

## LQS-3800 Passively Q-Switched Laser System



### Series Specifications:

Nominal Wavelength	3800 nm
Output Type	Q-Switched
Laser Source Type	DPSS

### Overview:

The LQS-3800 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 3800 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 7  $\mu$ J - 20  $\mu$ J
- Pulse repetition rate of 5 kHz - 15 kHz
- Pulse duration in the range of 5-10 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 Q3G-N, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to Q3G-N have been highlighted below in **red + bold**.

Laser Form Factor	<b>N</b>
Output Power (mW)	<b>&gt;100, &gt;200, &gt;300</b>
Single Pulse Energy (μJ)	<b>7, 13, 20</b>
Optimal Pulse Frequency (Hz)	<b>15000</b>
Output Power Stability (%RMS/4h)	<b>&lt;3, &lt;5, &lt;10</b>
FDA Safety Class	<b>IV</b>
Central Wavelength (nm)	<b>3800</b>
Wavelength Tolerance (+/- nm)	<b>20</b>
Divergence (mrad, full angle)	<b>&lt;1.5</b>
Beam Dimensions (mm, 1/e <sup>2</sup> )	<b>3</b>
Longitudinal Modes	<b>Multiple</b>
Warm-up Time (minutes)	<b>10</b>
Avg. Pulse Duration (ns)	<b>5</b>
Approximate Peak Power (W)	<b>4000, 5000, 6000</b>
Operating Temperature Range (°C)	<b>10 to 35</b>
Storage Temperature Range (°C)	<b>-10 to 50</b>
Max. TTL Modulation Freq. (Hz)	<b>15000</b>
Minimum Pulsing Frequency (Hz)	<b>5000</b>
Modulation Input Signal	<b>0-5 VDC</b>
Max. Power Input Duty Cycle	<b>100%</b>
Cooling Method	<b>TEC/Forced Air</b>
Standard Warranty (months)	<b>12</b>
MTTF (operational hours)	<b>10000</b>
Weight of Product or Laser Head (kg)	<b>2.6</b>
Beam Height from Base Plate (mm)	<b>68.2</b>

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	<b>N</b>
Dimensions of Product or Laser Head (mm)	<b>240 (l) x 99 (w) x 94 (h)</b>

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:	<b>SN</b>
	Input Power	<b>85v to 264v</b>
	Power Supply Weight (kg)	<b>2.3</b>
	Dimensions (mm)	<b>238 (l) x 146 (w) x 102 (h)</b>

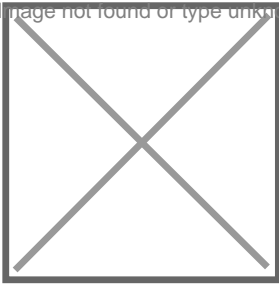
\*Power supply may not be exactly as shown, see dimensional drawings on next 2 pages.

\*Dimensions for fiber-integrated (I\_) include laser head packaged inside.

