



QSLFN Series

Passively Q-Switched DPSS Lasers

Data Sheet

Overview

The QSLFN Series is a family of ultraviolet diode-pumped solid-state (DPSS) passively Q-switched lasers delivering average output powers up to 15mW. Available at 236nm and 266nm wavelengths, these compact laser systems provide pulse energies up to 8μJ with ultra-short pulse durations as short as approximately 0.6ns for precision ultraviolet applications. Designed for long operating lifetime, reliable performance, and FDA-compliant operation, the QSLFN Series is well suited for scientific research, microelectronics, UV processing, and medical applications.

Features

- Available ultraviolet wavelengths: 236nm and 266nm
- Passively Q-switched operation
- Average output power up to 15mW
- Pulse energy up to 8μJ
- Ultra-short pulse duration (~0.6ns)
- High peak power
- Ultra-compact integrated design
- Long operating lifetime
- FDA-compliant laser system with driver

Applications

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

236-266 nm Specifications

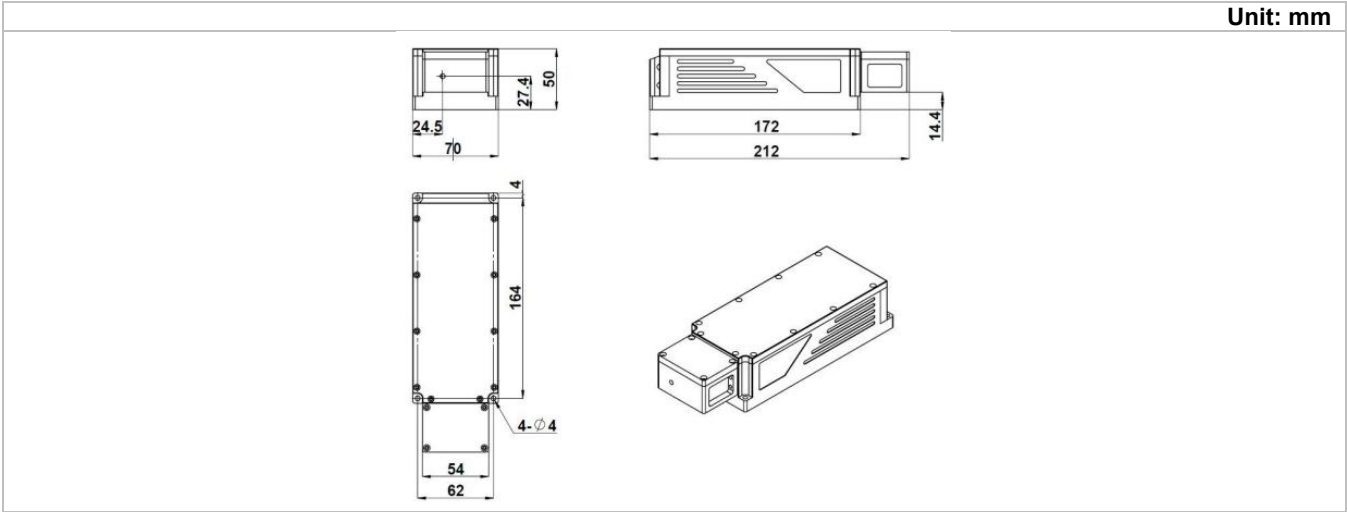
Parameter		QSLFN236	QSLFN266S	QSLFN266
Wavelength		236±1 nm	266±1 nm	266±1 nm
Operating mode		Passively Q-switched		
Average power ⁽¹⁾		1-3 mW	1-8 mW	1-15 mW
Single pulse energy ⁽²⁾		1-3 µJ	1-8 µJ	1-5 µJ
Power stability (rms, over 4 hours ±3°C)		<5%, <3%		
Pulse duration		~1.4 ns	~0.6 ns	~0.8 ns
Peak power ⁽³⁾		0.7-2.1 kW	1.7-13.3 kW	1.3-6.3 kW
Repetition rate	Internal Fixed ⁽⁴⁾	10 Hz-1 kHz	10 Hz-1 kHz	1-3 kHz
	External Trigger	10 Hz-1 kHz	10 Hz-1 kHz	1-3 kHz
Transverse mode		Near TEM ₀₀		
Beam diameter at aperture		~1.5 mm		
Beam divergence, full angle		~6.0 mrad		
M ² factor		<2.0		
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 or five discrete values 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.

