



# Water Cooled DPSS Q-Switched Ti:Sapphire Tunable Laser TWQA Series

Data Sheet

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## Overview

The TWQA series is a water-cooled wavelength tunable all-solid-state Q-switched Ti: sapphire laser with tuning range from 770nm to 840nm and can deliver up to 2500 mW output power. The laser features high peak power, high repetition rate, and short pulse duration. The laser series is widely used in marking, carving, measurement, scientific research, military, and many other applications.

## Features

- 770-840nm tunable wavelength
- Q-switched operating mode
- Optical output power up to 2500mW
- Ultra-compact design

## Applications

- Measurement
- Marking
- Carving
- Military
- Scientific research

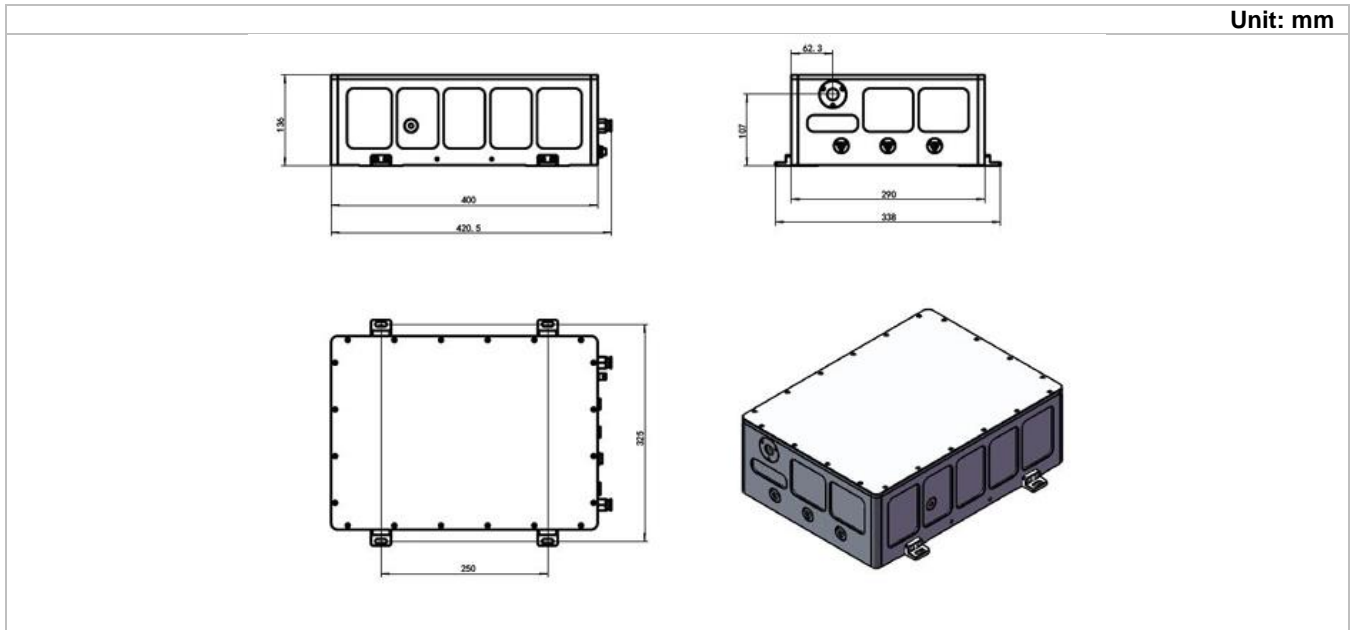
## 770-840 nm Specifications

Parameter	TWQA7784	
Tunable wavelength range	770-840 nm	
Operating mode	Acousto-Optic Q-switched	
Average power	1-1300@50kHz	1300-2500@50kHz&810nm
Pulse duration	<40ns @50kHz&1300mW	
Repetition rate	10-50 kHz	
Single pulse energy	26uJ@50kHz	50uJ@50kHz
Peak power	1.1kW@50kHz	
Power stability (rms, over 4 hours)	<5%	
Beam diameter at aperture (1/e <sup>2</sup> )	~2 mm	
Beam divergence, full angle	<3.5 mrad	
Warm-up time	<10 min	
Operating temperature	15-35°C	
Cooled method	Water cooled	
Power supply	DC 12V	
Expected lifetime	10,000 hours	
Warranty period	10 months	

