

LQS-1064 Passively Q-Switched Laser System



Series Specifications:

| | |
|--------------------|------------|
| Nominal Wavelength | 1064 nm |
| Output Type | Q-Switched |
| Laser Source Type | DPSS |

Overview:

The LQS-1064 Series of Diode-Pumped Solid-State (DPSS) Q-Switched Lasers are ideal for applications requiring a very high peak power or short pulse duration at 1064 nm.

These lasers are commonly used for Raman spectroscopy, material processing, and a broad range of other applications. The driver is available as a plug-and-play benchtop system or an O.E.M. component designed for system integration.

Key Features:

- Pulse energy of 10 μ J - 100 μ J
- Pulse repetition rate of 1 Hz - 10 kHz
- Pulse duration in the range of 10-25 ns
- Air cooled
- Runs on standard AC power (85 - 264 V, 47 - 63 Hz)
- 10,000 hour maintenance-free operating life (Expected)
- FDA/CDRH compliant Class IV enclosure

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 QA6-N, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to QA6-N have been highlighted below in **red + bold**.

| | | | |
|---|------------|-------------------|----------------------------|
| Output Power (mW) | >40, >80 | >200, >500, >1000 | >1000, >2000 |
| Single Pulse Energy (µJ) | 10, 20 | 20, 50, 100 | 200, 250 |
| Optimal Pulse Frequency (Hz) | 4000 | 10000 | 4000 |
| Output Power Stability (%RMS/4h) | <1, <3, <5 | <1, <3, <5 | <1, <3, <5 |
| Central Wavelength (nm) | 1063.2 | 1063.2 | 1063.2 |
| Wavelength Tolerance (+/- nm) | 1 | 1 | 1 |
| Divergence (mrad, full angle) | <1.5 | <1.8 | <1.5 |
| Beam Dimensions (mm, 1/e ²) | 1.2 | 1.5, 2 | 3 |
| Warm-up Time (minutes) | 10 | 10 | |
| Avg. Pulse Duration (ns) | 10 | 10 | 5 |
| Approximate Peak Power (W) | 3000 | 5000, 10000 | 20000 |
| Optical Noise Amplitude (%RMS @ 20 Hz - 20 MHz) | <20 | <20 | |
| M ² | <1.2 | <1.5 | <1.3 |
| Polarization Ratio | | >50 | >50 |
| Beam Pointing Stability (mrad) | <0.05 | <0.05 | |
| Operating Temperature Range (°C) | 10 to 35 | 10 to 35 | 10 to 35 |
| Max. TTL Modulation Freq. (Hz) | 20000 | 20000 | 20000 |
| Minimum Pulsing Frequency (Hz) | 1 | 1 | 4000, 10000 |
| Modulation Input Signal | 0-5 VDC | 0-5 VDC | 0-5 VDC |
| Total Power Consumption (W) | 35 | | |
| 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 | 0.9 | 2.6 |
| Beam Height from Base Plate (mm) | 24.8 | 29 | 68.2 |

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.

Specifications Page 2:


| | | | |
|--|-------------------------------|---------------------------|----------------------------------|
| Laser Form Factor | | | |
| Dimensions of Product or Laser Head (mm) | 140.8 (l) x 73 (w) x 46.2 (h) | 155 (l) x 77 (w) x 60 (h) | 240 (l) x 99 (w) x 94 (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: | SM | SH |
|---|--------------------------|----------------------------|-----------------------------|
| FDA-Compliant Standard  | 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) |

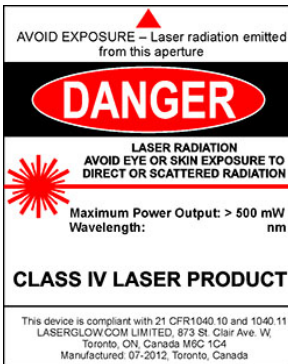
| | Power Supply Type: | FN |
|--|--------------------------|------------------------------------|
| FDA-Compliant LabSpec  | Input Power | 85v to 264v |
| | Power Supply Weight (kg) | 2.6 |
| | Dimensions (mm) | 268 (l) x 145 (w) x 106 (h) |

