

Arktis Laser Product Datasheet

LVD-0785 Diode Laser System For Raman Spectroscopy



Series Specifications:

| | |
|--------------------|--------|
| Nominal Wavelength | 785 nm |
| Output Type | CW |
| Laser Source Type | Diode |

Overview:

785 nm diode lasers are ideal when both reliability and low cost of ownership cannot be compromised. Recent advancements make this laser form factor suitable for an even greater number of applications. As fewer materials absorb at the infrared wavelength, utilizing 785 nm laser light allows for fluorescence suppression. 785 nm is also a lower energy wavelength as compared to visible light, allowing for analysis of sensitive biological specimens.

High power, wavelength stability and narrow linewidth make the 785 nm laser for Raman Spectroscopy from Laserglow Technologies a versatile choice for cost-effective, high-resolution Raman applications.

Key Features:

- Wavelength stabilized at 785.03 nm
- Narrow spectral linewidth at 0.2 nm
- Fiber coupling available: 100 μm - 400 μm (optional)
- Output power: Up to 700 mW
- TTL and Analog modulation available
- Integrated thermoelectric cooling
- CW operating mode
- 10,000 hours expected lifetime
- 1 year warranty

Specifications:

This spec sheet has been generated specifically for part number V78-R, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to V78-R have been highlighted below in **red + bold**.

| | | |
|---|---------------------------|---|
| Output Power (mW) | >200, >300, >450 | >200, >300, >400, >600 |
| Output Power Stability (%RMS/4h) | <1, <3 | <1, <3 |
| Central Wavelength (nm) | 785 | 785 |
| Wavelength Tolerance (+/- nm) | 0.5 | 0.5 |
| Divergence (mrad, full angle) | <120x240 | <3 |
| Beam Dimensions (mm, 1/e ²) | | 10x1 |
| Warm-up Time (minutes) | 5 | 5 |
| Optical Noise Amplitude (%RMS @ 20 Hz - 20 MHz) | <1 | |
| Spectral Linewidth (nm) | <0.2 | <0.2 |
| Polarization Ratio | | >50 |
| Operating Temperature Range (°C) | 10 to 35 | 10 to 35 |
| Max. Analog Modulation Freq. (Hz) | 30000 | 30000 |
| Max. TTL Modulation Freq. (Hz) | 30000 | 30000 |
| Modulation Rise Time (us) | 10 | |
| Modulation Input Signal | 0-5 VDC | 0-5 VDC |
| Max. Power Input Duty Cycle | 100% | 100% |
| Standard Warranty (months) | 12 | 12 |
| MTTF (operational hours) | 10000 | 10000 |
| Weight of Product or Laser Head (kg) | 0.875 | 0.6 |
| Beam Height from Base Plate (mm) | | 24.8 |
| Dimensions of Product or Laser Head (mm) | 130 (l) x 98 (w) x 51 (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: | IS |
|  | Input Power | 7v to 15v |
| | Power Supply Weight (kg) | 1 |
| | Dimensions (mm) | 130 (l) x 98 (w) x 51 (h) |

| | | |
|---|--------------------------|-----------------------------------|
| | Power Supply Type: | FR |
|  | Input Power | 85v to 264v |
| | Power Supply Weight (kg) | 1.5 |
| | Dimensions (mm) | 154 (l) x 155 (w) x 95 (h) |

