



# Passively Q-Switched Laser System

## QSLF Series

Data Sheet



### Overview

The QSLF series is a family of UV and near IR diode pumped solid state (DPSS) q-switched lasers that deliver up to 300mW of average power. The QSLF series laser features a compact design, long lifetime, easy operation, and FDA-compliant system with driver. The UV QSLF series lasers are widely used in UV curing, microelectronics, CD carving, laser medical treatment, scientific experiment, and many other applications. The infrared QSLF series lasers are widely used in scientific experiment, laser fluorescence, and many other applications.

### Features

- Available wavelengths: 261nm, 266nm, 349nm, 351nm, 355nm, and 1030nm
- Q-switched operating mode
- Pulse energy up to 150uJ
- Ultra-compact design
- FDA compliant

### Applications

- UV curing
- Micro-electronics
- CD carving
- Laser medical treatment
- Scientific experiment
- Laser fluorescence

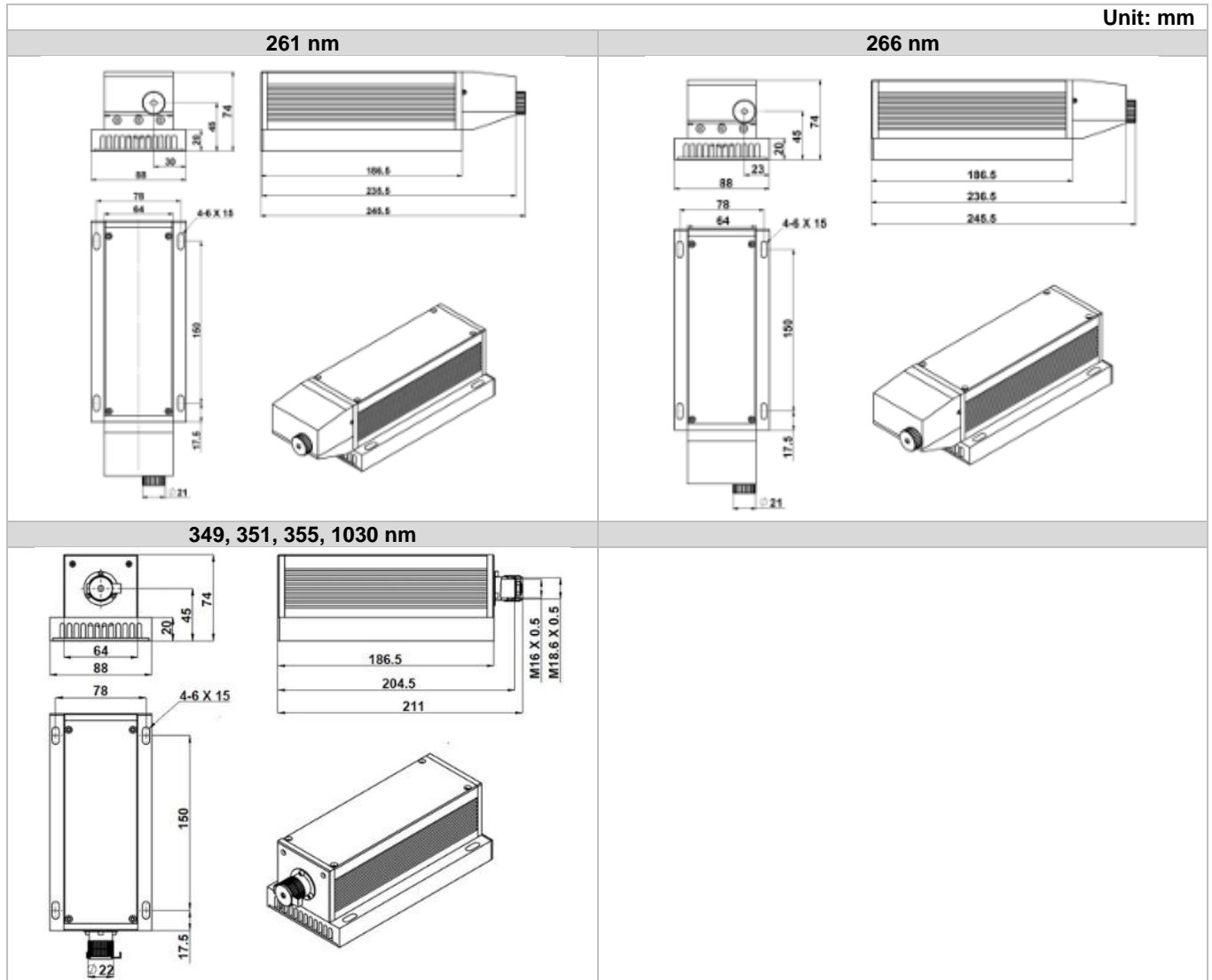
261-1030 nm Specifications

Parameter		QSLF261	QSLF266	QSLF349	QSLF351	QSLF355	QSLF1030
Wavelength		261±1 nm	266±1 nm	349±1 nm	351±1 nm	355±1 nm	1030±2 nm
Operating mode		Frequency conversion of Q-switched pulsed laser					Q-switched pulsed laser
