



High Energy DPSS Q-Switched Laser

QEOE Series

Data Sheet

Overview

The QEOE series is a family of high energy diode-pumped solid-state (DPSS) Q-switched EOM (Electro-Optic Modulation) lasers that can provide single pulse energies up to 8mJ. The laser is constructed with features of high single pulse energy, short pulse duration, and high peak power. The QEOE series laser is widely used in LIBS, LIF, PIV, ICP-MS, LCD repair, scientific research, laser processing, military, and many other applications.

Features

- Available wavelengths: 355nm, 532nm, and 1064nm
- Q-switched operating mode
- Pulse energy 1mJ to 8mJ
- Pulse duration <4ns
- Repetition rate 1-50Hz

Applications

- LIBS
- LIF
- PIV
- ICP-MS
- LCD repair
- Scientific research
- Laser processing

355-1064 nm Specifications

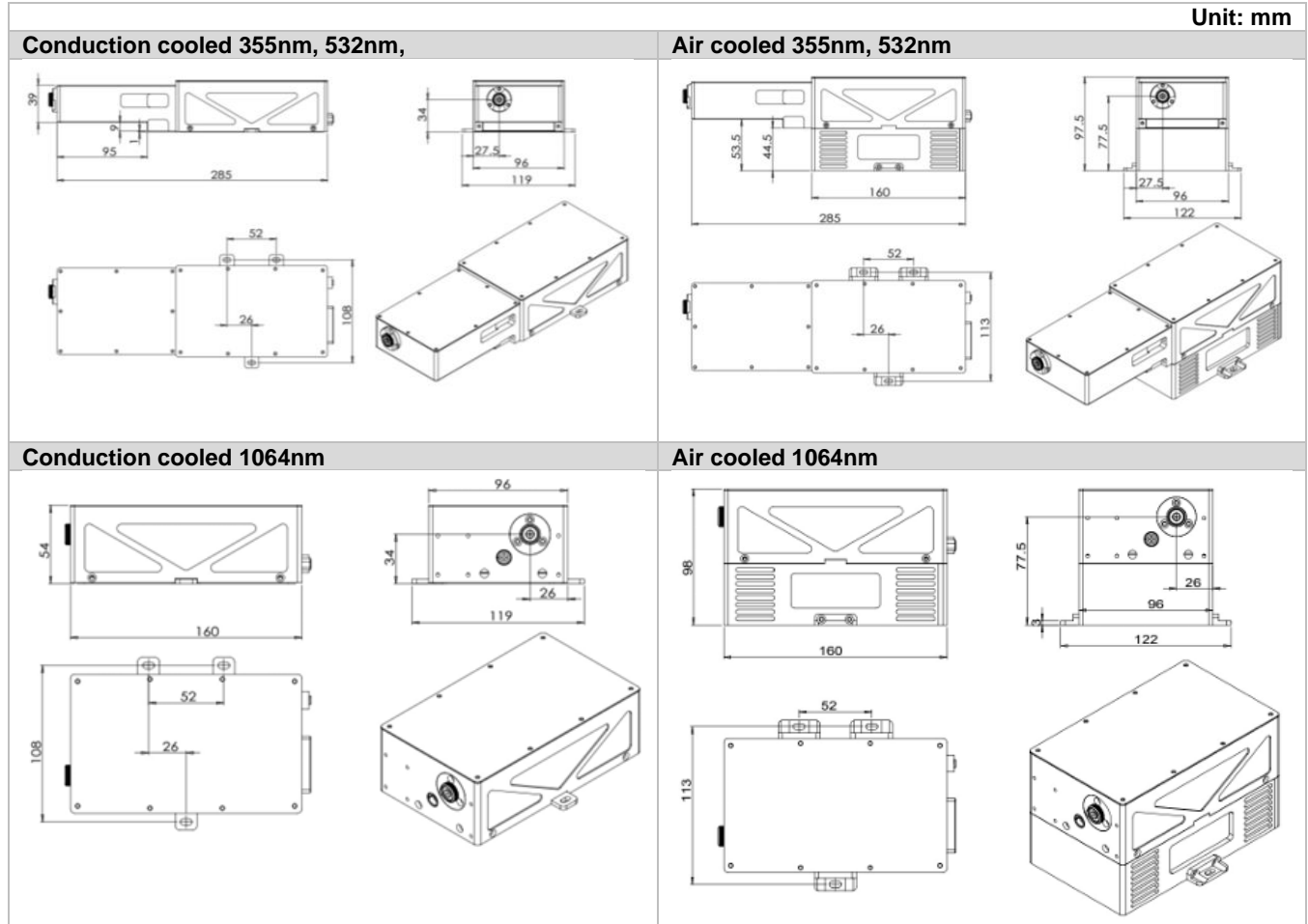
| Parameter | QEOE355 | | QEOE532 | | QEOE1064 | |
|-----------------------------|--|------------|--|------------|--|------------|
| Wavelength | 355±1 nm | | 532±1 nm | | 1064±1 nm | |
| Operating mode | Q-switched: EO (Electro-optic) | | Q-switched: EO (Electro-optic) | | Q-switched: EO (Electro-optic) | |
| Single pulse energy | ~1 mJ | ~2 mJ | ~1.5 mJ | ~4 mJ | ~3 mJ | ~8 mJ |
| Pulse duration | <4 ns | | <4 ns | | <4 ns | |
| Repetition rate | 1-50 Hz (Optional), EXT | | 1-50 Hz (Optional), EXT | | 1-50 Hz (Optional), EXT | |
| Energy stability | <5% | | <5%, <3% | | <5%, <3% | |
| Beam divergence, full angle | <3 mrad | | <3 mrad | | <3 mrad | |
| Beam diameter | ~1 mm | | ~1 mm | | ~1 mm | |
| Warm-up time | <15min | | <15min | | <15min | |
| Operating temperature | 15-30°C | | 15-30°C | | 15-30°C | |
| Cooling method | Conduction (Heat dissipation offered by customer.) | Air cooled | Conduction (Heat dissipation offered by customer.) | Air cooled | Conduction (Heat dissipation offered by customer.) | Air cooled |
| Expected lifetime | 10 ⁹ pulses | | 10 ⁹ pulses | | 10 ⁹ pulses | |
| Warranty period | 10 months | | 10 months | | 10 months | |