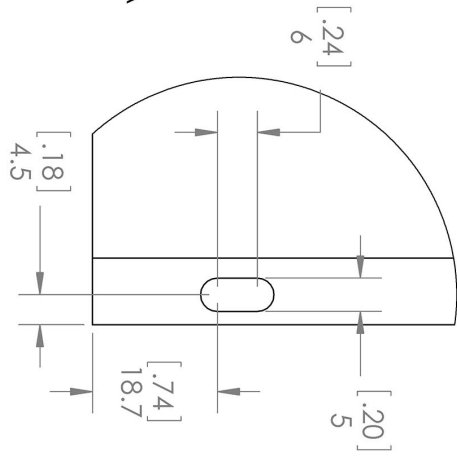
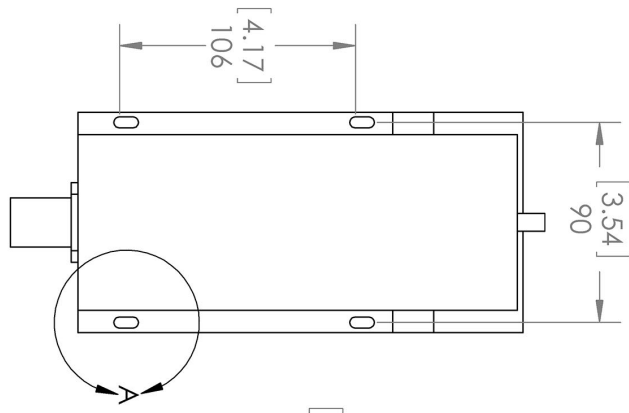
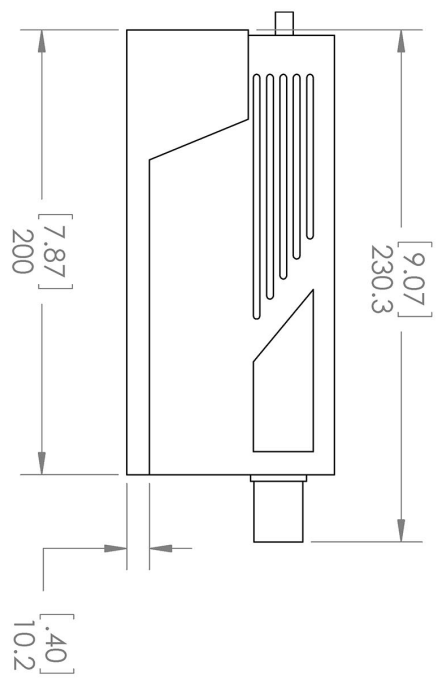
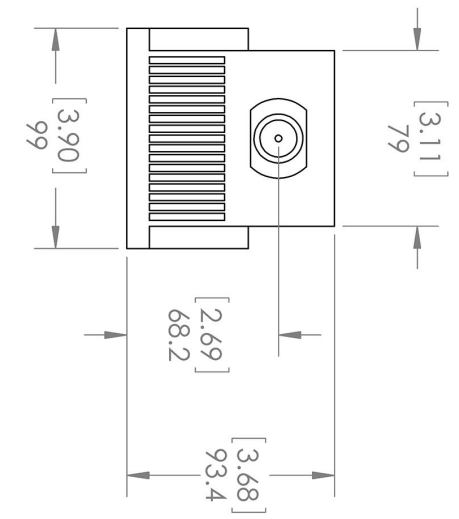
### Regulatory Classification:

The model you have selected (Q3G-N) requires the following safety label(s):

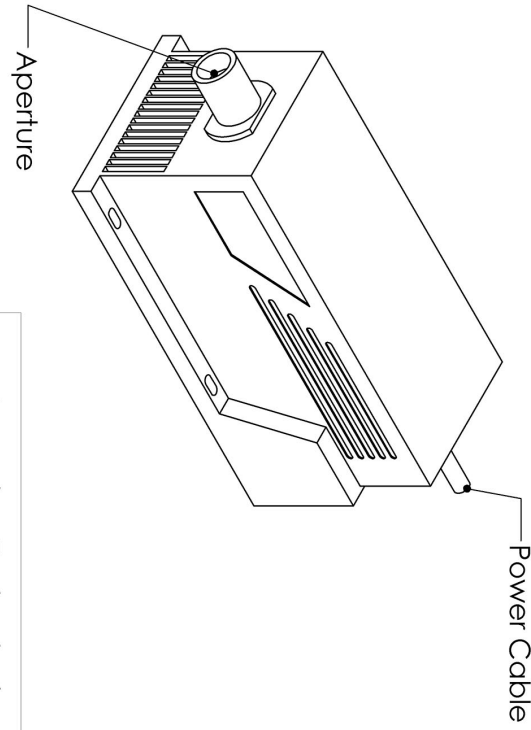
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**Dimensional Drawing - Laser Form Factor: N:**



