



QSLQ Series

Passively Q-Switched DPSS Lasers

Data Sheet

Overview

The QSLQ Series is a family of ultraviolet diode-pumped solid-state (DPSS) passively Q-switched lasers delivering average output powers up to 150mW. Available at 266nm and 355nm wavelengths, these compact laser systems provide pulse energies up to 15μJ with ultra-short pulse durations as low as approximately 1.3ns for precision UV applications. Designed for long operating lifetime, cost-effective performance, and FDA-compliant operation, the QSLQ Series is ideal for scientific research, UV processing, medical, and industrial OEM applications.

Features

- Available ultraviolet wavelengths: 266nm and 355nm
- Passively Q-switched operation
- Average output power up to 150mW
- Pulse energy up to 15μJ
- Ultra-short pulse duration (~1.3ns or ~4ns)
- High peak power
- Ultra-compact integrated design
- Long operating lifetime
- Cost-effective solution
- FDA-compliant laser system with driver

Applications

- UV curing
- Microelectronics processing
- CD engraving and marking
- Laser medical treatment
- Scientific research
- Precision UV material processing

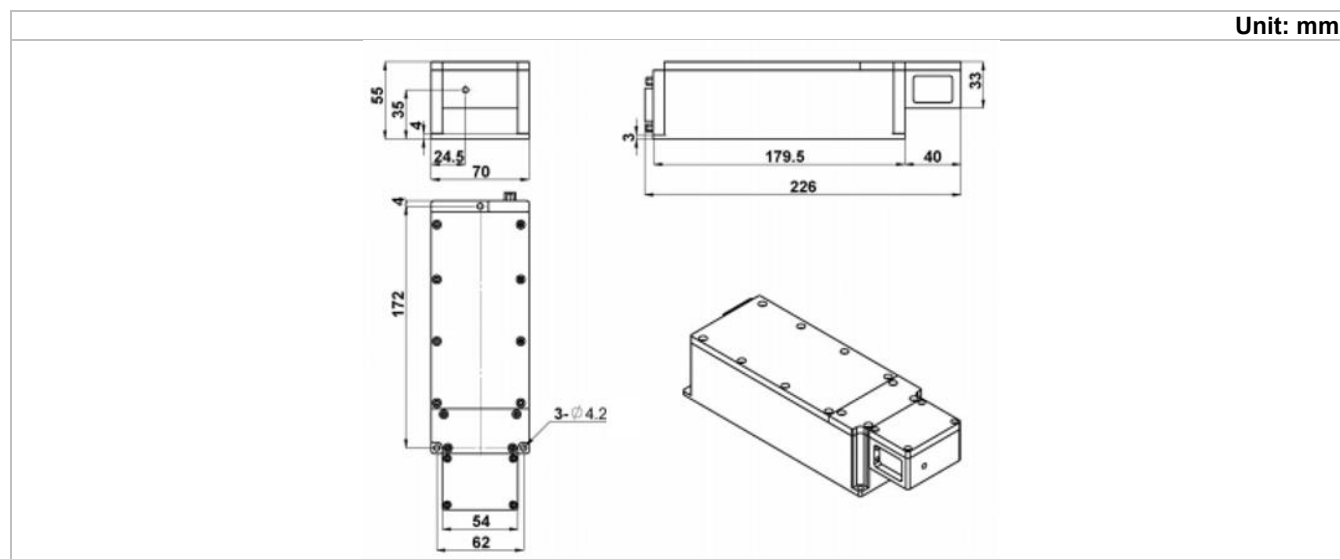
266-355 nm Specifications

Parameter		QSLQ266	QSLQ266S	QSLQ355	
Wavelength		266±1 nm	266±1 nm	355±1 nm	
Operating mode		Passively Q-switched			
Average power ⁽¹⁾		1-30 mW	1-30 mW	1-150 mW	
Single pulse energy ⁽²⁾		0.1-3 uJ	0.1-3 uJ	0.1-15 uJ	
Average power stability (rms, over 4 hours ±3°C)		<5%, <3%			
Pulse duration		~4 ns	~1.3 ns	~4 ns	~1.3 ns
Peak power ⁽³⁾		0.2-0.8 kW	0.8-2.3 kW	0.8-11.5kW	0.25-3.75kW
Repetition rate	Internal Fixed ⁽⁴⁾	3-5 kHz			
	External Trigger	3-5 kHz			
	QCW ⁽⁵⁾	9-12 kHz			
Transverse mode		Near TEM ₀₀			
Beam diameter at aperture		~1.0 mm			
M ² factor		<2			
Polarization ratio		>50:1, Horizontal			
Warm-up time		<5 min			
Operating temperature		10-35°C			
Expected lifetime		>10000 hrs			

