



QDPE Series

High Energy DPSS Q-Switched Lasers

Data Sheet

Overview

The QDPE 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 QDPE 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	QDPE355	QDPE532	QDPE1064
Wavelength	355±1 nm	532±1 nm	1064±1 nm
Operating mode	Actively		
Single pulse energy	1-2 mJ	1-4 mJ	1-8 mJ
Pulse duration	<4 ns		
Jitter (ns, sdev)	<1 ns (Int)		
Repetition rate ⁽¹⁾	1-50 Hz		
Energy stability	<5%	<5%, <3%	<5%, <3%, <2%
Beam divergence, full angle	<3 mrad		
Beam diameter	~1 mm		
Warm-up time	<15 min		
Operating temperature	15-30°C		
Cooling method	Conduction or Air cooled		
Expected lifetime	10 ⁹ pulses		

Remarks:

- (1) One fixed value between 1-50Hz.
- (2) 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.
- (3) The above specifications are subject to change without notice.

QDPE Series Laser Head Dimensions

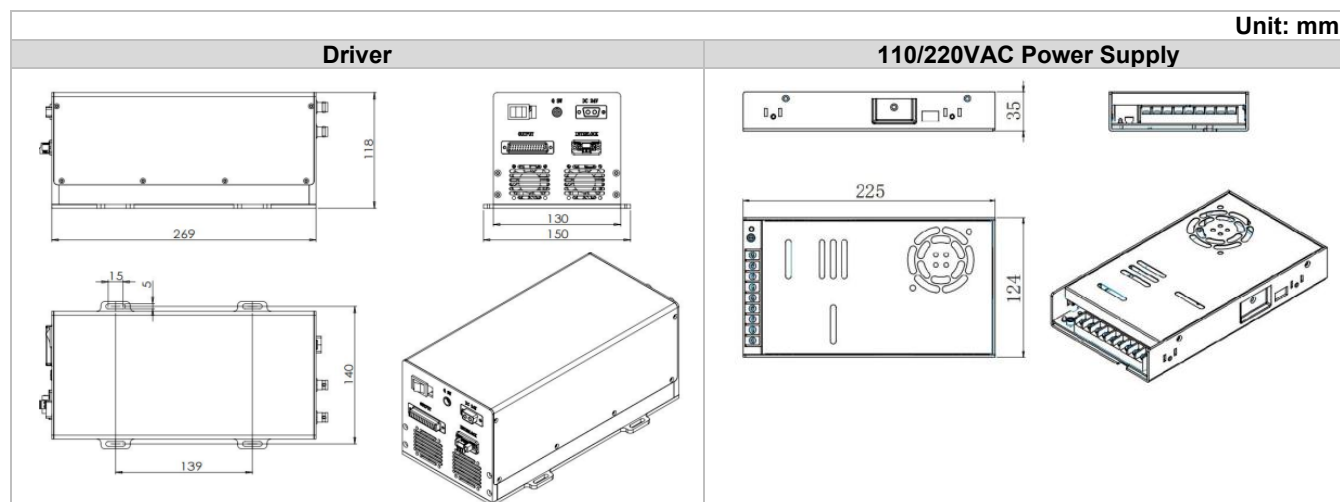
		Unit: mm	
QDPE355C		QDPE355A	
QDPE532C		QDPE532A	
QDPE1064C		QDPE1064A	

Parameter	QDPE355C	QDPE355A	QDPE532C	QDPE532A	QDPE1064C	QDPE1064A
Dimensions	285(L) × 119(W) × 54(H) mm ³	285(L) × 122(W) × 97.5(H) mm ³	230(L) × 119(W) × 54(H) mm ³	230(L) × 122(W) × 97.5(H) mm ³	160(L) × 119(W) × 54(H) mm ³	160(L) × 122(W) × 98(H) mm ³
Weight	3.5 kg	4 kg	3 kg	3.5 kg	2.5 kg	3.5 kg
Beam height from base plate	34 mm	77.5 mm	34 mm	77.5 mm	34 mm	77.5 mm
Beam exit (from side)	27.5 mm	27.5 mm	24.5 mm	71.5 mm	26 mm	26 mm
Feature	Conduction cooled ⁽¹⁾	Air cooled	Conduction cooled ⁽¹⁾	Air cooled	Conduction cooled ⁽¹⁾	Air cooled

Note:

(1) The laser head needs to be used on a heat sink with ~80W heat dissipation.

QDPE Series Power Supply Dimensions



Parameter	Driver	110/220VAC Power Supply
Dimensions	269(L) × 150(W) × 118(H) mm ³	225(L) × 134(W) × 35(H) mm ³
Weight	4 kg	0.85 kg
Input voltage	24V DC/18.8 A	110/220 VAC

Ordering Information

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

Part Number Configuration QDPE[1][2]-[3][4][5]					
QDPE = Laser Model Series	[1] = Wavelength	[2] = Cooled Method	[3] = Single Pulse Energy	[4] = Power Supply	[5] = Power Stability
	355= 355nm 532= 532nm 1064= 1064nm	A= Air cooled C= Conduction cooled	1= 1mJ 2= 2mJ 3= 3mJ 4= 4mJ 5= 5mJ 8= 8mJ	DE= Driver	A= <5% E= <3% 2= <2%

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