Laserglow Product Datasheet

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 uJ - 100 uJ
- 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.

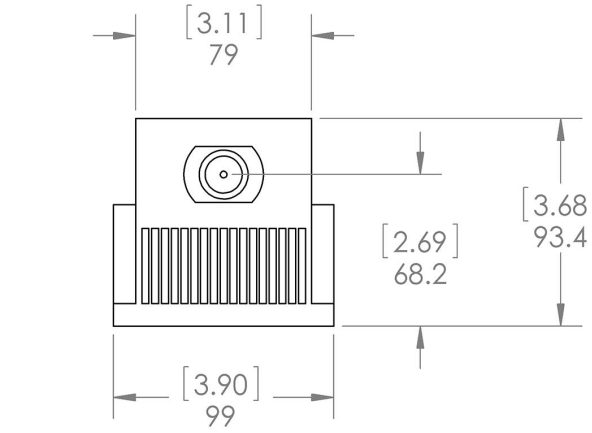
*Dimensions for fiber-integrated (I_) include laser head packaged inside.

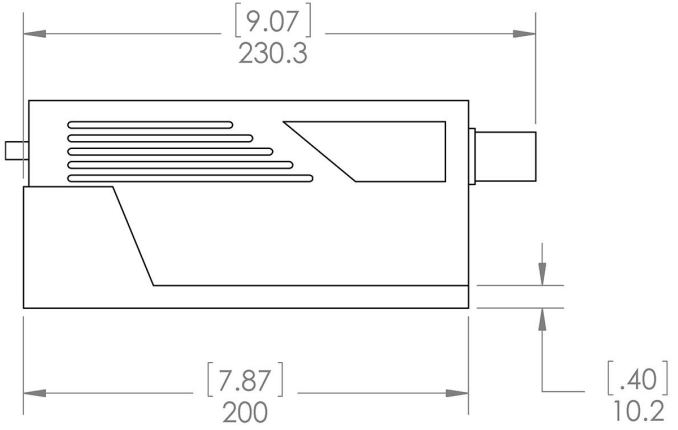
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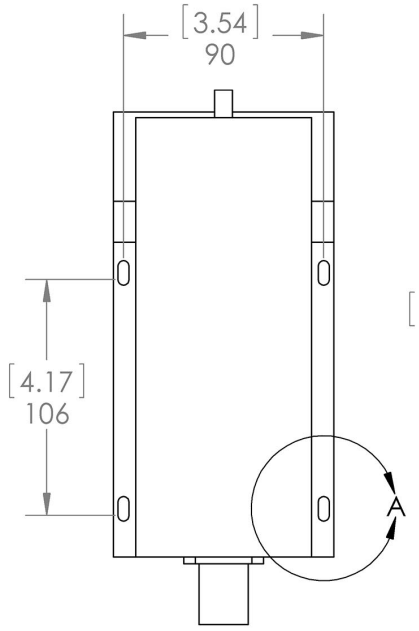
The model you have selected (QA6-N) requires the following safety label(s):

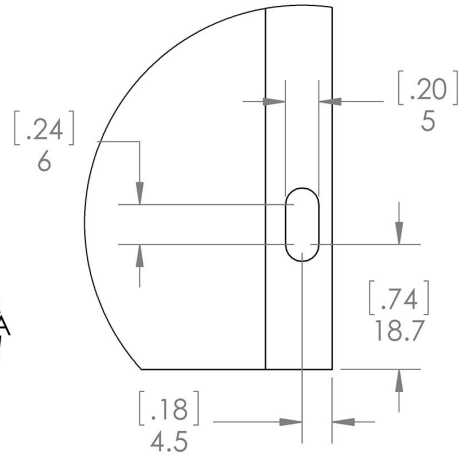


Dimensional Drawing - Laser Form Factor: N:

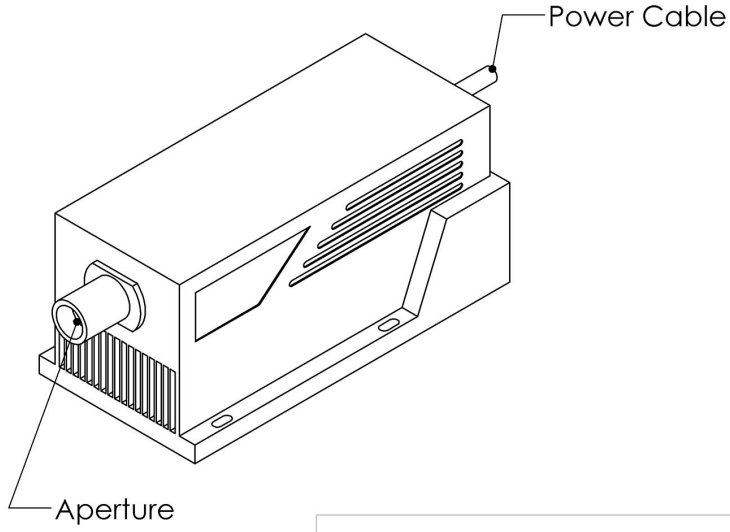








DETAIL A
SCALE 1 : 1



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UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MM[INCH]
TOLERANCES: +/- 0.75 MM

