

LRS-0594 DPSS Laser System



Series Specifications:

| | |
|--------------------|----------|
| Nominal Wavelength | 593.5 nm |
| Output Type | CW |
| Laser Source Type | DPSS |

Overview:

The LRS-0594 Series of Diode-Pumped Solid-State (DPSS) Lasers are ideal for applications requiring 5 mW to >800 mW of 593.5 nm laser light with long-term output power stability of <10%, <5% or <3% as well as a long operating lifetime at an aggressively competitive cost.

These lasers are commonly used for fluorescence excitation, PIV, Raman spectroscopy, optogenetics, 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 on-board as well as remote on/off control, and in 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*
- Specially-tuned for clean modulation responses from 1-100 Hz (*on selected models*)
- 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 R59-N, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to R59-N have been highlighted below in **red + bold**.


| | | | | |
|--|-------------------------------|-----------------------------|----------------------------------|-----------------------------|
| Output Power (mW) | <5, >10, >20, >30 | >50, >80, >100, >150 | >200, >300 | >500, >800 |
| Output Power Stability (%RMS/4h) | <3, <5, <10 | <3, <5 | <3, <5 | <3, <5, <10 |
| Central Wavelength (nm) | 593.14 | 593.14 | 593.14 | 593.14 |
| Wavelength Tolerance (+/- nm) | 1 | 1 | 1 | 1 |
| Divergence (mrad, full angle) | <1.5 | <2 | <2 | <2 |
| Beam Dimensions (mm, 1/e ²) | 1.2 | 3 | 3 | 4 |
| Warm-up Time (minutes) | 10 | 10 | 10 | 10 |
| Spectral Linewidth (nm) | <0.15 | <0.15 | <0.15 | <0.15 |
| M ² | <1.5 | <1.5 | <3 | <6 |
| Polarization Ratio | >100 | | | |
| Beam Pointing Stability (mrad) | <0.05 | <0.05 | | |
| Operating Temperature Range (°C) | 10 to 35 | 10 to 35 | 20 to 30 | 10 to 35 |
| Max. Analog Modulation Freq. (Hz) | 500 | 150, 500, 30000 | 150, 500 | 500 |
| Max. TTL Modulation Freq. (Hz) | 500 | 150, 500, 30000 | 150, 500 | 500 |
| Modulation Input Signal | 0-5 VDC | 0-5 VDC | 0-5 VDC | 0-5 VDC |
| Total Power Consumption (W) | 25, 30 | 80 | 90 | 140 |
| Max. Power Input Duty Cycle | 100% | 100% | 100% | 100% |
| Standard Warranty (months) | 12 | 12 | 12 | 12 |
| MTTF (operational hours) | 10000 | 10000 | 10000 | 10000 |
| Weight of Product or Laser Head (kg) | 0.6 | 1.6 | 2.6 | 6.1 |
| Beam Height from Base Plate (mm) | 24.8 | 45 | 68.2 | 93.5 |
| Dimensions of Product or Laser Head (mm) | 140.8 (l) x 73 (w) x 46.2 (h) | 211.5 (l) x 88 (w) x 74 (h) | 240 (l) x 99 (w) x 94 (h) | 346 (l) x 140 (w) x 125 (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 | FF | FN | FW |
|--|--------------------------|----------------------------|-----------------------------|------------------------------------|-----------------------------|
| FDA-Compliant LabSpec  | Input Power | 85v to 264v | 85v to 264v | 85v to 264v | 85v to 264v |
| | Power Supply Weight (kg) | 1.5 | 2.6 | 2.6 | 5.2 |
| | Dimensions (mm) | 154 (l) x 155 (w) x 95 (h) | 268 (l) x 145 (w) x 106 (h) | 268 (l) x 145 (w) x 106 (h) | 307 (l) x 168 (w) x 123 (h) |

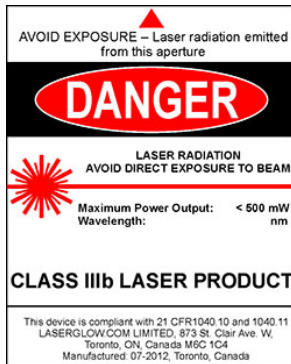
| | Power Supply Type: | SM | SW |
|---|--------------------------|----------------------------|-----------------------------|
| FDA-Compliant Standard  | Input Power | 85v to 264v | 85v to 264v |
| | Power Supply Weight (kg) | 1.2 | 5.1 |
| | Dimensions (mm) | 133 (l) x 130 (w) x 65 (h) | 307 (l) x 168 (w) x 123 (h) |

