



Actively Q-Switched Laser System

QAOV Series

Data Sheet



Overview

The QAOV series is a line of visible and near IR diode-pumped solid-state (DPSS) actively Q-switched AOM (Acousto-Optic Modulation) lasers that delivers up to 4000 mW of average power. The QAOV series laser features high peak power, high repetition rate and short pulse duration. The QAOV series laser is widely used in marking, carving, measurement, research, and many other applications.

Features

- Available wavelengths: 457nm, 473nm and 671nm
- Q-switched operating mode
- Single pulse energy up to 350uJ
- Short pulse duration
- High repetition rate

Applications

- Marking
- Carving
- Measurement
- Research

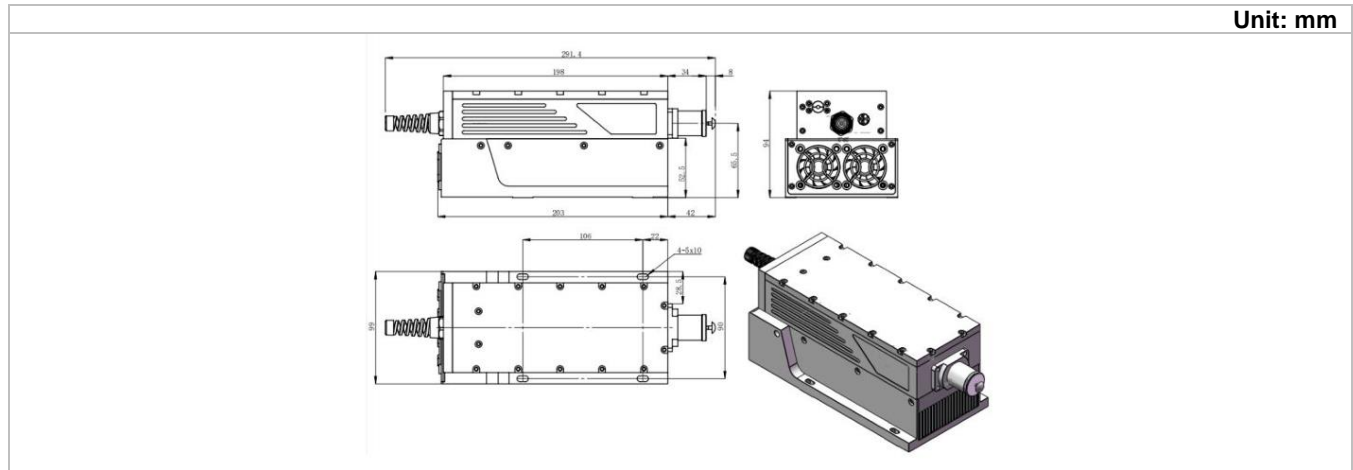
457-671 nm Specifications

Parameter	QAOV457	QAOV473	QAOV671
Wavelength	457±1 nm	473±1 nm	671±1 nm
Operating mode	Acousto-optic Q-switched		
Average power	1-500mW (500mW@20kHz)	1-500mW	1-4000mW (4000mW@20kHz; 3500mW@10kHz)
Single pulse energy	1-50uJ (50uJ@10kHz)	1-50uJ (50uJ@1kHz; 50uJ@10kHz)	1-350uJ (200uJ@20kHz; 350uJ@10kHz)
Ave power stability (over 4 hours)	<5%, <3%	<5%, <3%	<5%, <3%
Pulse duration (varies from power and repetition)	Typically ~300ns@10kHz	80ns@1kHz; 200ns@10kHz	Typically ~25ns@10kHz
Repetition rate	1-50kHz	1-10kHz	1-100 kHz
Peak power	0.01-0.1kW (0.1kW@10kHz)	0.5kW@1kHz; 0.25kW@10kHz	1-14kW (14kW@10kHz)
Beam diameter at aperture (1/e ²)	~1.0 mm	~2.0 mm	~1.0 mm
Beam divergence, full angle	<2.5 mrad	<2.5 mrad	<2.5 mrad
Warm-up time	<10 min		
Cooled method	Air cooled		
Beam height from base plate	65.5 mm		
Operating temperature	10-35°C		
Dimensions	291.4(L) x99(W) x94(H) mm ³		
Weight			
Expected lifetime	10,000 hours		
Warranty	10 months		

Remarks:

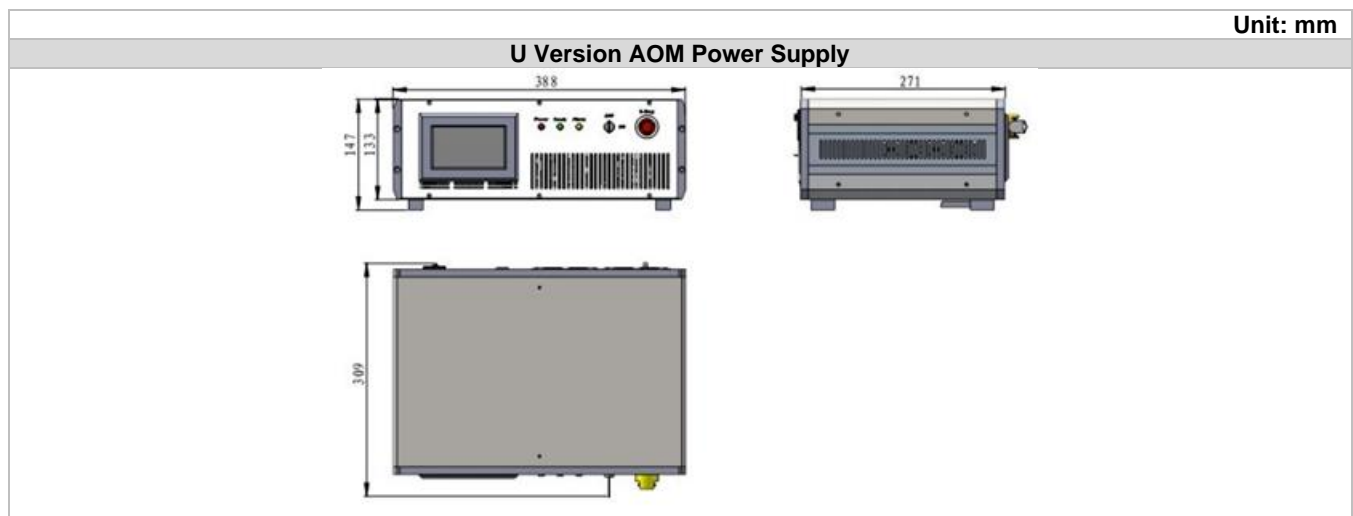
- Average power (mW) = Single pulse energy (µJ) * Rep. rate (kHz)
- Peak Power (W) = Single Pulse Energy (µJ) / Pulse Duration (µs)
- Specifications of the Q-switched pulsed laser is based on the laser pulsed at the specified repetition rate. If the laser is run at a different repetition rate, the output characteristics may change.

QAOV Series Laser Head Dimensions



Parameter	QAOV Series
Dimensions	291.4(L) x99(W) x94(H) mm ³
Weight	
Beam height from base plate	65.5 mm

QAOV Series Power Supply Dimensions



Parameter	U Version AOM Power Supply
Dimensions	388(L) x309(W) x147(H) mm ³
Weight	9.6 kg
Input voltage	220/110VAC

Ordering Information

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

Part Number Configuration QAOV[1][2][3][4]				
QAOV = Laser Model Series	[1] = Wavelength	[2] = Average Power or Single Pulse Energy	[3] = Power Supply	[4] = Power Stability
			AU= U Version AOM Power Supply	A= <5% E= <3%

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