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

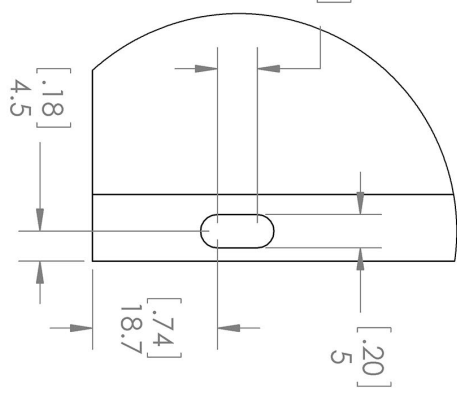
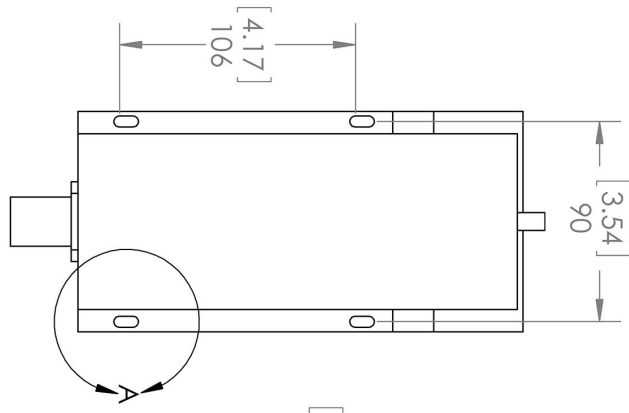
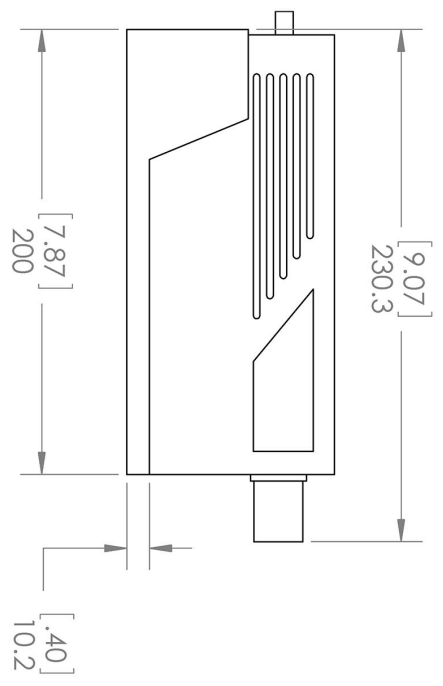
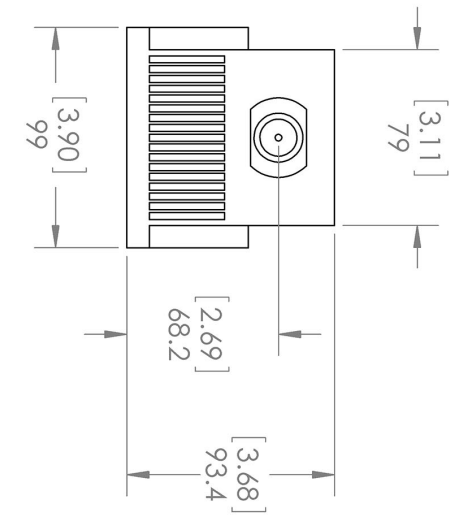
*Dimensions for fiber-integrated (I_) include laser head packaged inside.

Regulatory Classification:

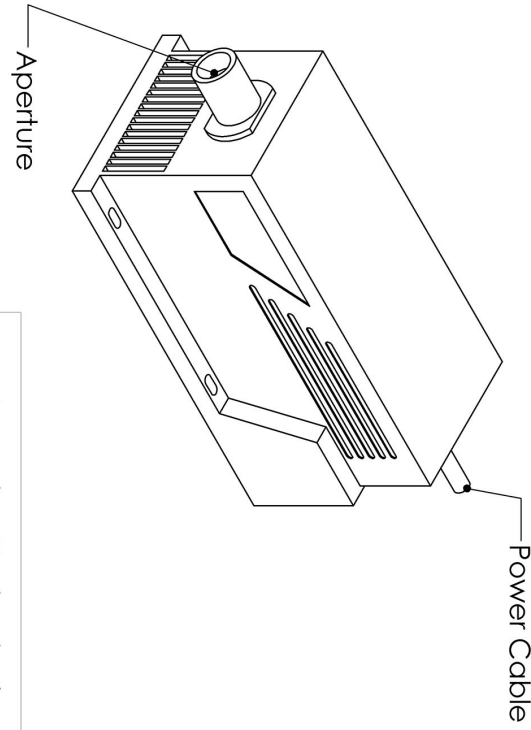
The model you have selected (QA6-N) requires the following safety label(s):



Dimensional Drawing - Laser Form Factor: N:

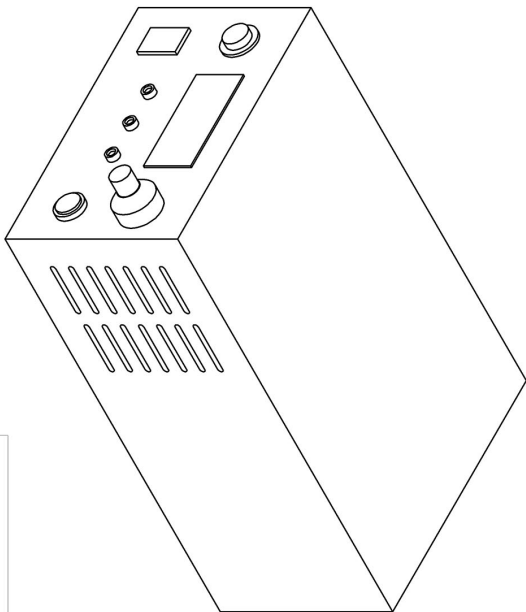
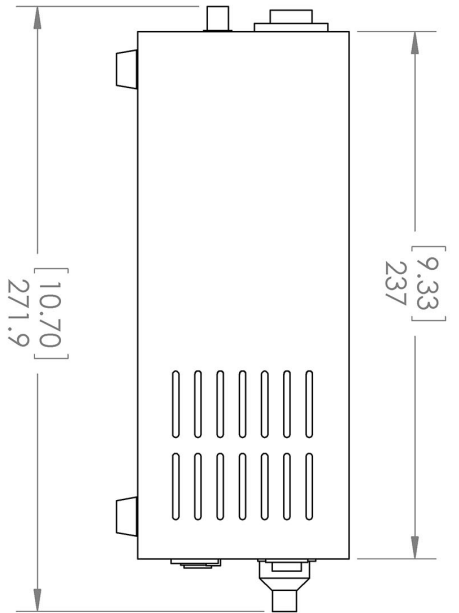
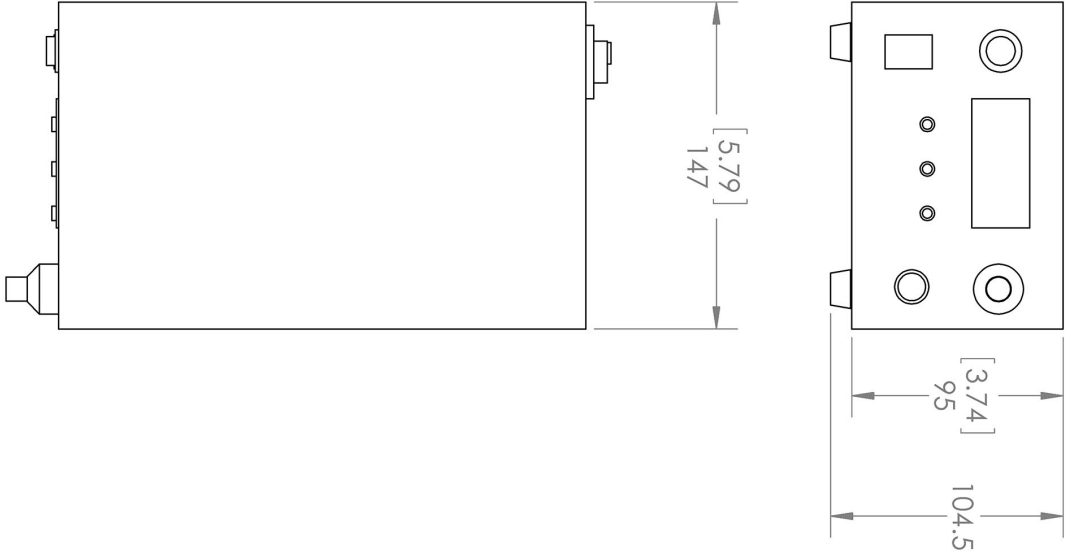


DETAIL A
SCALE 1 : 1



| | | | |
|--|--|---|--|
| UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MM(INCH) TOLERANCES: +/- 0.75 MM | | TITLE: Laserglow Technologies | |
| THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF LASERGLOW TECHNOLOGIES. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF LASERGLOW TECHNOLOGIES IS PROHIBITED. © 2012 LASERGLOW.COM LIMITED. ALL RIGHTS RESERVED | | SCALE: 1:3 | |
| 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 QA6-N are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

| Part Number | Description | |
|--|---|--|
|  AGFA647XX | LSG-1064-NF-7 Fit-Over Safety Goggles 1064nm Output: OD 7+ at 950-1070 nm CE Certified Full Details: www.arktislaser.com/AGF | |
|  ACFMIRHXA | FC/PC Fiber Coupler/Collimator for IR wavelengths (1000 to 1300 nm) (installed and aligned) 11mm diameter input lens Full Details: www.arktislaser.com/ACF | |
|  ACSMIRHXA | SMA-905 Fiber Coupler/Collimator for IR wavelengths (1000 to 1300 nm) (installed and aligned) 11mm diameter input lens Full Details: www.arktislaser.com/ACS | |
|  AFS2002XX | Armored Fiber With SMA 905 Connectors 200um Core Multimode 2 m length Full Details: www.arktislaser.com/AFS | |
|  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.