



FSPH Series Femtosecond Pulsed Fiber Lasers, 100-5000 mW

Data Sheet



Overview

The FSPH Series femtosecond pulsed fiber lasers deliver ultrashort pulse durations below 150 fs, repetition rates up to 80 MHz, and output power levels up to 5000 mW. Available in multiple wavelengths including 515 nm, 532 nm, 1030 nm, and 1064 nm, these ultrafast laser systems are ideal for scientific research, biomedical imaging, nonlinear optics, spectroscopy, semiconductor processing, and precision micromachining applications.

Key Features

- Ultrashort pulse duration <150 fs
- Repetition rates up to 80 MHz
- Available wavelengths from 515 nm to 1064 nm
- Output power from 100 mW to 5000 mW
- High beam quality with TEM₀₀ mode output
- Excellent power stability and long-term reliability
- Laser head with separate power supply included

Applications

- Two-photon microscopy and bioimaging
- Nonlinear optics research
- Spectral analysis
- Terahertz generation and imaging
- Glass/silicon/thin-film processing
- Precision manufacturing
- Nonlinear optics research

515-1064 nm Specifications

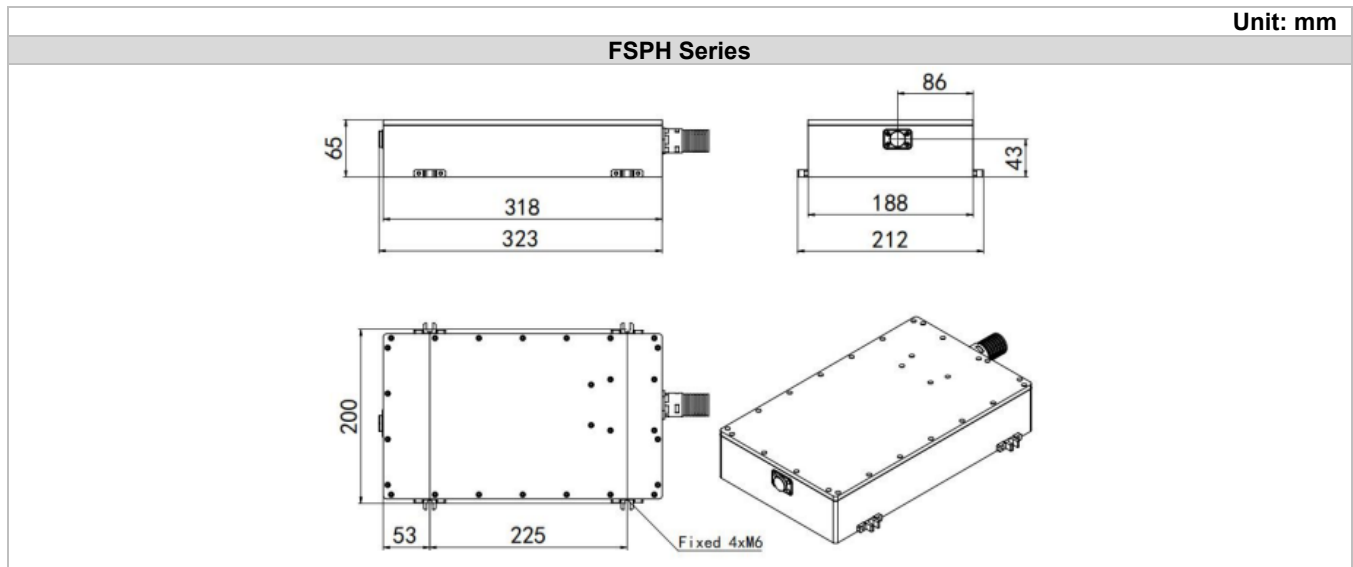
Parameter	FSPH515	FSPH532	FSPH1030	FSPH1064
Wavelength	515±5 nm	532±2 nm	1030±10 nm	1064±5 nm
Operating mode	Pulsed			
Average power ⁽¹⁾	100-1000 mW	100-2000 mW	500-3000 mW ⁽²⁾	500-5000 mW
Single pulse energy	1.25-12.5 nJ	1.25-25 nJ	6.25-30 nJ	6.25-62.5nJ
Repetition rate	80±1 MHz	80±1 MHz	80±2 MHz	80±1 MHz
Pulse duration	<150 fs	<150 fs	<150 fs	<150 fs
Peak power	7.5-83 kW	160 kW	-	-
Group delay dispersion	-	-	-60000-0 fs ²	-60000-0 fs ²
Ave power stability (rms, 4 hours ±3°C)	<2%, <1%			
Transverse mode	TEM ₀₀			
Beam quality (M ²)	<1.2			
Beam divergence, full angle	<1.0 mrad			
Beam diameter at aperture	<2 mm	~1.0 mm	<2.0 mm	~1.0 mm
Cooled method	Air cooled			
Warm-up time	<10 mins			
Operating temperature	10-35°C	10-35°C	15-35°C	10-35°C
Expected lifetime	>10,000 hours			

