



QEOR Series

High Frequency Electro-Optic Q-Switched DPSS Pulsed Lasers

Data Sheet



Overview

The QEOR Series High Frequency Electro-Optic Q-Switched DPSS Pulsed Lasers deliver high-speed nanosecond pulse output with repetition rates up to 100kHz, high peak power, excellent beam quality, and outstanding pulse-to-pulse stability. Available at 532nm and 1064nm, these compact, air-cooled laser systems provide low timing jitter, and reliable performance for high-throughput scientific, analytical, and precision industrial applications.

Features

- Available wavelengths: 532nm and 1064nm
- High repetition rates up to 100kHz
- Ultra-short nanosecond pulse width
- Electro-optic Q-switched operation
- High peak power
- Excellent beam quality
- Low timing jitter
- High pulse-to-pulse stability
- Compact air-cooled design
- Long operational lifetime

Applications

- High-speed laser ranging (LiDAR)
- LIBS
- Raman spectroscopy
- ICP-MS
- High-speed laser processing
- Time-resolved spectroscopy
- Nonlinear optics
- Scientific research
- Precision analytical instrumentation

532-1064 nm Specifications

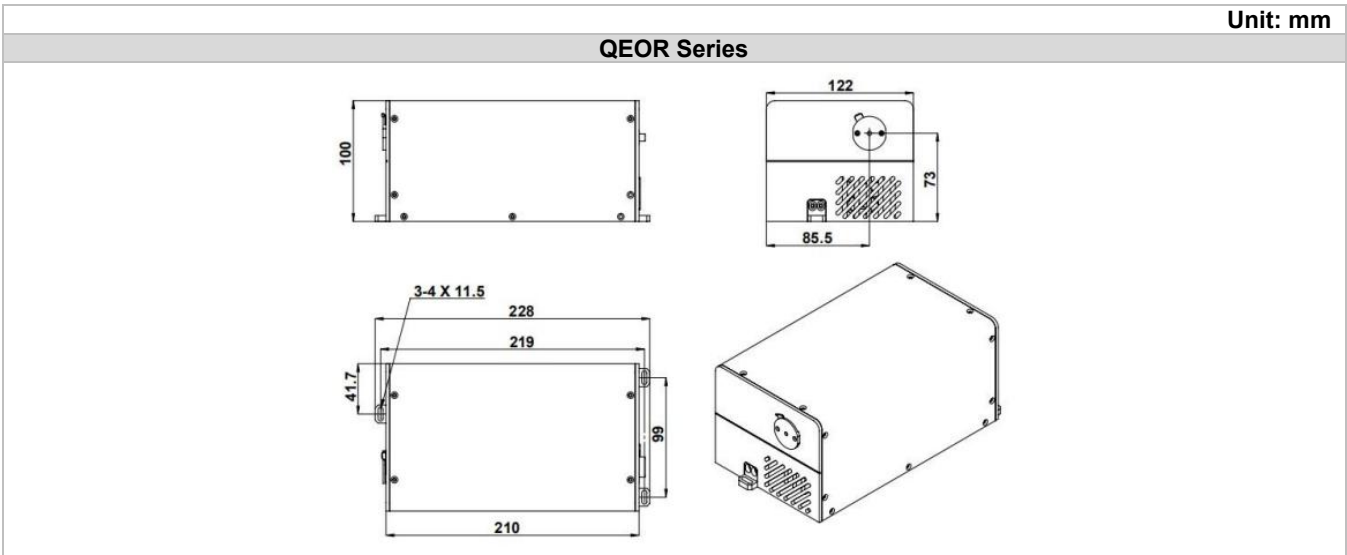
Parameter	QEOR532	QEOR532S	QEOR1064	QEOR1064P	QEOR1064S
Wavelength	532±1 nm	532±1 nm	1064±1 nm	1064±1 nm	1064±1 nm
Operating mode	Q-switched: EO (Electro-optic)				
Average power ⁽¹⁾	1-150 mW	1-450 mW	1-300 mW	1-1500 mW	1-1500 mW
Single pulse energy ⁽²⁾	1-150 uJ (150uJ@1 kHz)	1-50 uJ (50uJ@1kHz; 12uJ@20 kHz)	1-300 uJ (300uJ@1 kHz)	1-100 uJ (100uJ@1 kHz; 75uJ@20 kHz)	1-100 uJ (100uJ@1kHz; 60uJ@20 kHz; 25uJ@50 kHz; 10uJ@100 kHz)
Pulse duration ⁽³⁾	~1.5 ns	~1.3 ns (~1.3ns @1kHz; ~1.9ns@20kHz)	~1.8 ns	~1.6 ns (~1.6ns@1kHz; ~2.0@20kHz)	~1.3 ns (~1.3ns@1kHz; ~3ns@20kHz; ~5ns@50kHz; ~8ns@100kHz)
Peak power	0.6-100 kW	0.7-38 kW	0.5-160 kW	0.5-60 kW	0.1-76.9 kW
Repetition rate ⁽⁴⁾	1 Hz-1 kHz	1-20 kHz	1 Hz-1 kHz	1-20 kHz	1-100 kHz
Jitter (sdev) (optional)	<0.2 ns (Ext)				
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. Repetition frequency is adjustable within this range.
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.

