



FLA Series

Acousto-Optic Q-Switched Fiber Lasers (532nm, 1064nm & 1550nm)

Data Sheet



Overview

The FLA Series Acousto-Optic Q-Switched Fiber Lasers provide high peak power and short-pulse laser output at 532nm, 1064nm, and 1550nm. Designed for pulsed laser applications, the series offers stable operation, excellent beam quality, and compact fiber laser architecture for industrial, scientific, and precision processing applications.

Features

- Available wavelengths: 532nm, 1064nm, and 1550nm
- Acousto-optic Q-switched operation
- Short pulse output
- High peak power
- Good beam quality
- Stable and reliable performance
- Compact fiber laser design
- High repetition rate
- Long operating lifetime
- Easy system integration

Applications

- Laser marking and engraving
- Precision material processing
- Laser micromachining
- Remote sensing
- Lidar
- Spectroscopy
- Scientific research
- Optical measurement
- Industrial applications

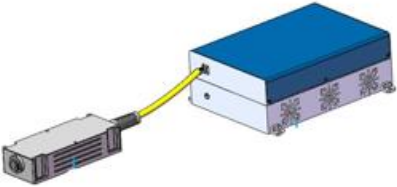
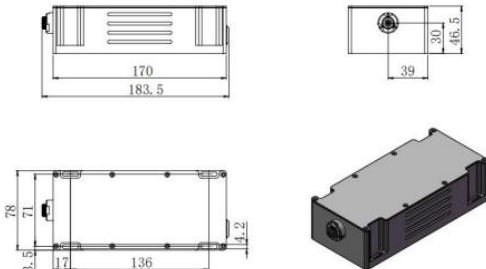
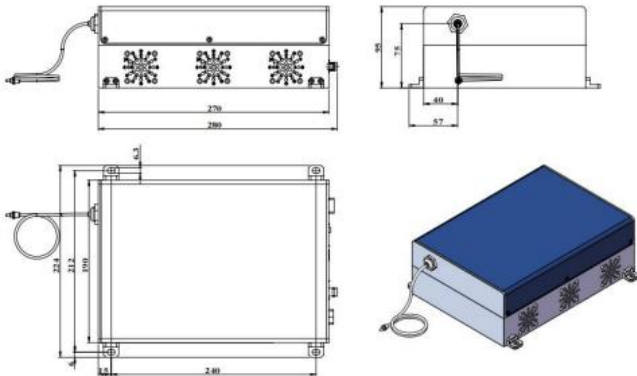
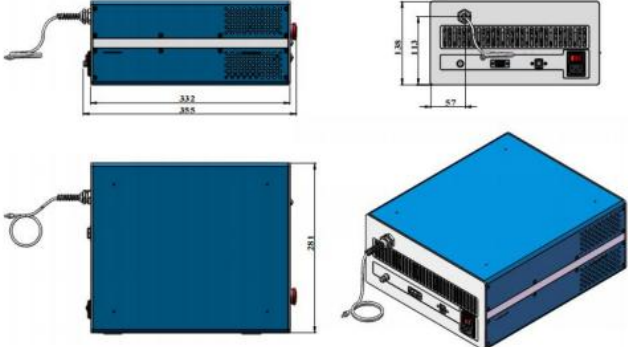
532-1550 nm Specifications

Parameter	FLA532	FLA1064		FLA1550	
Wavelength	532±1 nm	1064±1 nm		1550±1 nm	
Operating mode	Pulsed				
Single pulse energy ⁽¹⁾	10-100 nJ	>2 uJ	>20 uJ	>2 uJ	>20 uJ
Pulse width	One fixed value between 0.5-50ns Adjustable: 0.5-5ns, 5-50ns	One fixed value between 0.5-5ns Adjustable: 0.5-5ns	One fixed value between 5-50ns Adjustable: 5-50ns	One fixed value between 0.5-5ns Adjustable: 0.5-5ns	One fixed value between 5-50ns Adjustable: 5-50ns
Energy stability (rms, over 4 hours)	<3%, <2%				
Repetition frequency	1-1000 Hz (adjustable)	1-1000 Hz (adjustable)		1-200 Hz (adjustable)	
Transverse mode	TEM ₀₀	TEM ₀₀		TEM ₀₀	
M ² factor	<1.2	<1.1		<1.1	
Fiber connector	-	FC/APC, Collimator optional		FC/APC, Collimator optional	
Fiber length	-	1 m		1 m	
Fiber jacket	-	PVC, Metal optional		PVC, Metal optional	
Beam diameter	-	4±1 mm (Collimator output)		4±1 mm (Collimator output)	
Polarization state	>15 dB Horizontal	Random / >15dB		Random / >15dB	
Warm-up time	<15 min				
Cooled method	Air cooled				
Operating temperature	15-35°C				
Operating voltage	12V/11.5A	12V/11.5A or 110/220VAC		12V/11.5A or 110/220VAC	
Expected lifetime	>10,000 hours				

