



# Picosecond Pulsed Fiber Laser FLK Series

Data Sheet



## Overview

The FLK series is a line of UV, visible, and near IR picosecond all fiber pulsed lasers with pulse width <900ps and can deliver up to 5000mW output power. The laser is available in nine different wavelengths and is constructed with features of high output power stability, good beam profile, ultra-compact design, long lifetime, cost effectiveness, and easy operation. It is commonly used in scientific research, laser processing, TCSPC, picosecond processing, laser drilling, glass engraving, laser radar, precision marking, precision drilling, life science, precision etching, microelectronics, and many other applications.

## Features

- UV-Visible-IR wavelengths
- Pulsed operating mode
- Optical output power 10mW to 5000mW
- Pulse width <900ps
- Ultra-compact design

## Applications

- Laser processing
- Scientific research
- TCSPC
- Picosecond processing
- Laser drilling
- Glass engraving
- Laser radar
- Precision marking
- Precision drilling
- Life science
- Precision etching
- Microelectronics

## 266-515 nm Specifications

Parameter	FLK266	FLK355	FLK515	
Wavelength	266±1 nm	355±1 nm	515±1 nm	
Operating mode	Pulsed	Pulsed	Pulsed	
Output power	~10 mW, ~20 mW, ~30 mW, ~40 mW, ~50 mW	~10 mW, ~30 mW, ~50 mW	~100 mW	~300 mW, ~500 mW, ~800 mW, ~1000 mW
Pulse width	One fixed value between 50~900ps	One fixed value between 100~900ps	One fixed value between 100~900ps	
Power stability (rms, over 4 hours)	<5%, <3%	<5%, <3%	<3%, <2%	
Repetition frequency	One fixed value between 0.1~20MHz	One fixed value between 0.1~20MHz	One fixed value between 0.1~20MHz	One fixed value between 0.1~1MHz
M <sup>2</sup> factor	<2	<2	<1.5	<2
Polarization ratio	>15dB	>15dB	>15dB	
Beam height from base plate	40 mm	40 mm	30 mm	
Delivery cable length	60 cm	60 cm	variable	
Warm-up time	<15 min	<15 min	<15 min	
Operating temperature	15~35°C	15~35°C	15~35°C	
Overall size and weight	Fourth Harmonic Dimensions: 350(L) x185(W) x60(H) mm <sup>3</sup> Weight: 2.5 kg	Third Harmonic Dimensions: 350(L) x185(W) x60(H) mm <sup>3</sup> Weight: 2.5 kg	Second Harmonic Dimensions: 164.5(L) x78(W) x46.5(H) mm <sup>3</sup> Weight: 1.1 kg	
	FLK1064 Laser Input voltage: 220V AC/12V DC Dimensions: 322(L) x282(W) x109.5(H) mm <sup>3</sup> Weight: 8.5 kg	FLK1064 Laser Input voltage: 220V AC/12V DC Dimensions: 322(L) x282(W) x109.5(H) mm <sup>3</sup> Weight: 8.5 kg	FLK1030 Laser Input voltage: 24V DC Dimensions: 286 (L) x224(W) x95(H) mm <sup>3</sup> Weight: 3 kg	
RS232 Interface Option	Available	Available	Available	
Expected lifetime	10,000 hours	10,000 hours	10,000 hours	
Warranty	10 months	10 months	10 months	

## Remarks:

- The fiber lasers are designated solely as OEM components for incorporation into the customer's end products. It is the customer's responsibility to comply with FDA requirements of FDA 21CFR, section 1040.10 and 1040.11 for complete laser products. For the code of FDA regulations, please refer to [FDA Performance Standards for Light-Emitting Products](#) for detailed information.
- Specifications are subject to change without notice.

