



QAOV Series

High Energy AOM Q-Switched DPSS Pulsed Lasers

Data Sheet



Overview

The QAOV Series Actively Q-Switched Lasers are diode-pumped, all-solid-state pulsed lasers available at 473nm and 671nm. They provide high peak power, short pulse duration, and high repetition rates in an air-cooled design. The lasers are suitable for precision marking, measurement, research, and other pulsed laser applications

Features

- Wavelengths: 473nm and 671nm
- AOM Q-switched operation
- Short pulse duration
- High peak power
- High repetition rate
- Air-cooled design
- Stable output power
- Compact laser head
- Expected lifetime >10,000 hours
- 100–240VAC power supply

Applications

- Laser marking
- Laser engraving / carving
- Precision measurement
- Scientific research
- Optical experiments
- Industrial processing

473-671 nm Specifications

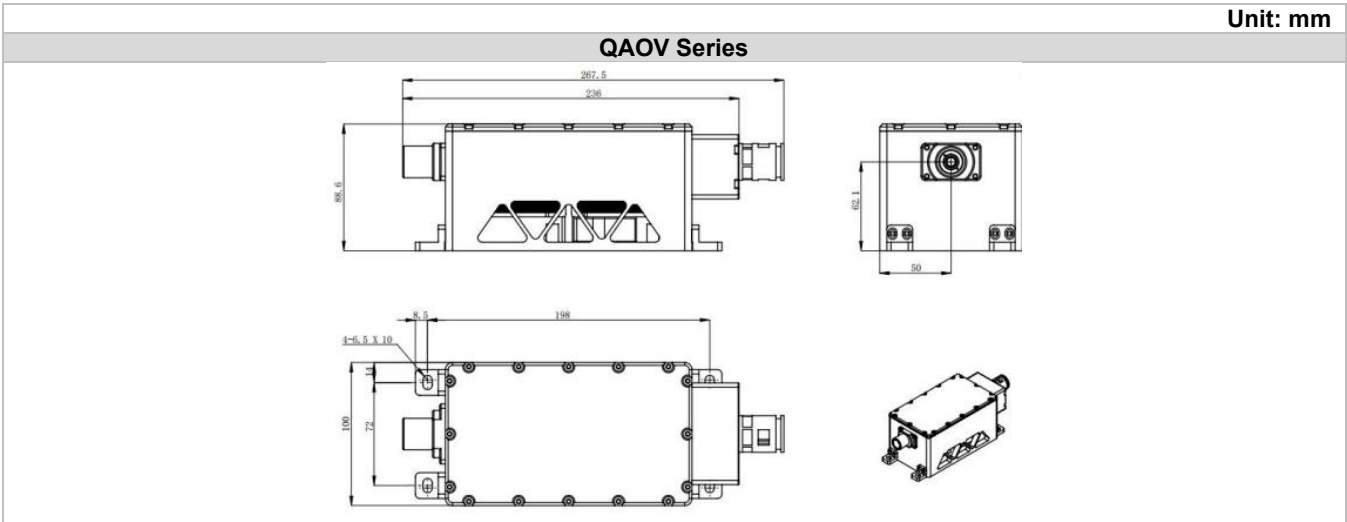
Parameter	QAOV473-R1	QAOV473-R10	QAOV671-R10	QAOV671-R20
Wavelength	473±1 nm	473±1 nm	671±1 nm	671±1 nm
Operating mode	Acousto-optic Q-switched			
Average power ⁽¹⁾	50 mW@1 kHz	500 mW@10 kHz	3.5 W@10 kHz	4 W@20 kHz
Single pulse energy	50 uJ@1 kHz	50 uJ@10 kHz	>350 uJ@10 kHz	>200 uJ@20 kHz
Power stability (rms, 4 hours ±3°C)	<5%, <3%, <2%		<3%, <2%, <1%	
Pulse duration ⁽²⁾	~80 ns@1 kHz	~200 ns@10 kHz	~20 ns@10 kHz	~25 ns@20 kHz
Repetition rate ⁽³⁾	1-100kHz			
Peak power ⁽⁴⁾	~0.5 kW@1 kHz	~0.25 kW@10 kHz	~15 kW@10 kHz	~10 kW@20 kHz
Beam diameter at aperture (1/e ²)	~2.0 mm		~1.0 mm	
Beam divergence, full angle	<2.5 mrad			
Warm-up time	<10 min			
Cooled method	Air cooled			
Operating temperature	10-35°C			
Expected lifetime	>10,000 hours			