## Remarks:

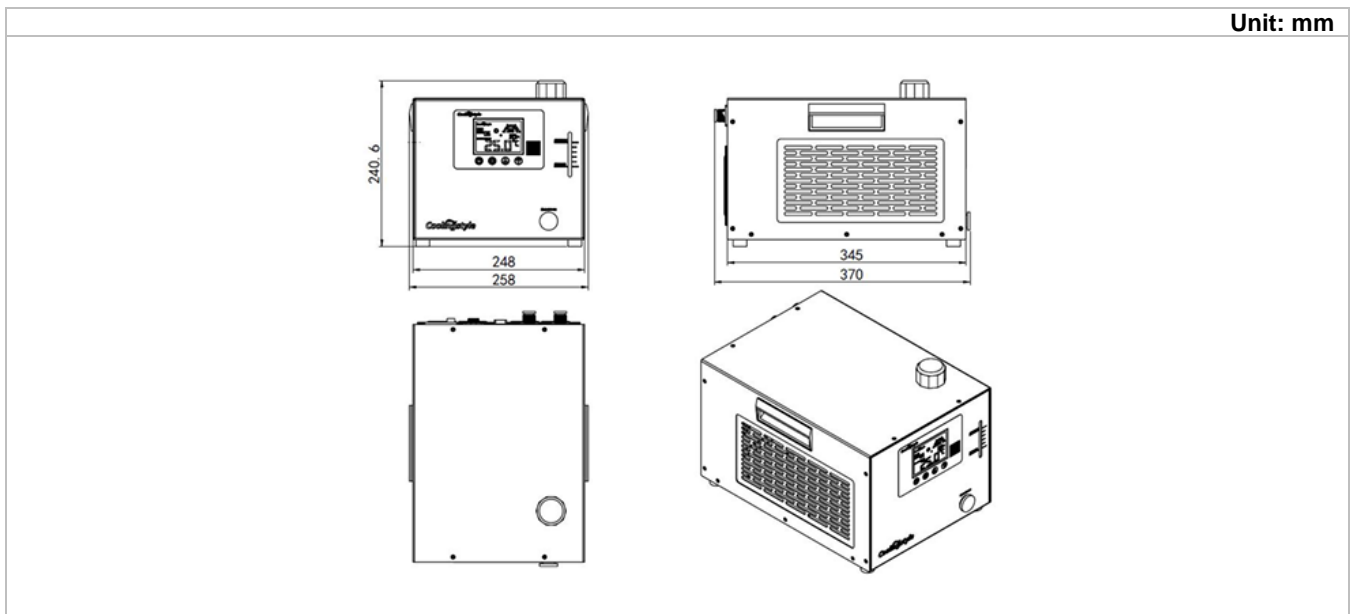
- Specifications of the Q-switched pulsed laser is based on the laser pulsed at the specified repetition rate. If the laser is run at a different repetition rate, the output characteristics may change.
- Specifications are subject to change without notice.

**TWQA Series Laser Head Dimensions**



Parameter	TWQA Series
Dimensions	420(L)x338(W)x136(H) mm <sup>3</sup>
Weight	21 kg
Beam height from base plate	107 mm

**Chiller Dimensions**



Parameter	580Chiller
Dimensions	370(L)x258(W)x240.6(H) mm <sup>3</sup>
Weight	8.3 kg

**Ordering Information**

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

<b>Part Number Configuration</b> TWQA[1][2][3]C				
<b>TWQA = Laser Model Series</b>	<b>[1] = Wavelength</b>	<b>[2] = Output Power</b>	<b>[3] = Power Stability</b>	<b>[C] = Water Chiller</b>
	7784= 770-840 nm	100= >100mW 200= >200mW 400= >400mW 1W= >1000mW 1T= >1300mW 1H= >1500mW 2W= >2000mW 2H= >2500mW	A=<5%	

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