## 532-1030 nm Specifications

Parameter	FLK532		FLK540		FLK1030	
Wavelength	532±1 nm		540±1 nm		1030±1 nm	
Operating mode	Pulsed		Pulsed		Pulsed	
Output power	~100 mW	~300 mW, ~500 mW, ~1000 mW	~100 mW	~300 mW, ~500 mW, ~800 mW, ~1000 mW	~100 mW	~1000 mW, ~2000 mW, ~3000 mW, ~5000 mW
Pulse width	One fixed value between 100~900ps		One fixed value between 100~900ps		One fixed value between 100~900ps	
Power stability (rms, over 4 hours)	<3%, <2%		<3%, <2%		<3%, <2%	
Repetition frequency	One fixed value between 0.1~20MHz	One fixed value between 0.1~1MHz	One fixed value between 0.1~20MHz	One fixed value between 0.1~1MHz	One fixed value between 0.1~20MHz	
M <sup>2</sup> factor	<1.5	<2	<1.5	<2	<1.2	<1.8
Polarization ratio	>15dB		>15dB		Random/>15dB	
Beam height from base plate	30 mm		30 mm			
Delivery cable length	variable		variable		variable	
Warm-up time	<15 min		<15 min		<15 min	
Operating temperature	15~35°C		15~35°C		15~35°C	
Overall size and weight	Second Harmonic Dimensions: 164.5(L) x78(W) x46.5(H) mm <sup>3</sup> Weight: 1.1 kg		Second Harmonic Dimensions: 164.5(L) x78(W) x46.5(H) mm <sup>3</sup> Weight: 1.1 kg		Dimensions: 286 (L) x190(W) x95(H) mm <sup>3</sup> Weight: 2.5 kg Input voltage: 12V DC	
	FLK1064 Series Laser Input voltage: 12V DC Dimensions: 286 (L) x224(W) x95(H) mm <sup>3</sup> Weight: 3 kg		FLK1080 Series Laser Input voltage: 12V DC Dimensions: 286 (L) x224(W) x95(H) mm <sup>3</sup> Weight: 3 kg			
RS232 Interface Option	Available		Available		Available	
Expected lifetime	10,000 hours		10,000 hours		10,000 hours	
Warranty	10 months		10 months		10 months	

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## 1064-1550 nm Specifications


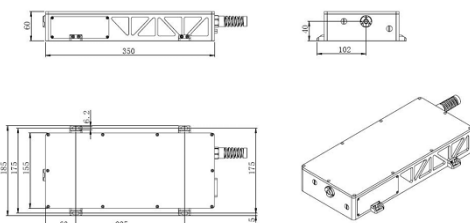
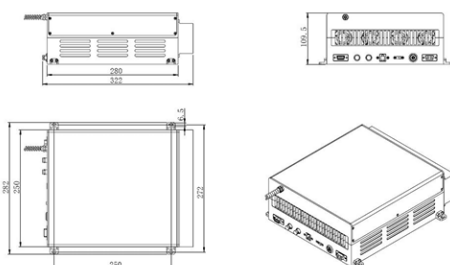

