

Laserglow Product Datasheet

LRD-0460 Collimated Diode Laser System



Series Specifications:

| | |
|--------------------|--------|
| Nominal Wavelength | 460 nm |
| Output Type | CW |
| Laser Source Type | Diode |

Overview:

The LRD-0460 Series of Collimated Diode (Semiconductor) Lasers are ideal for applications requiring a short wavelength of 460 nm and output power levels of 5 mW to 1000 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 D4H-R, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to D4H-R have been highlighted below in **red + bold**.


| | | | |
|--|-------------------------------|------------------------------|--|
| Output Power (mW) | <5, >10, >50, >80 | <5, >10, >20, >30, >50, >100 | >100, >200, >300, >500, >800 |
| Output Power Stability (%RMS/4h) | <1, <3, <5, <10 | <1, <3, <5 | <1, <3, <5, <10 |
| Central Wavelength (nm) | 460 | 460 | 460 |
| Wavelength Tolerance (+/- nm) | 10 | 5 | 10 |
| Divergence (mrad, full angle) | <1 | <2.5x0.2 | <2.5x0.2 |
| Beam Dimensions (mm, 1/e ²) | 2.5 | 2x5 | 2x5 |
| Warm-up Time (minutes) | 5 | 15 | 5 |
| Spectral Linewidth (nm) | | <0.06 | |
| M ² | <1.5 | | |
| Polarization Ratio | >50 | >50 | >50 |
| Beam Pointing Stability (mrad) | <0.05 | | |
| Operating Temperature Range (°C) | 10 to 35 | 20 to 30 | 10 to 35 |
| Max. Analog Modulation Freq. (Hz) | 30000 | 30000 | 30000 |
| Max. TTL Modulation Freq. (Hz) | 10000, 30000 | 30000 | 10000, 30000 |
| Modulation Input Signal | 0-5 VDC | 0-5 VDC | 0-5 VDC |
| Total Power Consumption (W) | 9 | 9 | 9 |
| Max. Power Input Duty Cycle | 100% | 100% | 100% |
| Standard Warranty (months) | 12 | 12 | 12 |
| MTTF (operational hours) | 10000 | 10000 | 10000 |
| Weight of Product or Laser Head (kg) | 0.6 | 0.8 | 0.6 |
| Beam Height from Base Plate (mm) | 24.8 | 30 | 24.8 |
| Dimensions of Product or Laser Head (mm) | 140.7 (l) x 73 (w) x 46.2 (h) | 122.5 (l) x 65 (w) x 50 (h) | 140.7 (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: | FR | FE |
| FDA-Compliant LabSpec  | Input Power | 85v to 264v | 85v to 264v |
| | Power Supply Weight (kg) | 1.5 | 6.2 |
| | Dimensions (mm) | 154 (l) x 155 (w) x 95 (h) | 320 (l) x 300 (w) x 123 (h) |

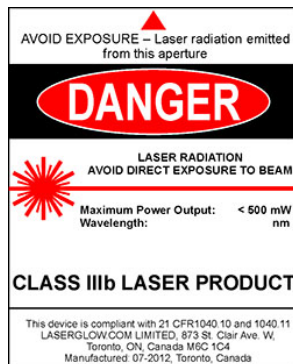
| | | |
|---|--------------------------|----------------------------|
| | Power Supply Type: | SR |
| FDA-Compliant Standard  | Input Power | 85v to 264v |
| | Power Supply Weight (kg) | 1.2 |
| | Dimensions (mm) | 133 (l) x 130 (w) x 65 (h) |

*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 (D4H-R) requires the following safety label(s):











Dimensional Drawing - Power Supply Form Factor: FR:



Accessories:

The most popular accessories for model D4H-R are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

| Part Number | Description | |
|--|--|---------------------|
|  ACALBMXXX | Carrying Case-102 Holds Lab/OEM M, R and S size, standard or LabSpec laser Full Details: www.laserglow.com/ACA | Included With Laser |
|  ACFVISHXA | FC/PC Fiber Coupler/Collimator for visible spectrum wavelengths (400 to 700 nm) (installed and aligned) 11mm diameter input lens Full Details: www.laserglow.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.laserglow.com/ACS | |
|  AGF5322XX | LSG-532-NF-2 Fit-Over Safety Goggles 532nm Output: OD 2+ at 400-532 nm CE Certified Full Details: www.laserglow.com/AGF | |
|  AFF2002XX | Armored Fiber With FC/PC Connectors 200um Core Multimode 2m length Full Details: www.laserglow.com/AFF | |
|  AFS2002XX | Armored Fiber With SMA 905 Connectors 200um Core Multimode 2 m length Full Details: www.laserglow.com/AFS | |

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.