Remarks:

- 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.
- The above specifications are subject to change without notice.

QE0E Series Laser Head Dimensions

Unit: mm



| Parameter | Conduction cooled 355nm, 532nm, 285(L) x 119(W) x 54(H) mm ³ | Air cooled 355nm, 532nm 285(L) x 122(W) x 97.5(H) mm ³ | Conduction cooled 1064nm 160(L) x 119(W) x 54(H) mm ³ | Air cooled 1064nm 160(L) x 122(W) x 98(H) mm ³ |
|-----------------------------|---|---|--|---|
| Dimensions | 285(L) x 119(W) x 54(H) mm ³ | 285(L) x 122(W) x 97.5(H) mm ³ | 160(L) x 119(W) x 54(H) mm ³ | 160(L) x 122(W) x 98(H) mm ³ |
| Weight | 3.5 kg | 4 kg | 2.5 kg | 3 kg |
| Beam height from base plate | 34 mm | 77.5 mm | 34 mm | 77.5 mm |
| Beam exit (from side) | 27.5 mm | 27.5 mm | 26 mm | 26 mm |

QEOE Series Power Supply Dimensions



| Parameter | QEOE Power Supply |
|---------------|--|
| Dimensions | 271(L) × 140(W) × 112(H) mm ³ |
| Weight | 2.5 kg |
| Input voltage | 24V DC |
| Feature | Repetition rate and voltage can be adjusted by touch screen. |

Ordering Information

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

| Part Number Configuration QEOE[1][2][3][4] | | | | |
|---|--|--|-----------------------|-----------------------|
| QEOE = Laser Model Series | [1] = Wavelength | [2] = Single Pulse Energy | [3] = Power Supply | [4] = Power Stability |
| | 355= 355nm 532= 532nm 1064= 1064nm | 1= 1mJ 2= 2mJ 3= 3mJ 4= 4mJ 5= 5mJ 8= 8mJ | DE= QEOE Power Supply | A= <5% E= <3% |

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