Remarks:

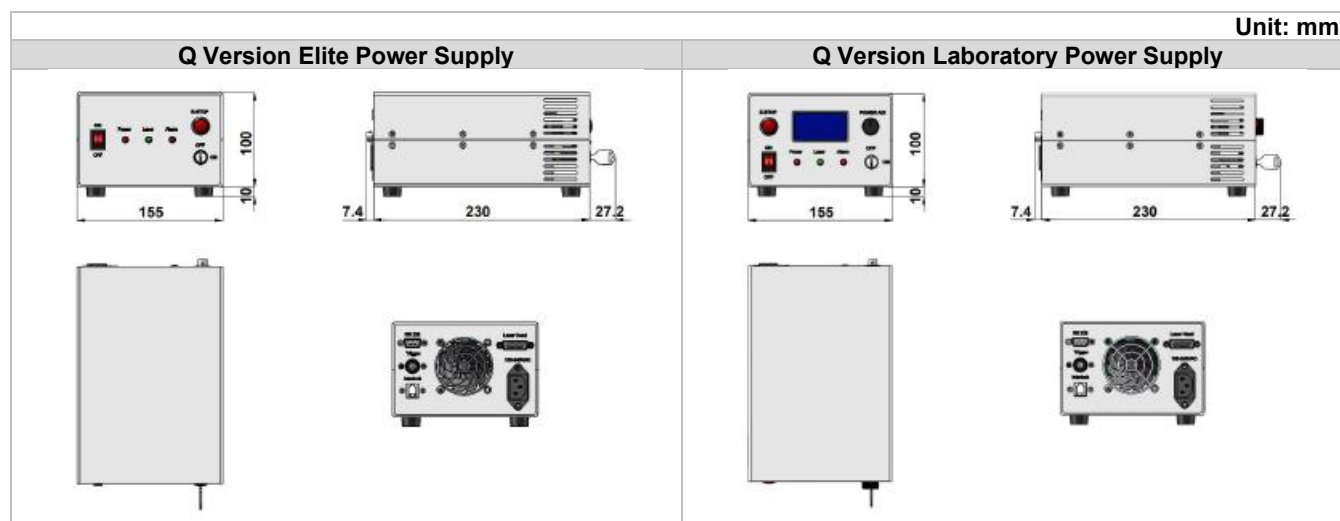
1. Average power (mW) = Single pulse energy (μJ) * Rep. rate (kHz)
2. Any energy level can be selected within this range.
3. Peak Power (W) = Single Pulse Energy (μJ) / Pulse Duration (μs)
4. The frequency is selectable from one discrete value within the range.
5. The repetition rate is a free running value within this range.
6. The laser head needs to be used on a heat sink with good heat dissipation.
7. Specifications of the Q-switched pulsed laser are based on the laser pulsed at the specified repetition rate. If the laser is run at a different repetition rate, the output characteristics may change.

QSLQ Series Laser Head Dimensions



Parameter	QSLQ Series
Dimensions	226(L)×70(W) ×55(H) mm ³
Weight	1.3 kg
Beam height from base plate	35 mm
Beam exit (from side)	24.5 mm

QSLQ Series Power Supply Dimensions



Parameter	Q Version Elite Power Supply	Q Version Laboratory Power Supply
Dimensions	264.6(L) ×155(W) ×110(H) mm ³	264.6(L) ×155(W) ×110(H) mm ³
Weight	2.3 kg	2.6 kg
Input voltage	100-240 VAC	100-240 VAC
Feature	Standard	Adjustable power

Ordering Information

For more information, please contact Lasermate directly at sales@lasermate.com.

Part Number Configuration QSLQ[1]-[2][3][4][5]					
QSLQ = Laser Model Series	[1] = Wavelength	[2] = Pulse Energy	[3] = Power Supply	[4] = Power Stability	[5] = Repetition Rate
			Q=Q Version Elite Power Supply QL=Q Version Laboratory Power Supply	A= <5% E= <3%	S3= INT FIXED 3kHz S4= INT FIXED 4kHz S5= INT FIXED 5kHz C= EXT TRIG U= QCW

Note: The above specifications are subject to change without notice.

