QSLF Series
Passively Q-Switched DPSS Lasers

Data Sheet

Overview

The QSLF Series is a family of ultraviolet and near-infrared diode-pumped solid-state (DPSS) passively Q-switched lasers delivering average output powers up to 300mW. Available at 349nm, 351nm, 355nm, and 1030nm wavelengths, these compact laser systems provide pulse energies up to 150µJ, short pulse durations, and reliable pulsed performance for scientific and industrial applications. Featuring a compact design, long operating lifetime, and FDA-compliant laser driver, the QSLF Series is well suited for UV processing, fluorescence applications, laboratory research, and OEM integration.

Features

- Available wavelengths: 349nm, 351nm, 355nm, and 1030nm
- Passively Q-switched operation
- Average output power up to 300mW
- Pulse energy up to 150µJ
- High peak power
- Short pulse duration
- Ultra-compact integrated design
- Long operating lifetime
- Easy operation
- FDA-compliant laser system with driver

Applications

- UV curing
- Microelectronics processing
- CD engraving and marking
- Laser medical treatment
- Scientific research
- Laser fluorescence
- Laboratory instrumentation
- OEM photonics integration

349-1030 nm Specifications

Parameter		**QSLF349**	**QSLF351**	**QSLF355**	**QSLF1030**
Wavelength		349±1 nm	351±1 nm	355±1 nm	1030±2 nm
Operating mode		Passively			
Average power(1)		1-30 mW	1-10 mW	1-100 mW	1-300 mW
Single pulse energy(2)		0.1-10 uJ	0.1-4 uJ	0.1-15 uJ	0.1-150 uJ
Pulse duration		~4 ns	~4 ns	~5 ns	~6 ns
Peak power(3)		0.1-2.5 kW	0.1-1 kW	0.2-3 kW	0.1-15 kW
Average power stability (rms, over 4 hours ±3°C)		<5%, <3%, <2%			
Repetition rate	Internal Fixed(4)	1kHz	1kHz	1-4 kHz	-
	External Trigger	1kHz	1kHz	1-4 kHz	-
	QCW(5)	2-3 kHz	2-3 kHz	5-7 kHz	2-5 kHz
Transverse mode		TEM_{00}			
Beam diameter at aperture		~1.2 mm			
Beam divergence, full angle		<1.5 mrad			
M^2 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			

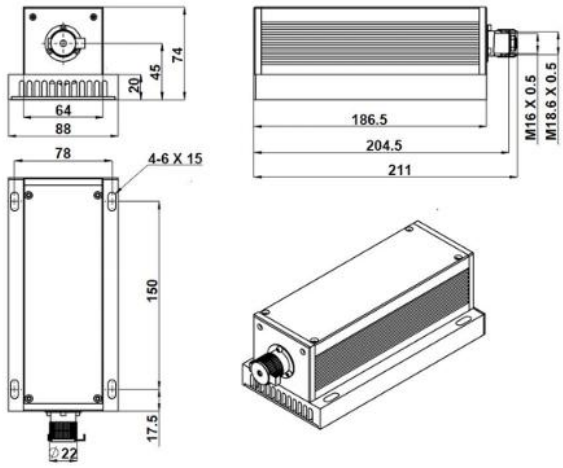
Remarks:

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 values within the range.
5. The repetition rate is a free running value within this range.
6. 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.
7. Specifications are subject to change without notice.

QSLF Series Laser Head Dimensions

Unit: mm

QSLF Series

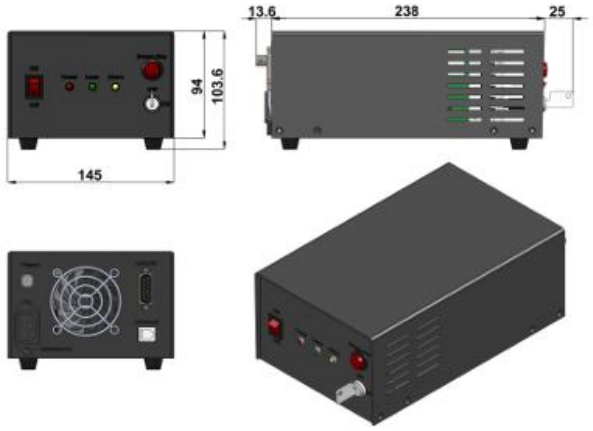


Parameter	QSLF Series
Dimensions	211(L)×88(W) ×74(H) mm^3
Weight	1.6 kg
Beam height from base plate	45 mm
Beam exit (from side)	44 mm

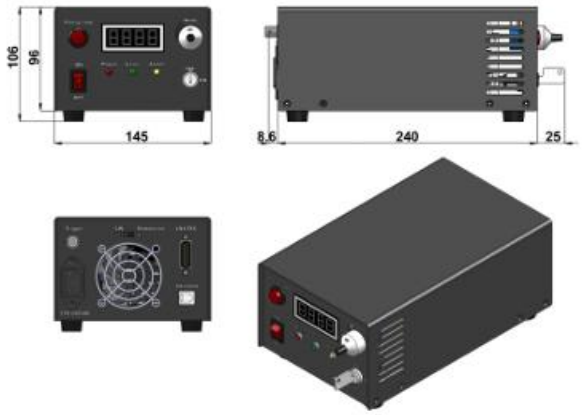
QSLF Series Power Supply Dimensions

Unit: mm

High Power Elite Power Supply



High Power Laboratory Power Supply



Parameter	High Power Elite Power Supply	High Power Laboratory Power Supply
Dimensions	273.6(L) ×145(W) ×104(H) mm^3	276.6(L) ×145(W) ×103.6(H) mm^3
Weight	2.3 kg	2.3 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 QSLF[1]-[2][3][4][5]					
QSLF = Laser Model Series	**[1] = Wavelength**	**[2] = Pulse Energy**	**[3] = Power Supply**	**[4] = Power Stability**	**[5] = Repetition Rate**
	261= 261nm 266= 266nm 349= 349nm 351= 351nm 1030= 1030nm		H=High Power Elite Power Supply M=High Power Laboratory Power Supply	A= <5% E= <3% 2= <2%	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.