



# High Energy Lamp Pumped Solid State Q-Switched Laser LPQS Series

Data Sheet

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## Overview

The LPQS series is a line of high energy lamp-pumped solid-state Q-switched laser that delivers single pulse energy up to 300mJ. The laser series features high single pulse energy, short pulse duration, and high peak power. The LPQS 355/532/1064nm laser is widely used in LIBS, LIF, PIV, ICP-MS, LCD repair, scientific research, laser processing, military, and many other applications. The LPQS 2940nm series is widely used in ranging, medical treatment, scientific research, laser cosmetology, optical sensor, and many other applications.

## Features

- Available wavelengths: 355nm, 532nm, 1064nm and 2940nm
- Q-switched operating mode
- Pulse energy 20mJ to 300mJ
- Pulse duration <10ns, <8ns
- Repetition rate 1-10Hz

## Applications

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

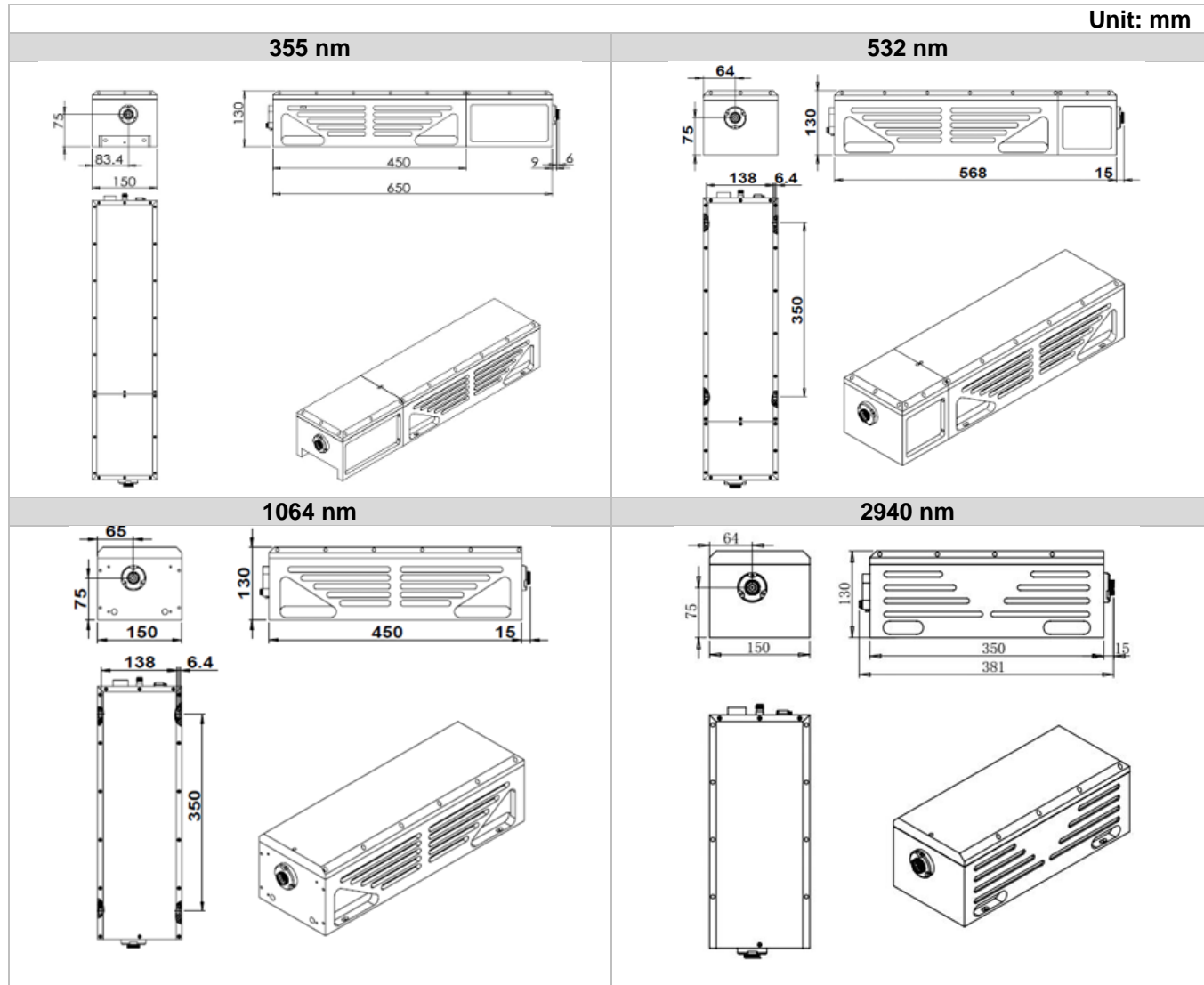
355-2940 nm Specifications

Parameter	LPQS355	LPQS532				LPQS1064				LPQS2940
Wavelength	355±1 nm	532±1 nm				1064±1 nm				2940±1 nm
Operating mode	Q-switched: EOM (Electro-optic modulation)									