Remarks:

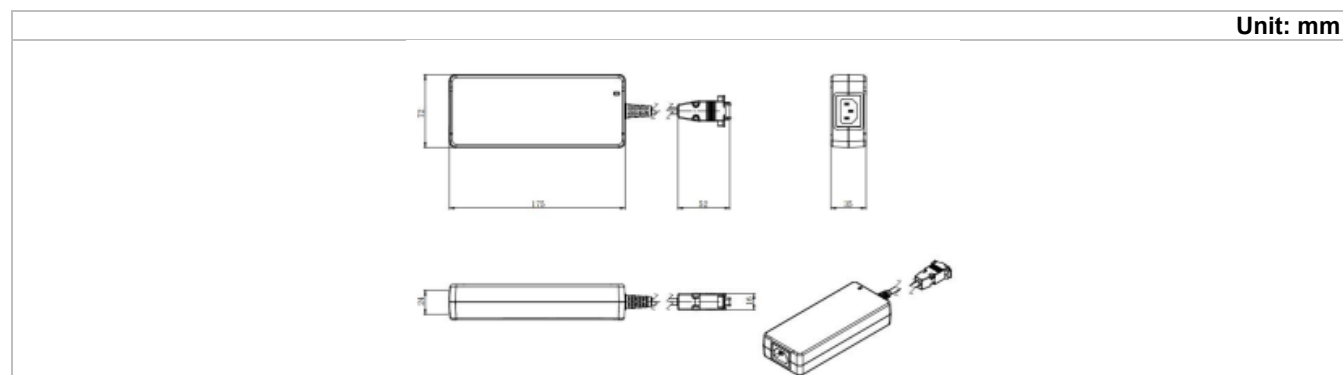
1. Any pulse energy to be selected within this range.
2. Specifications of the Q-switched pulsed laser are based on the laser pulsed at the specified repetition rate. If the laser is run at a different repetition rate, the output characteristics may change.
3. Specifications are subject to change without notice.

FLA Series Laser Head Dimensions

Unit: mm	
FLA532 Second Harmonic (left); FLA1064 Laser (right) 	Second Harmonic 
FLA1064/1550 	FLA1064/1550P 

Parameter	Second Harmonic	FLA1064/1550	FLA1064/1550P
Dimensions	183.5(L) x 78(W) x 46.5(H) mm ³	280(L) x 224(W) x 95(H) mm ³	355(L) x 281(W) x 138(H) mm ³
Weight	1 kg	3.5 kg	5.5 kg
Beam height from base plate	30 mm	75 mm	113 mm
Beam exit (from side)	39 mm	57 mm	57 mm
Operating voltage		12V/11.5A	110/220 VAC
Notes		Peak power ≤4kW	Peak power >4kW

FLA Series Power Supply Dimensions



Parameter	100-240VAC Power Supply
Dimensions	350(L) x 185(W) x 60(H) mm ³
Weight	0.7 kg
Input voltage	100-240 VAC

Ordering Information

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

Part Number Configuration FLA[1]-[2][3][4]				
FLA = Laser Model Series	[1] = Wavelength	[2] = Pulse Energy	[3] = Energy Stability	[4] = Pulse Width
	532= 532nm 1064= 1064nm 1550= 1550nm	1N= 100nJ 1= 1uJ 2= 2uJ 5= 5uJ 10= 10uJ 20= 20uJ	E= <3% 2= <2%	(value)= Fixed value A1= Adjustable 0.5~50ns A2= Adjustable 5~50ns

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