DETAIL A  
SCALE 1 : 1

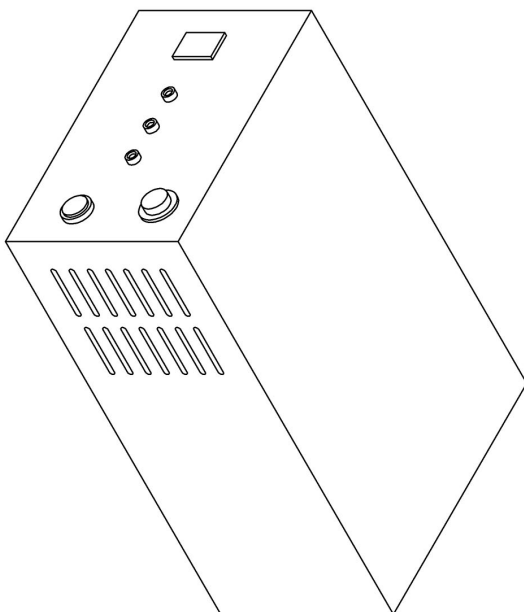
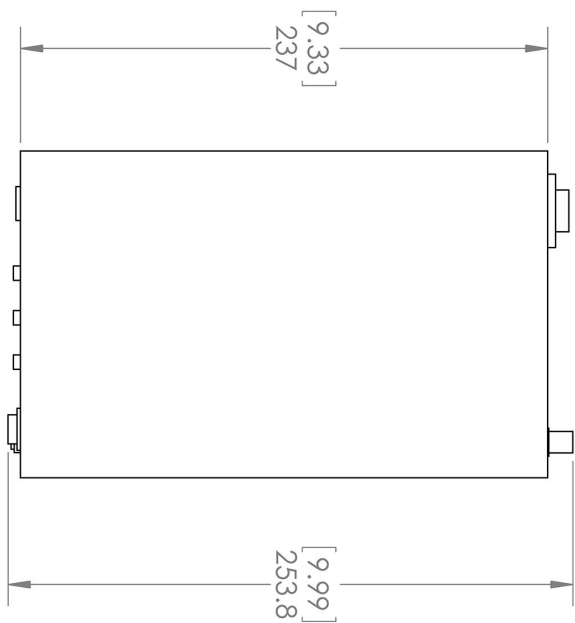
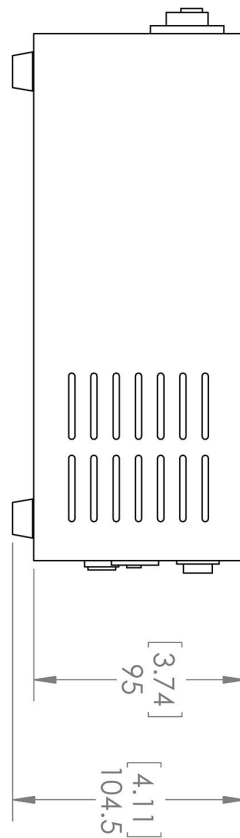
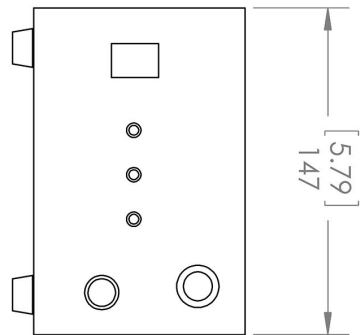


UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN MILLIMETER  
TOLERANCES: +/- 0.075 MM

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

**Dimensional Drawing - Power Supply Form Factor: SN:**



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

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**Laserglow Technologies**

TITLE:  
**Power Supply**  
**SH/SF/SN**  
 REV  
**1**

SCALE: 1:3  
 SHEET 1 OF 1

**Accessories:**

The most popular accessories for model Q3G-N are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

Part Number	Description	
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**FOR MORE INFORMATION PLEASE CONTACT:**

LASERGLOW TECHNOLOGIES

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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.