

## Arktis Laser Product Datasheet

### LQS-1313 Passively Q-Switched Laser System



#### Series Specifications:

Nominal Wavelength	1313 nm
Output Type	Q-Switched
Laser Source Type	DPSS

#### Overview:

The LQS-1313 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 1313 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 5 uJ - 40 uJ
- Pulse repetition rate of 1 Hz - 5 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 QD2-H, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to QD2-H have been highlighted below in **red + bold**.


Output Power (mW)	>25	<b>&gt;50, &gt;100</b>
Single Pulse Energy (µJ)	5	<b>10, 20</b>
Optimal Pulse Frequency (Hz)	5000	<b>5000</b>
Output Power Stability (%RMS/4h)	<1, <3, <5	<b>&lt;1, &lt;3, &lt;5</b>
Wavelength Tolerance (+/- nm)	1	<b>1</b>
Divergence (mrad, full angle)	<1.5	<b>&lt;2</b>
Beam Dimensions (mm, 1/e <sup>2</sup> )	1.5	<b>3</b>
Warm-up Time (minutes)	10	<b>10</b>
Avg. Pulse Duration (ns)	10	<b>25</b>
Approximate Peak Power (W)	500	<b>1000</b>
M <sup>2</sup>	<1.2	<b>&lt;1.5</b>
Operating Temperature Range (°C)	10 to 35	<b>10 to 35</b>
Max. TTL Modulation Freq. (Hz)	20000	<b>20000</b>
Minimum Pulsing Frequency (Hz)	1	<b>1</b>
Modulation Input Signal	0-5 VDC	<b>0-5 VDC</b>
Max. Power Input Duty Cycle	100%	<b>100%</b>
Standard Warranty (months)	12	<b>12</b>
MTTF (operational hours)	10000	<b>10000</b>
Weight of Product or Laser Head (kg)	0.6	<b>0.9</b>
Beam Height from Base Plate (mm)	24.8	<b>29</b>
Dimensions of Product or Laser Head (mm)	140.8 (l) x 73 (w) x 46.2 (h)	<b>155 (l) x 77 (w) x 60 (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.

<div>FDA-Compliant Standard</div> <div></div>	Power Supply Type:	<b>SM</b>	<b>SH</b>
	Input Power	85v to 264v	<b>85v to 264v</b>
	Power Supply Weight (kg)	1.2	<b>2.3</b>
	Dimensions (mm)	133 (l) x 130 (w) x 65 (h)	<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 (QD2-H) requires the following safety label(s):



### Dimensional Drawing - Laser Form Factor: H:









Dimensional Drawing - Power Supply Form Factor: SH:



## Accessories:

The most popular accessories for model QD2-H are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

Part Number	Description	
 ACFLIRHXA	FC/PC Fiber Coupler/Collimator for IR wavelengths (1300 to 1600 nm) (installed and aligned) 11 mm diameter input lens Full Details: <a href="http://www.arktislaser.com/ACF">www.arktislaser.com/ACF</a>	
 ACSLIRHXA	SMA-905 Fiber Coupler/Collimator for IR wavelengths (1300 to 1600 nm) (installed and aligned) 11 mm diameter input lens Full Details: <a href="http://www.arktislaser.com/ACS">www.arktislaser.com/ACS</a>	
 ACALBMXXX	Carrying Case-102 Holds Lab/OEM M, R and S size, standard or LabSpec laser Full Details: <a href="http://www.arktislaser.com/ACA">www.arktislaser.com/ACA</a>	Included With Laser
 AFF2002XX	Armored Fiber With FC/PC Connectors 200um Core Multimode 2m length Full Details: <a href="http://www.arktislaser.com/AFF">www.arktislaser.com/AFF</a>	
 AFS2002XX	Armored Fiber With SMA 905 Connectors 200um Core Multimode 2 m length Full Details: <a href="http://www.arktislaser.com/AFS">www.arktislaser.com/AFS</a>	
 AGFMIR4XX	LSG-MIR-NF-4 Fit-Over Safety Goggles Mid-IR Range Output: OD 4+ at 945-10600 nm CE Certified Full Details: <a href="http://www.arktislaser.com/AGF">www.arktislaser.com/AGF</a>	

## 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.