Single pulse energy	~20 mJ, ~50 mJ, ~80 mJ	~30 mJ	~50 mJ	~100 mJ	~150 mJ	~50 mJ	~100 mJ	~200 mJ	~300 mJ	~100 mJ, ~200 mJ
Pulse duration	<10 ns	<10 ns	<10 ns	<8 ns	<8 ns	<10 ns	<10 ns	<8 ns	<8 ns	0.9ms
Repetition rate	1~10 Hz (adjustable)	1~10 Hz (adjustable)				1~10 Hz (adjustable)				2-5 Hz
Energy stability	<5%, <3%	<5%, <3%				<5%, <3%, <2%, <1%				<5%, <3%, <2%
Beam divergence, full angle	<3 mrad	~1 mrad	~1 mrad	~1 mrad	~3 mrad	~1 mrad	~1 mrad	~1 mrad	~3 mrad	
Beam diameter	~7 mm	<6 mm	<6 mm	6 mm	7 mm	<6 mm	<6 mm	6 mm	7 mm	5 mm
Warm-up time	<15 min	/				<15 min				<15 min
Cooled method	Water Cooled									
Operating temperature	15-35°C									
Expected lifetime	10 <sup>8</sup> pulses	10 <sup>7</sup> -10 <sup>8</sup> pulses				10 <sup>7</sup> -10 <sup>8</sup> pulses				10 <sup>7</sup> pulses
Warranty period	10 months									

Remarks:

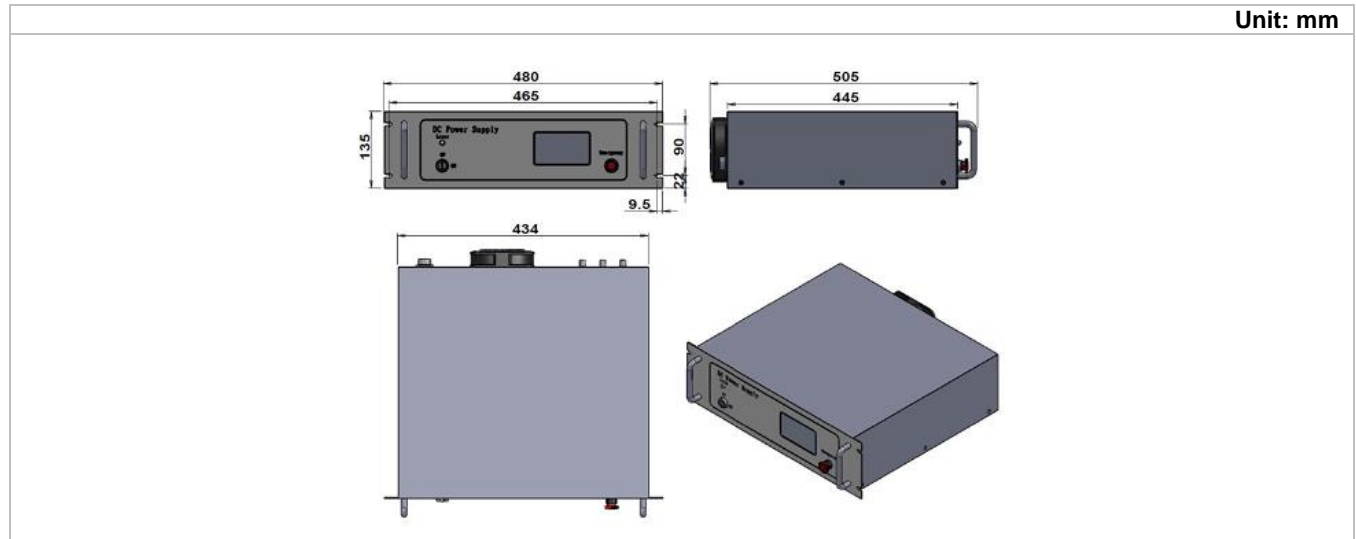
- Specifications of the Q-switched pulsed laser is based on the laser pulsed at the specified repetition rate. If the laser is run at a different repetition rate, the output characteristics may change.
- Specifications are subject to change without notice.