Remarks:

1. Average power (mW) = Single pulse energy (μJ) * Rep. rate (kHz)
2. Pulse width is not tunable; the value varies with different frequency.
3. Other repetition rate range may be available upon request.
4. Peak Power (W) = Single Pulse Energy (μJ) / Pulse Duration (μs)
5. 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.

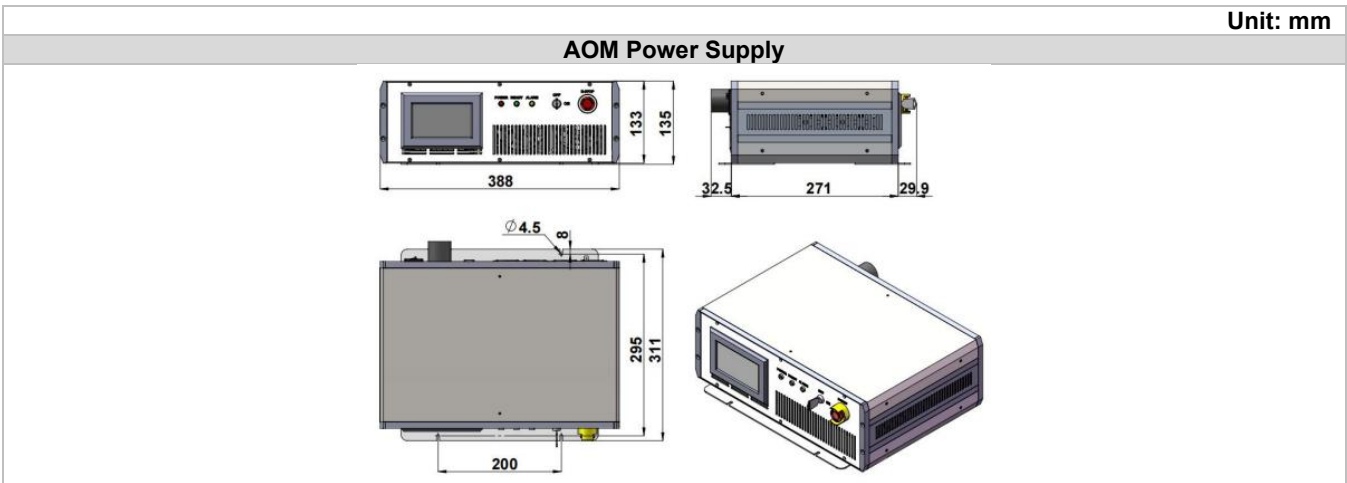


QAOV Series Laser Head Dimensions



Parameter	QAOV Series
Dimensions	267.5(L) x 100(W) x 88.6(H) mm ³
Weight	
Beam height from base plate	62.1 mm
Beam exit (from side)	50 mm

QAOV Series Power Supply Dimensions



Parameter	AOM Power Supply
Dimensions	388(L) x 311(W) x 135(H) mm ³
Weight	9.6 kg
Input voltage	100-240 VAC

Ordering Information

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

Part Number Configuration QAOV[1]-[2]AO[3][4]					
QAOV = Laser Model Series	[1] = Wavelength	[2] = Single Pulse Energy	AO = Power Supply	[3] = Power Stability	[4] = Repetition Rate
				A= <5% E= <3% 2= <2% D= <1%	R1= 1kHz R10= 10kHz R20= 20kHz

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