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

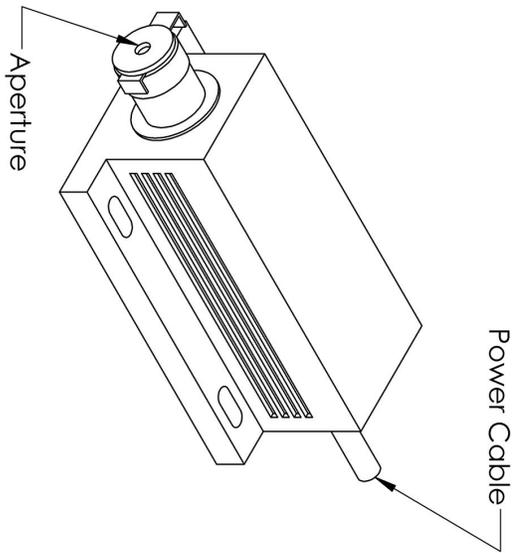
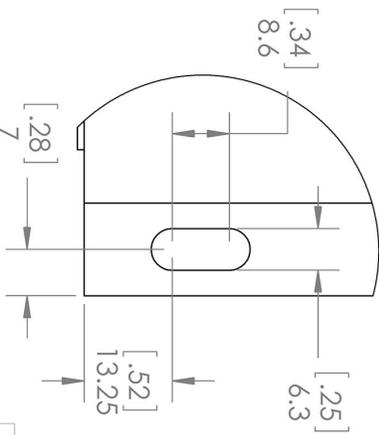
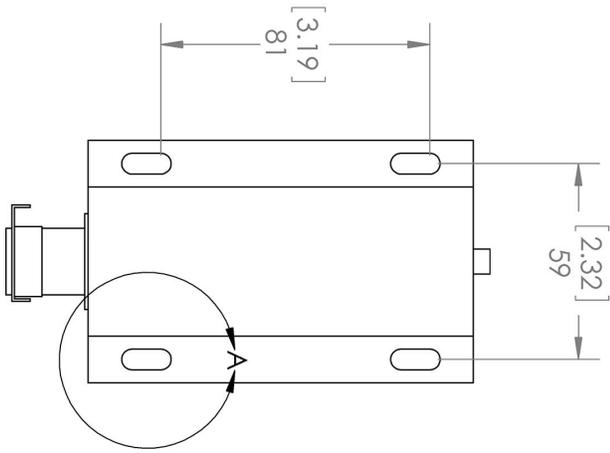
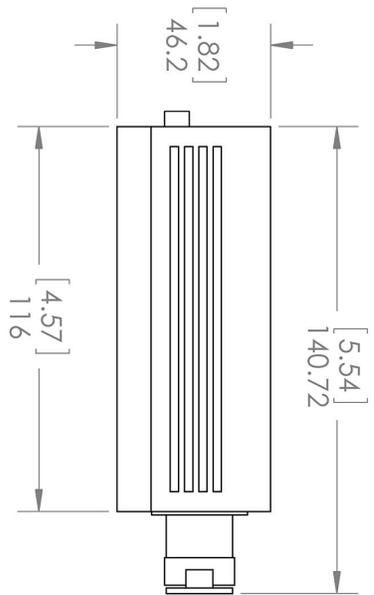
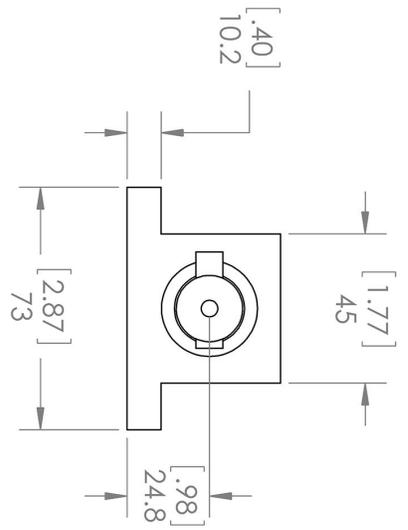
*Dimensions for fiber-integrated (I_) include laser head packaged inside.

Regulatory Classification:

The model you have selected (V78-R) requires the following safety label(s):



Dimensional Drawing - Laser Form Factor: R:



DETAIL A
SCALE 1 : 1

TITLE:
Laserglow Technologies

Lab/OEM
M/R Housing REV 1

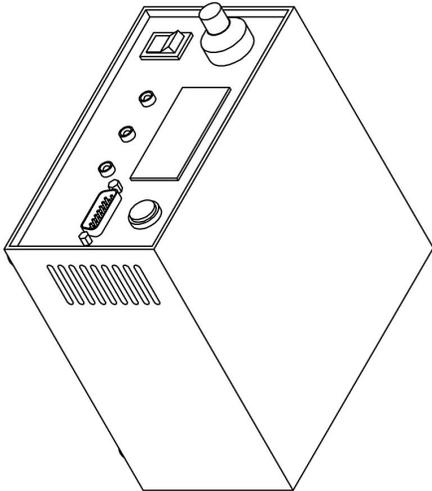
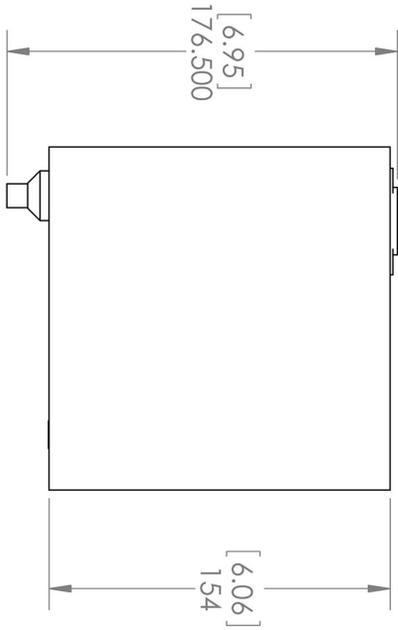
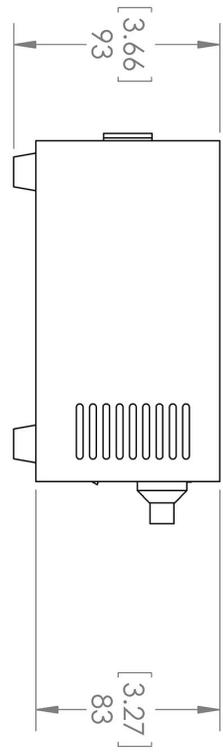
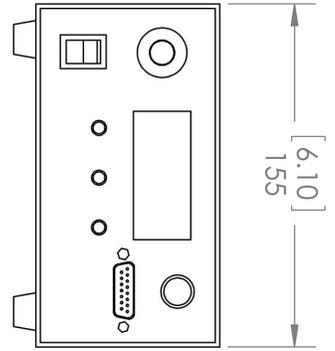
UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MM(INCH)
TOLERANCES: +/- 0.75 MM

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SCALE: 1:2

SHEET 1 OF 1

Dimensional Drawing - Power Supply Form Factor: FR:



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 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 V78-R are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

| Part Number | Description | |
|---|---|---------------------|
|  AGF80859X | LSG-808-NF-6 Fit-Over Safety Goggles 808nm Output: OD 6+ at 800-818 nm CE Certified Full Details: www.arktislaser.com/AGF | |
|  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 | |

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.