

Arktis Laser Product Datasheet

LRS-1444 DPSS Laser System



Series Specifications:

| | |
|--------------------|---------|
| Nominal Wavelength | 1444 nm |
| Output Type | CW |
| Laser Source Type | DPSS |

Overview:

The LRS-1444 Series of Diode-Pumped Solid-State (DPSS) Lasers are ideal for applications requiring 50 mW to 200 mW of 1444 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 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
- BNC Connector (LabSpec models only)
- Keys, Safety Interlock
- Hard-shell Carrying Case

Specifications:

This spec sheet has been generated specifically for part number RE4-M, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to RE4-M have been highlighted below in **red + bold**.


| | |
|--|--------------------------------------|
| Output Power (mW) | >50, >100, >200 |
| Output Power Stability (%RMS/4h) | <3, <5, <10 |
| Central Wavelength (nm) | 1444 |
| Wavelength Tolerance (+/- nm) | 2 |
| Divergence (mrad, full angle) | <1.5 |
| Beam Dimensions (mm, 1/e ²) | 1.5 |
| Warm-up Time (minutes) | 10 |
| M ² | <1.5 |
| Beam Pointing Stability (mrad) | <0.05 |
| Operating Temperature Range (°C) | 10 to 35 |
| Max. Analog Modulation Freq. (Hz) | 30000 |
| Max. TTL Modulation Freq. (Hz) | 10000, 30000 |
| Modulation Input Signal | 0-5 VDC |
| Max. Power Input Duty Cycle | 100% |
| Standard Warranty (months) | 12 |
| MTTF (operational hours) | 10000 |
| Weight of Product or Laser Head (kg) | 0.6 |
| Beam Height from Base Plate (mm) | 24.8 |
| Dimensions of Product or Laser Head (mm) | 140.8 (l) x 73 (w) x 46.2 (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: | FM |
| FDA-Compliant LabSpec  | Input Power | 85v to 264v |
| | Power Supply Weight (kg) | 1.5 |
| | Dimensions (mm) | 154 (l) x 155 (w) x 95 (h) |

| | | |
|---|--------------------------|----------------------------|
| | Power Supply Type: | SM |
| FDA-Compliant Standard  | Input Power | 85v to 264v |
| | Power Supply Weight (kg) | 1.2 |
| | Dimensions (mm) | 133 (l) x 130 (w) x 65 (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:

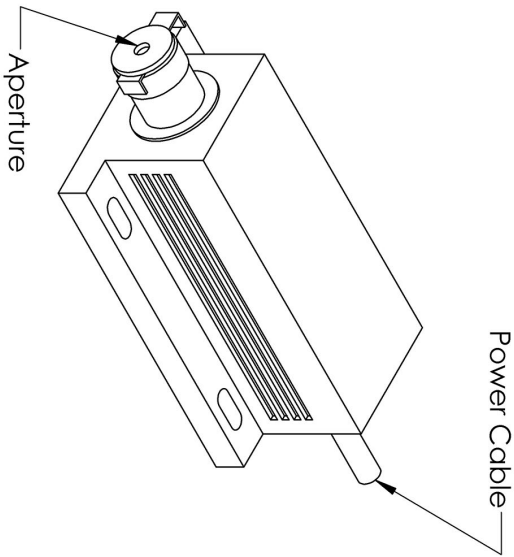
The model you have selected (RE4-M) requires the following safety label(s):



Dimensional Drawing - Laser Form Factor: M:



DETAIL A
SCALE 1 : 1



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

| | | |
|--|--|------------------------|
| TITLE: | | Laserglow Technologies |
| SCALE: 1:2 | | SHEET 1 OF 1 |
| <p>Lab/OEM M/R Housing REV 1</p> | | |

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Dimensional Drawing - Power Supply Form Factor: FM:



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 RE4-M are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

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

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 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.