LPQS Series Laser Head Dimensions



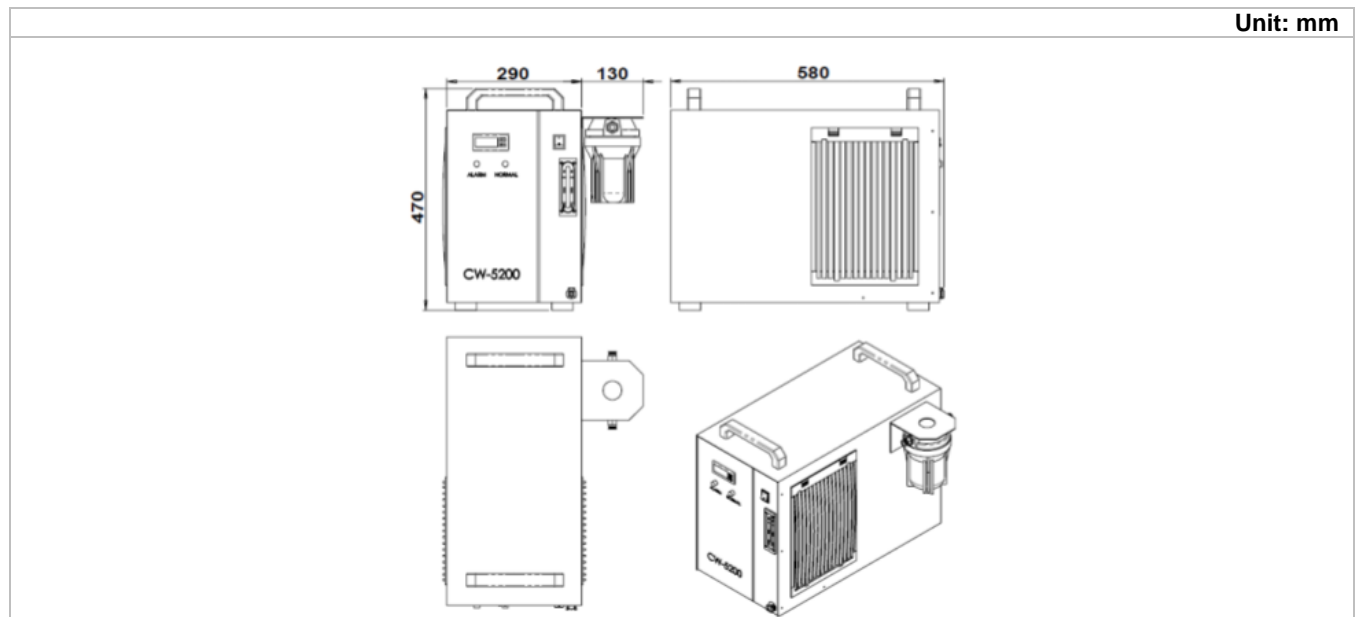
Parameter	355nm	532nm	1064nm	2940nm
Dimensions	650(L) x150(W) x130(H) mm3	568(L) x150(W) x130(H) mm3	450(L) x150(W) x130(H) mm3	381(L) x150(W) x130(H) mm3
Weight	15 kg	15 kg	14 kg	9.4 kg
Beam height from base plate	75 mm	75 mm	75 mm	75 mm
Beam exit (from side)	52 mm	52 mm		

LPQS Series Power Supply Dimensions



Parameter	LPQS Power Supply
Dimensions	480(L) × 465(W) × 135(H) mm <sup>3</sup>
Weight	15 kg
Input voltage	220/110VAC
Feature	Repetition rate and voltage can be adjusted by touch screen.

LPQS Series Chiller Dimensions



Parameter	Chiller
Dimensions	580(L) × 290(W) × 470(H) mm <sup>3</sup>
Weight	24 kg

**Ordering Information**

For more information, please contact Lasermate directly at [sales@lasermate.com](mailto:sales@lasermate.com).

Part Number Configuration LPQS[1][2]LS[3][4]					
LPQS = Laser Model Series	[1] = Wavelength	[2] = Single Pulse Energy	LS = Power Supply	[3] = Energy Stability	[4] = Water Chiller
	355= 355nm 532= 532nm 1064= 1064nm 2940= 2940nm	20= 20mJ 30= 30mJ 50= 50mJ 80= 80mJ 100= 100mJ 150= 150mJ 200= 200mJ 300= 300mJ		A= <5% E= <3% 2= <2% D= <1%	Blank = No C = Yes

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