Max average power		~3mW, ~5mW, ~10mW	~5mW, ~10mW	~5mW, ~10mW, ~20mW, ~30mW	~3mW, ~5mW, ~10mW	~10mW, ~30mW, ~50mW, ~100mW	~100mW, ~200mW, ~300mW
Single pulse energy		0.1-4uJ	0.1-3uJ	0.1-10uJ	0.1-4uJ	0.1-15uJ	0.1-150uJ
Pulse duration		~4 ns	~5 ns	~4 ns	~4 ns	~5 ns	~10 ns
Peak power		0.25-1kW	0.25-0.75kW	0.25-0.25kW	0.25-1kW	0.2-3kW	0.1-15kW
Average power stability (rms, over 4 hours)		<5%	<5%, <3%	<10%, <5%	<5%	<10%, <5%	<10%, <5%
Repetition rate	Internal Fixed	1kHz	1kHz, 2kHz, 3kHz, 4kHz	1kHz	1kHz	1kHz, 2kHz, 3kHz, 4kHz	-
	External Trigger	1kHz	1kHz-4kHz	1kHz	1kHz	1kHz-4kHz	-
	QCW	Between 2kHz-3kHz	Between 5kHz-7kHz	Between 2kHz-3kHz	Between 2kHz-3kHz	Between 5kHz-7kHz	Between 2kHz-5kHz
Transverse mode		Near TEM <sub>00</sub>					
Beam diameter at aperture		Elliptical (4:1), Beam spot ~1mm	Elliptical (4:1), Beam spot ~1mm	<1.5 mm		~1.2 mm	
Beam divergence, full angle		-	-	~1.2 mrad		<1.5 mrad	
M <sup>2</sup> factor		<2					
Polarization ratio		>50:1, Horizontal			>50:1, Horizontal	>100:1, Horizontal	>100:1, Horizontal
Warm-up time		<5 min					
Operating temperature		10-35°C					
Expected lifetime		/					10000 hours
Warranty period		10 months					

Remarks:

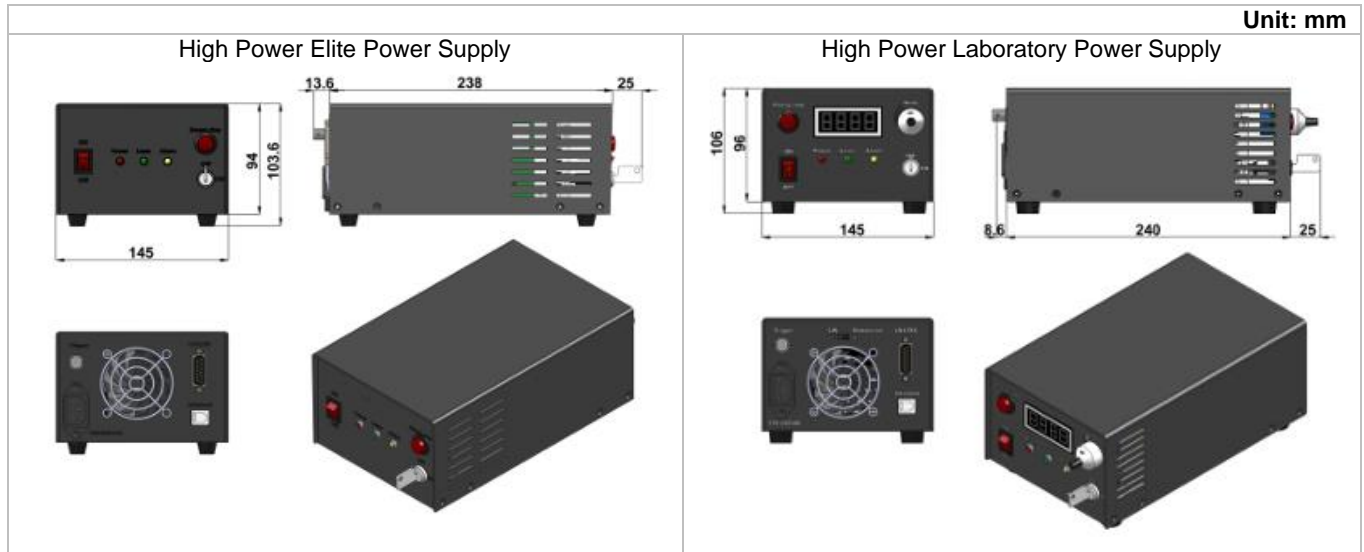
- For 261nm/266nm: Due to the Walk-off effect of nonlinear crystals, the beam quality of the UV laser is not as good as that of the 1064/532nm laser.
- Average power (mW) = Single pulse energy (μJ) \* Rep. rate (kHz)
- Peak Power (W) = Single Pulse Energy (μJ) / Pulse Duration (μs)
- Specifications of the Q-switched pulsed laser is 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.
- Specifications are subject to change without notice.

QSLF Series Laser Head Dimensions



Parameter	261 nm	266 nm	349, 351, 355, 1030 nm
Dimensions	245.5(L)×88(W) ×74(H) mm <sup>3</sup>	245.5(L)×88(W) ×74(H) mm <sup>3</sup>	211(L)×88(W) ×74(H) mm <sup>3</sup>
Weight	2.0 kg	2.0 kg	1.6 kg
Beam height from base plate	45 mm	45 mm	45 mm
Beam exit (from side)	30 mm	23 mm	44 mm

QSLF Series Power Supply Dimensions



Parameter	High Power Elite Power Supply	High Power Laboratory Power Supply
Dimensions	273.6(L) x145(W) x104(H) mm <sup>3</sup>	276.6(L) x145(W) x103.6(H) mm <sup>3</sup>
Weight	2.3 kg	2.3 kg
Input voltage	90-264VAC	90-264VAC
Feature	Standard	Adjustable power

**Ordering Information**

For more information, please contact Lasermate directly at [sales@lasermate.com](mailto:sales@lasermate.com).

Part Number Configuration QSLF[1][2][3][4][5]					
QSLF = Laser Model Series	[1] = Wavelength	[2] = Average Power	[3] = Power Supply	[4] = Power Stability	[5] = Repetition Rate
	261= 261nm 266= 266nm 349= 349nm 351= 351nm 1030= 1030nm	3= 3mW 5= 5mW 10= 10mW 20= 20mW 30= 30mW 50= 50mW 100= 100mW 200= 200mW 300= 300mW	H=High Power Elite Power Supply M=High Power Laboratory Power Supply	B= <10% A= <5%	S1= INT FIXED 1kHz S2 = INT FIXED 2kHz S3= INT FIXED 3kHz S4= INT FIXED 4kHz C= EXT TRIG U= QCW

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