Remarks:

1. Select one fixed value between the output power range.
2. Integrated AOM for fine power control and fast power modulation; the power loss is 15%.
3. Specifications of the 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.
4. Specifications are subject to change without notice.

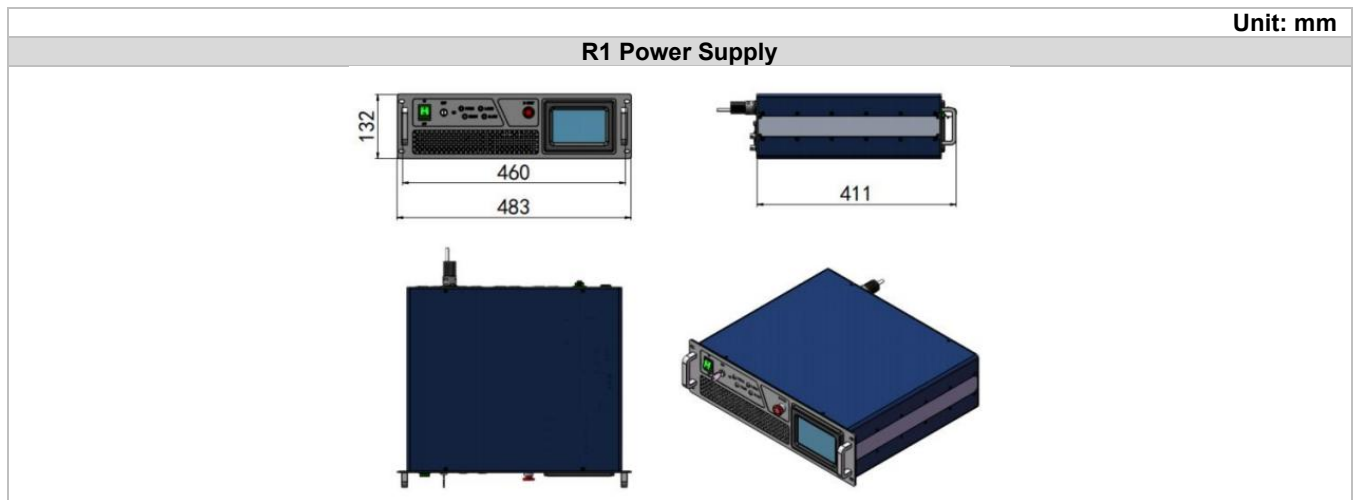


FSPH Series Laser Dimensions



Parameter	FSPH Series
Dimensions	323(L) x 212(W) x 65(H) mm ³
Weight	5.5 kg
Beam height from base plate	43 mm
Beam exit (from side)	86 mm

FSPH Series Power Supply Dimensions



Parameter	R1 Power Supply
Dimensions	411(L) x 483(W) x 132(H) mm ³
Weight	7.5 kg
Input voltage	100-240VAC