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TITLE:

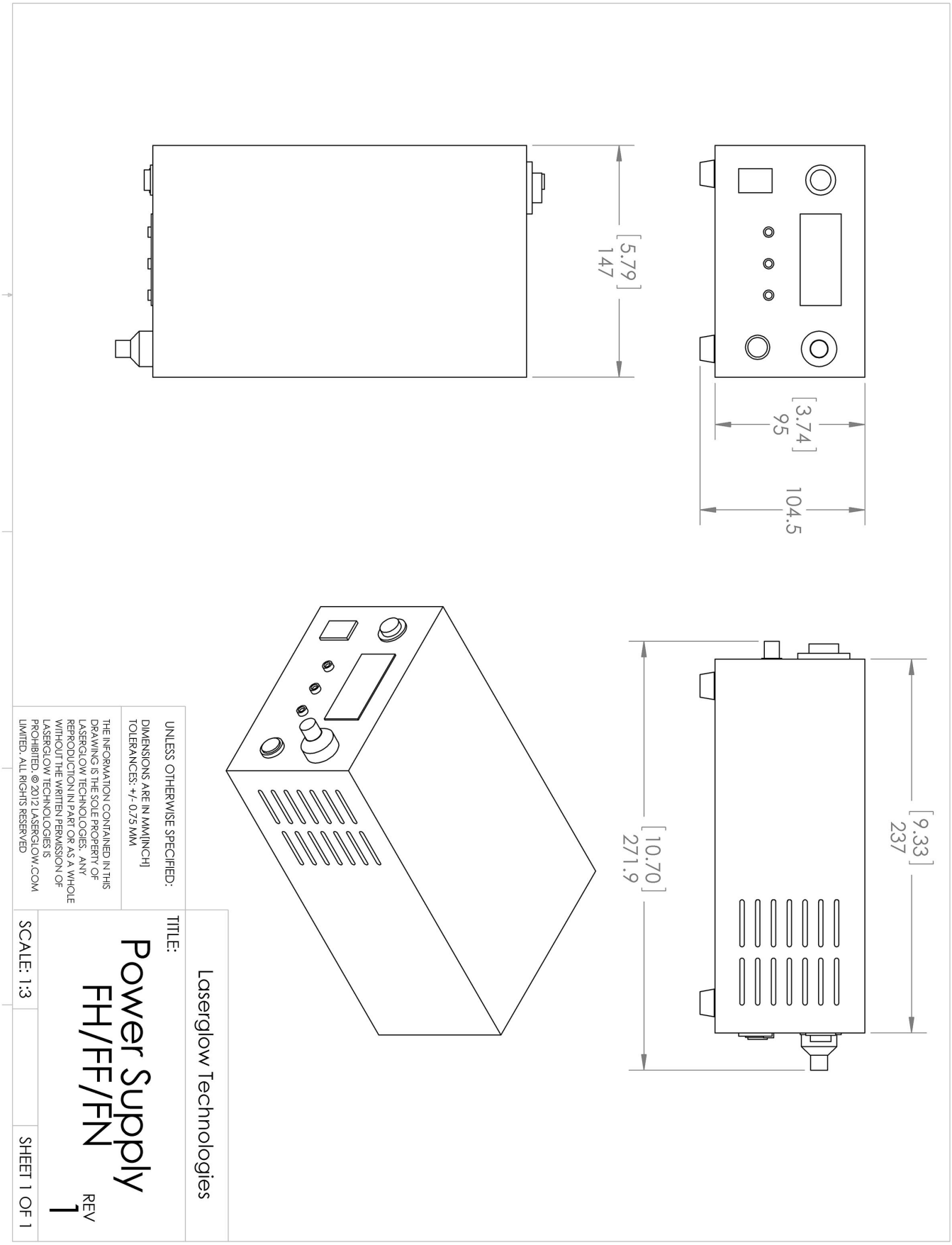
Lab/OEM N/V Housing

REV 1

SCALE: 1:3

SHEET 1 OF 1

Dimensional Drawing - Power Supply Form Factor: FN:



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.laserglow.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.laserglow.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.laserglow.com/ACS	
 AFS2002XX	Armored Fiber With SMA 905 Connectors 200um Core Multimode 2 m length Full Details: www.laserglow.com/AFS	
 AFF2002XX	Armored Fiber With FC/PC Connectors 200um Core Multimode 2m length Full Details: www.laserglow.com/AFF	

FOR MORE INFORMATION PLEASE CONTACT:

LASERGLOW TECHNOLOGIES
99 Ingram Dr. Unit B, North York, ON, Canada M6M2L7
Tel. (416) 729-7976 Fax (716) 322-3510
sales@laserglow.com www.laserglow.com

E&OE: Data included in this sheet may be subject to change without notice.
Please confirm critical specifications with our staff prior to ordering.