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

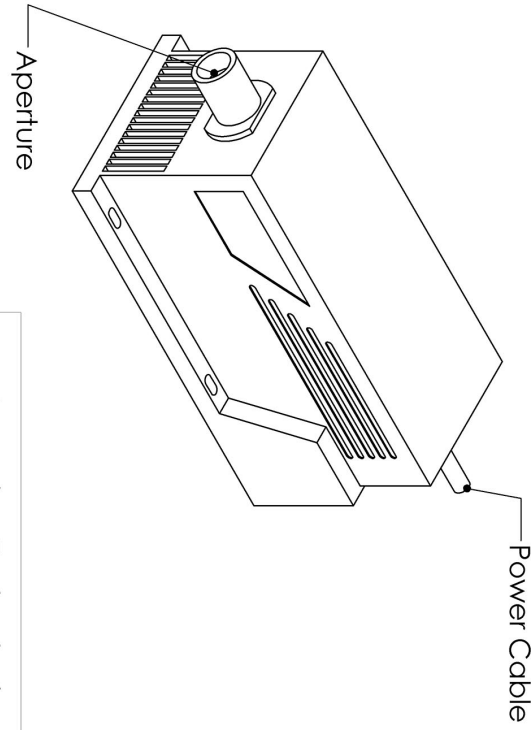
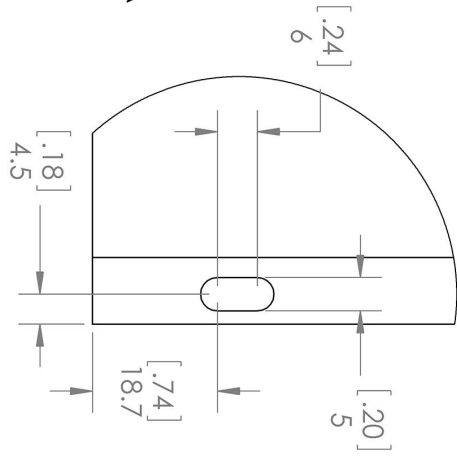
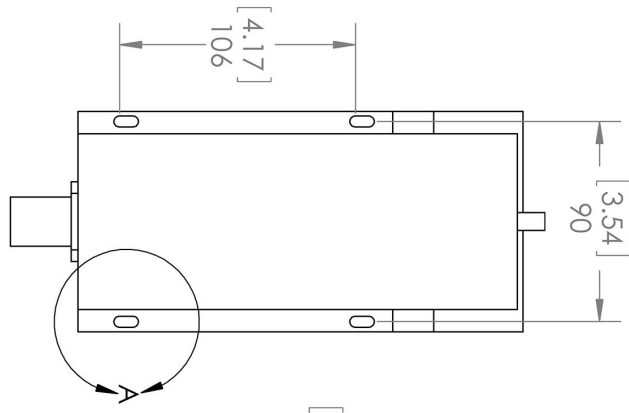
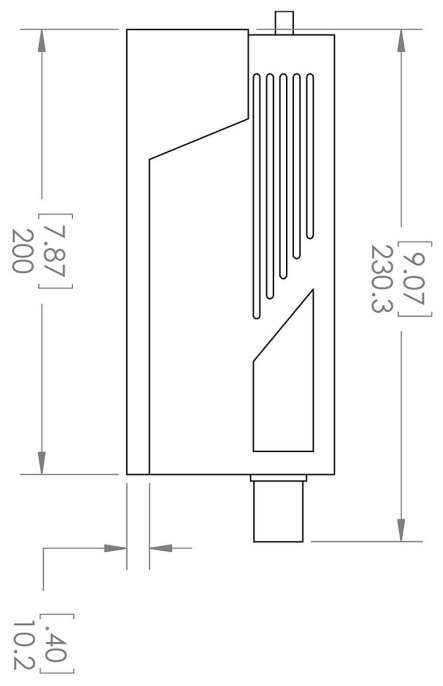
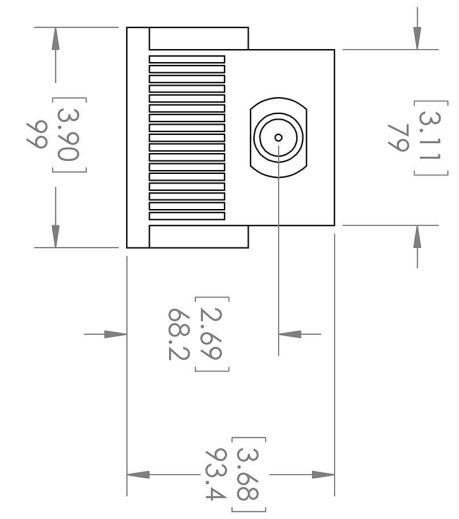
*Dimensions for fiber-integrated (l_) include laser head packaged inside.