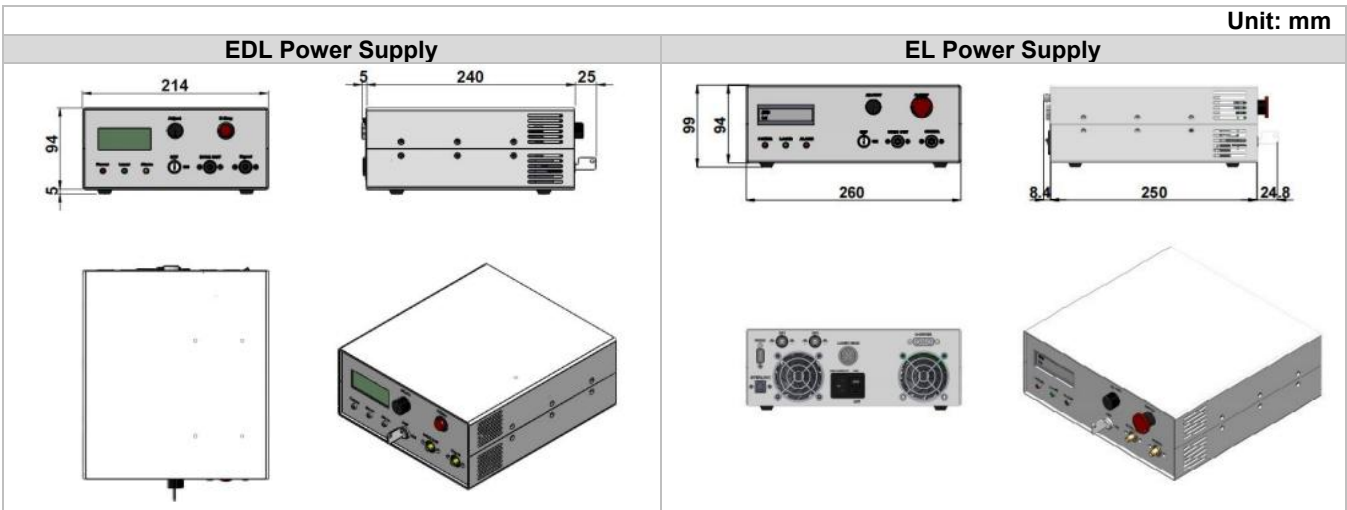


QEOR Series Laser Head Dimensions



Parameter	QEOR Series
Dimensions	228(L) × 122(W) × 100(H) mm ³
Weight	4.0 kg
Beam height from base plate	73 mm
Beam exit (from side)	85.5 mm

QEOR Series Power Supply Dimensions



Parameter	EDL Power Supply	EL Power Supply
Dimensions	270(L) × 214(W) × 99(H) mm ³	283.2(L) × 260(W) × 99(H) mm ³
Weight	3.02 kg	3.6 kg
Input voltage	100-240 VAC	100-240 VAC
Notes	For low-jitter lasers	Output energy adjustable 10-100%

Ordering Information

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

Part Number Configuration QEOR[1]-[2][3][4]				
QEOR = Laser Model Series	[1] = Wavelength	[2] = Single Pulse Energy	[3] = Power Supply	[4] = Power Stability
			EDL= EDL Power Supply EL= EL Power Supply	E= <3% 2= <2% D= <1%

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