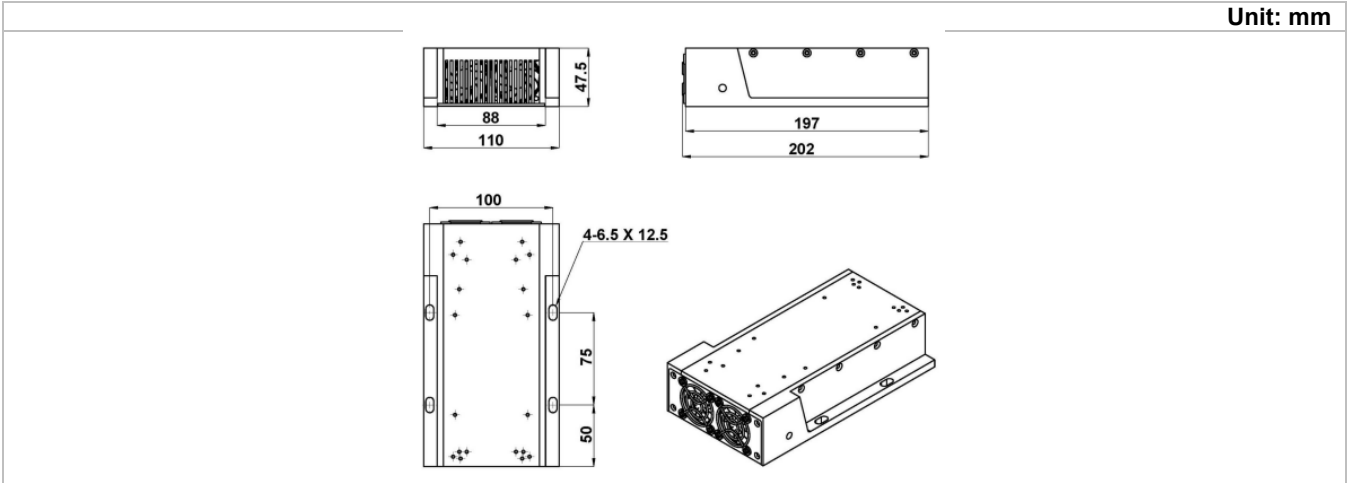


QSLFN Series Laser Head Dimensions



Parameter	QSLFN Series
Dimensions	212(L)×70(W) ×50(H) mm ³
Weight	1.6 kg
Beam height from base plate	27.4 mm
Beam exit (from side)	24.5 mm

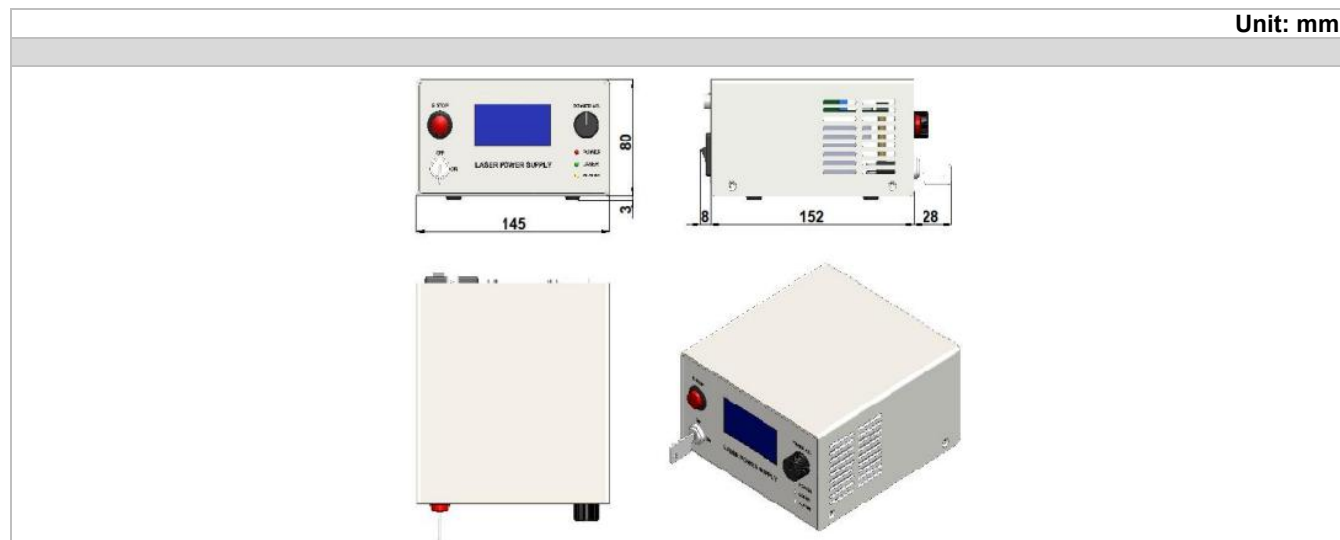
QSLFN Series Heat Sink Dimensions



Parameter	HS2
Dimensions	202(L)×110(W) ×47.5(H) mm ³
Weight	1.25 kg

QSLFN Series Power Supply Dimensions

Unit: mm



Parameter	High Power S Version Laboratory Power Supply
Dimensions	188(L) × 145(W) × 83(H) mm ³
Weight	1.2 kg
Input voltage	100-240 VAC

Ordering Information

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

Part Number Configuration QSLFN[1]-[2][3][4][5]					
QSLFN = Laser Model Series	[1] = Wavelength	[2] = Pulse Energy	[3] = Power Supply	[4] = Power Stability	[5] = Repetition Rate
			S= High Power S Version Laboratory Power Supply	A= <5% E= <3%	S1= INT FIXED 1kHz S2= INT FIXED 2kHz S3= INT FIXED 3kHz S4= INT FIXED 4kHz S5= INT FIXED 5kHz C= EXT TRIG

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