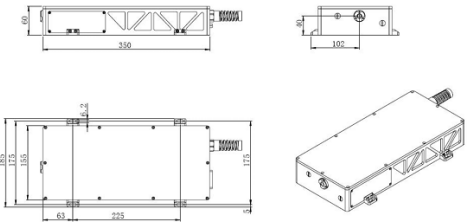
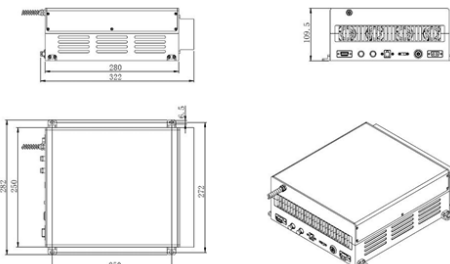
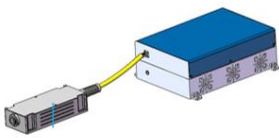
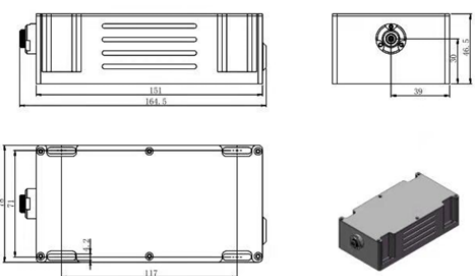
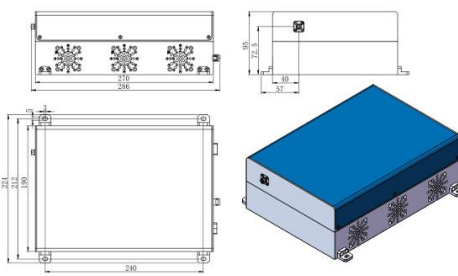
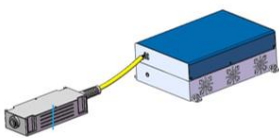
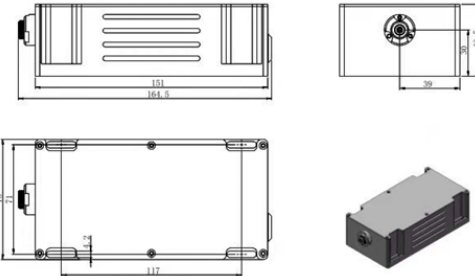
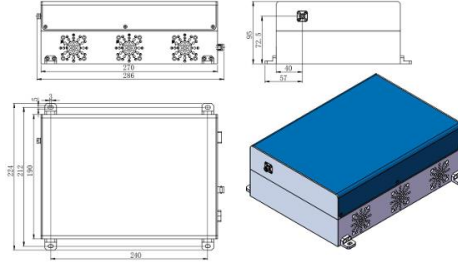
Parameter	FLK1064		FLK1080		FLK1550
Wavelength	1064±1 nm		1080±1 nm		1550±1 nm
Operating mode	Pulsed		Pulsed		Pulsed
Output power	~100 mW	~500 mW, ~1000 mW, ~3000 mW, ~5000 mW	~100 mW	~200 mW, ~300 mW, ~500 mW, ~1000 mW, ~2000 mW, ~3000 mW, ~5000 mW	~100 mW, ~500 mW, ~1000 mW
Pulse width	One fixed value between 100~900ps		One fixed value between 100~900ps		One fixed value between 100~900ps
Power stability (rms, over 4 hours)	<3%, <2%		<2%		<3%, <2%
Repetition frequency	One fixed value between 0.1~20MHz		One fixed value between 0.1~20MHz		One fixed value between 0.1~20MHz
M <sup>2</sup> factor	<1.2	<1.8	<1.2	<1.8	<1.2
Polarization ratio	Random/>15dB		Random/>15dB		Random/>15dB
Delivery cable length	variable		variable		variable
Warm-up time	<15 min		<15 min		<15 min
Operating temperature	15~35°C		15~35°C		15~35°C
Input voltage	24V DC		24V DC		12V DC
Overall size and weight	Dimensions: 344 (L) x200(W) x100(H) mm <sup>3</sup> Weight: 6.5 kg		Dimensions: 344 (L) x200(W) x100(H) mm <sup>3</sup> Weight: 6.5 kg		Dimensions: 286 (L) x224(W) x95(H) mm <sup>3</sup> Weight: 3 kg
RS232 Interface Option	Available		Available		Available
Expected lifetime	10,000 hours		10,000 hours		10,000 hours
Warranty	10 months		10 months		10 months