Regulatory Classification:

The model you have selected (R59-N) requires the following safety label(s):



Dimensional Drawing - Laser Form Factor: N:



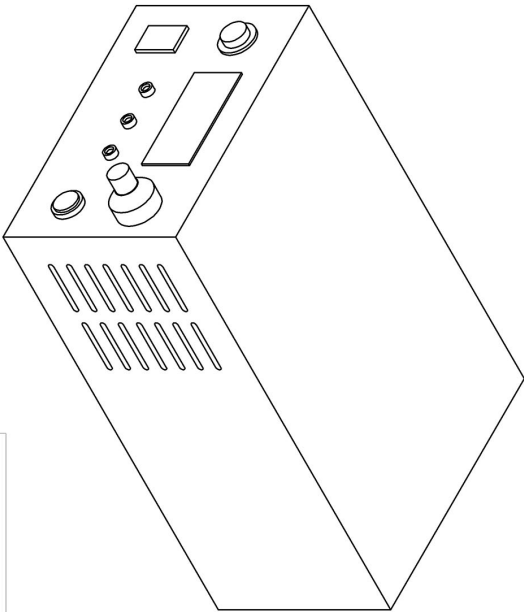
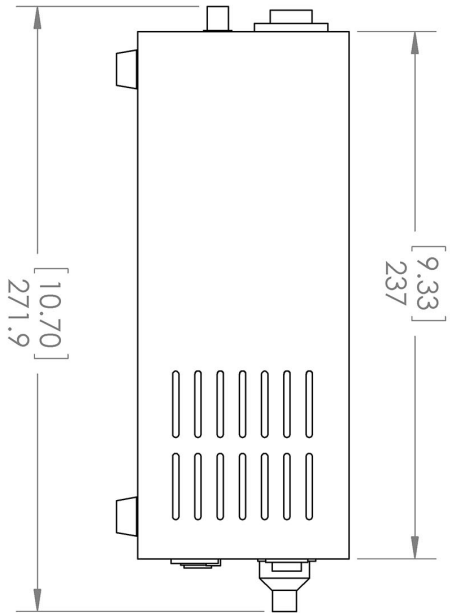
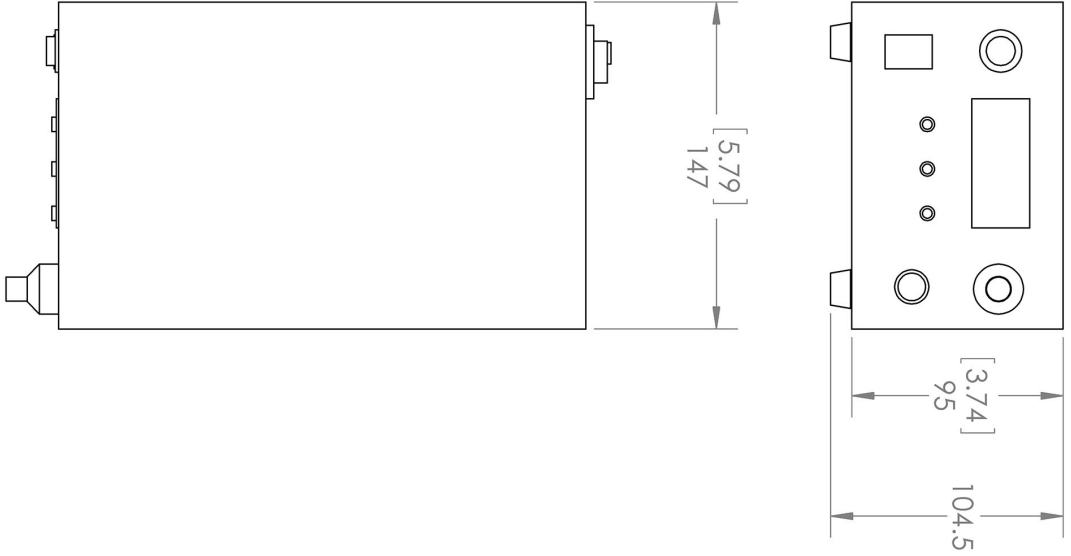
DETAIL A
SCALE 1 : 1

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

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| | |
|----------------------------------|--------------|
| TITLE: Laserglow Technologies | |
| Lab/OEM N/V Housing REV 1 | |
| SCALE: 1:3 | SHEET 1 OF 1 |

Dimensional Drawing - Power Supply Form Factor: FN:









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

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| | |
|--|--------------|
| TITLE: Power Supply FH/FF/FN | |
| Laserglow Technologies | |
| SCALE: 1:3 | SHEET 1 OF 1 |
| REV 1 | |

Accessories:

The most popular accessories for model R59-N are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

| Part Number | Description | |
|--|--|--|
|  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 | |
|  AGF59459X | Optical Density 6 Fit over prescription glasses Protect your vision when working with Class IIIb and Class IV green lasers. Full Details: www.arktislaser.com/AGF | |
|  ACFVISHXA | FC/PC Fiber Coupler/Collimator for visible spectrum wavelengths (400 to 700 nm) (installed and aligned) 11mm diameter input lens Full Details: www.arktislaser.com/ACF | |
|  ACSVISHXA | SMA-905 Fiber Coupler/Collimator for visible spectrum wavelengths (400 to 700 nm) (installed and aligned) 11mm diameter input lens Full Details: www.arktislaser.com/ACS | |
|  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:

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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.