>                                          |                     |
| <br>ACFNIRHXA   | FC/PC Fiber Coupler/Collimator for IR wavelengths (700 to 1000 nm) (installed and aligned)<br>11mm diameter input lens<br>Full Details: <a href="http://www.arktislaser.com/ACF">www.arktislaser.com/ACF</a>                |                     |
| <br>ACSNIRHXA   | SMA-905 Fiber Coupler/Collimator for IR wavelengths (700 to 1000nm) (installed and aligned)<br>11mm diameter input lens<br>Full Details: <a href="http://www.arktislaser.com/ACS">www.arktislaser.com/ACS</a>               |                     |
| <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> |                     |
| <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 |

## 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.