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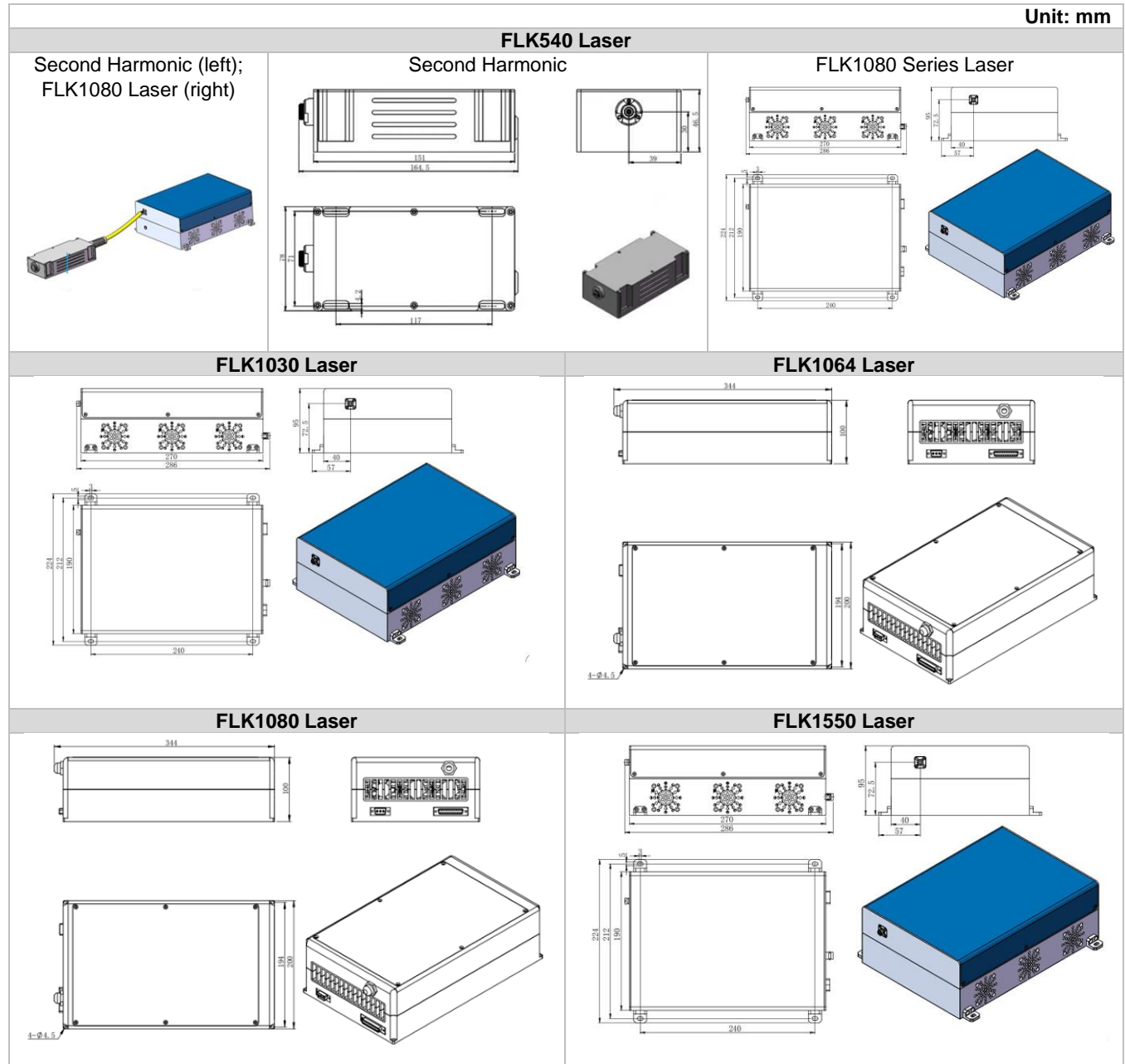
FLK Series Laser Dimensions

Unit: mm

FLK266 Laser		
<p>Forth Harmonic (left); FLK1064 Laser (right)</p> 	<p>Forth Harmonic</p> 	<p>FLK1064 Laser</p> 
FLK355 Laser		
<p>Third Harmonic (left); FLK1064 Laser (right)</p> 	<p>Third Harmonic</p> 	<p>FLK1064 Laser</p> 
FLK515 Laser		
<p>Second Harmonic (left); FLK1030 Laser (right)</p> 	<p>Second Harmonic</p> 	<p>FLK1030 Laser</p> 
FLK532 Laser		
<p>Second Harmonic (left); FLK1064 Laser (right)</p> 	<p>Second Harmonic</p> 	<p>FLK1064 Laser</p> 

FLK Series Laser Dimensions (Continued)

Unit: mm



**Ordering Information**

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

Part Number Configuration FLK[1][2][3][4][5][6]						
FLK = Laser Model Series	[1] = Wavelength	[2] = Output Power	[3] = Power Stability	[4] = Pulse Width	[5] = Repetition Frequency	[6] = RS232 Interface
	266= 266nm 355= 355nm 515= 515nm 532= 532nm 540= 540nm 1030= 1030nm 1064= 1064nm 1080= 1080nm 1550= 1550nm	10= 10mW 20= 20mW 30= 30mW ... 1W= 1000mW 2W= 2000mW 3W= 3000mW 5W= 5000mW	A= <5% E= <3% 2= <2%	(value)=Specify value	(value)=Specify value	Blank=No R=Yes

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