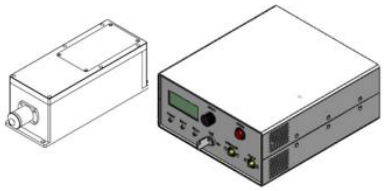
QEOS Series
Electro-Optic Q-Switched Nanosecond DPSS Pulsed Lasers

Data Sheet



Overview

The QEOS Series Electro-Optic Q-Switched DPSS Pulsed Lasers deliver stable nanosecond pulses with high peak power, excellent beam quality, and reliable pulse-to-pulse performance. Available at 532nm and 1064nm with adjustable repetition rates from 1Hz to 1kHz, the series provides a compact and dependable solution for scientific research, spectroscopy, laser ranging, and industrial applications requiring precise pulsed laser output.

Features

- Wavelengths: 532nm & 1064nm
- Electro-optic Q-switched operation
- Nanosecond pulse width
- Repetition rates from 1Hz to 1kHz
- High peak power and pulse energy
- Excellent beam quality
- Low timing jitter
- Stable pulse-to-pulse energy
- Compact, air-cooled design
- Long operational lifetime

Applications

- Laser ranging
- Raman spectroscopy
- LIBS (Laser-Induced Breakdown Spectroscopy)
- ICP-MS
- Material processing
- Scientific research
- Nonlinear optics
- Laboratory instrumentation

532-1064 nm Specifications

Parameter	QEOS532	QEOS1064
Wavelength	532±1 nm	1064±1 nm
Operating mode	Q-switched: EO (Electro-optic)	
Average power(1)	1-70 mW	1-300 mW
Single pulse energy(2)	1-70 uJ (70uJ @1kHz; 10uJ @100Hz)	1-300 uJ (300uJ @1kHz; 250uJ @100Hz)
Pulse duration(3)	~6 ns	~8 ns
Peak power	0.2-12 kW	0.1-37 kW
Repetition rate	1 Hz-1 kHz (Adjustable)	
Pulse jitter (sdev) @1kHz(4)	<1 ns	
Power stability (rms, 4 hours ±3°C)	<3%, <2%, <1%	
Beam divergence, full angle	<1.5 mrad	
Beam diameter	~1.0 mm	
M^2 factor	<1.5	
Warm-up time	<10 min	
Operating temperature	10-35°C	
Expected lifetime	>10000 hours	

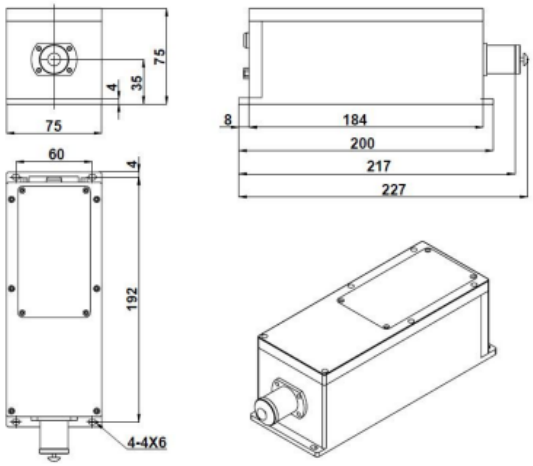
Remarks:

1. Average power (mW) = Single pulse energy (uJ) * Repetition rate (kHz).
2. Any pulse energy level can be selected within this range.
3. Pulse width is not tunable; the value varies with different frequency and energy.
4. Precision of digital oscilloscope: bandwidth 1GHz; sample rate: 10GS/s.
5. 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.
6. The above specifications are subject to change without notice.

QEOS Series Laser Head Dimensions

Unit: mm

QEOS Series



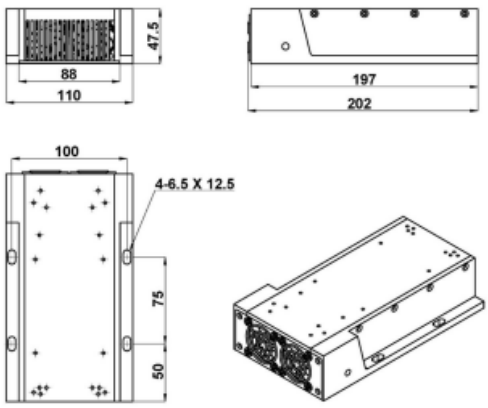
Parameter	QEOS Series
Dimensions	227(L) ×75(W) ×75(H) mm^3
Weight	2.05 kg
Beam height from base plate	35 mm
Beam exit (from side)	37.5 mm

Note: The laser head needs to be used on a heat sink with good heat dissipation.

QEOS Series Heat Sink Dimensions

Unit: mm

HS2

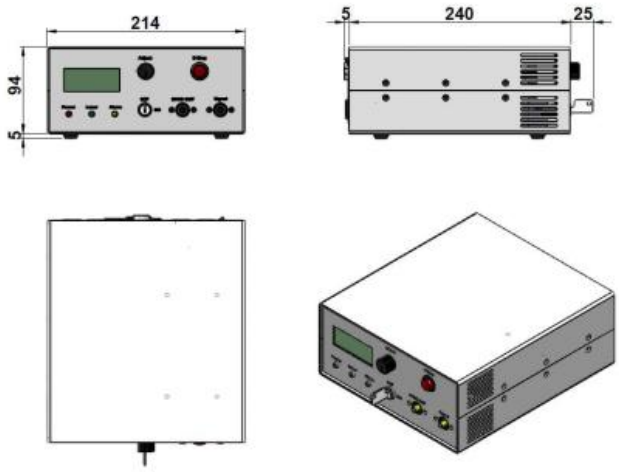


Parameter	HS2
Dimensions	202(L) ×110(W) ×47.5(H) mm^3
Weight	1.25 kg

QEOS Series Power Supply Dimensions

Unit: mm

EDL Power Supply



Parameter	EDL Power Supply
Dimensions	270(L) ×214(W) ×99(H) mm^3
Weight	3.02 kg
Input voltage	100-240 VAC

Ordering Information

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

Part Number Configuration QEOS[1]-[2]EDL[3]				
QEOS = Laser Model Series	**[1] = Wavelength**	**[2] = Single Pulse Energy**	**EDL = Power Supply**	**[3] = Power Stability**
				E= <3% 2= <2% D= <1%

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