



FLSL Series

Single Frequency PM Fiber Seed Laser

Data Sheet

Overview

The FLSL Series Single Frequency PM Fiber Seed Lasers provide stable, narrow-linewidth continuous-wave (CW) output for precision scientific and industrial applications. Available in wavelength ranges from 1014nm to 2000nm, these compact fiber lasers offer single-frequency operation, excellent beam quality, and polarization-maintaining (PM) fiber output for reliable performance in demanding optical systems.

Features

- Wavelength ranges from 1014nm to 2000nm
- Continuous-wave (CW) operation
- Single-frequency output
- Narrow spectral linewidth
- Polarization-maintaining (PM) fiber output
- Excellent beam quality
- High power stability
- Compact, conduction-cooled design
- FC/APC fiber connector
- Long operating lifetime

Applications

- Fiber amplifier seeding
- Precision spectroscopy
- Interferometry
- Optical trapping
- Quantum optics
- LiDAR
- Optical communications
- Scientific research

1014-1120 nm Specifications

Selectable wavelength range	1014-1120 nm	
Typical wavelength	1014, 10148, 1027, 1030, 1040, 1050, 1053, 1064, 1080, 1100 nm	1120 nm
Operating mode	CW	
Output power ⁽¹⁾	1-50 mW	1-5 mW
Power stability (rms, over 4 hours $\pm 3^{\circ}\text{C}$)	<3%, <2%, <1%	
Temperature turning range	>0.5 nm	
Transverse mode	TEM ₀₀	
Output mode	Single-mode PM fiber	
Numerical aperture	0.14 NA	
Fiber connector	FC/APC	
Fiber length	1 m	
Spectral linewidth	<10 kHz, <5kHz	<100kHz
Polarization ratio	>20dB, after PM fiber	
M ² factor	<1.05	
Relative intensity noise (rms, 10Hz-10MHz)	<0.1%, <0.05%	
Relative intensity noise	<-140 dBc/Hz (10MHz)	
Peak intensity noise	<-130 dBc/Hz	
PZT Turning range	>3 GHz	
PZT Turning bandwidth	>5 kHz	
Cooled method	Conduction cooled	
Operating temperature	15-30°C	
Power dissipation	12 W	
Operating voltage	12V/11.5A	
Expected lifetime	>10,000 hours	



1525-1596 nm Specifications

Selectable wavelength range	1525-1596 nm
Typical wavelength	1530, 1540, 1550, 1560, 1570 nm
Operating mode	CW
Output power ⁽¹⁾	1-40 mW
Power stability (rms, over 4 hours $\pm 3^{\circ}\text{C}$)	<3%, <2%, <1%
Temperature turning range	>0.5 nm
Transverse mode	TEM ₀₀
Output mode	Single-mode PM fiber
Numerical aperture	0.14 NA
Fiber connector	FC/APC
Fiber length	1 m
Spectral linewidth	<10 kHz, <5kHz
Polarization ratio	>20dB, after PM fiber
M ² factor	<1.05
Relative intensity noise (rms, 10Hz-10MHz)	<0.1%, <0.05%
Relative intensity noise	<-140 dBc/Hz (10MHz)
Peak intensity noise	<-120 dBc/Hz
Relaxation oscillation peak frequency	1-2 MHz
PZT Turning range	>3 GHz
PZT Turning bandwidth	>5 kHz
Cooled method	Conduction cooled
Operating temperature	15-30°C
Power dissipation	12 W
Operating voltage	12V/11.5A
Expected lifetime	>10,000 hours



1800-2000 nm Specifications

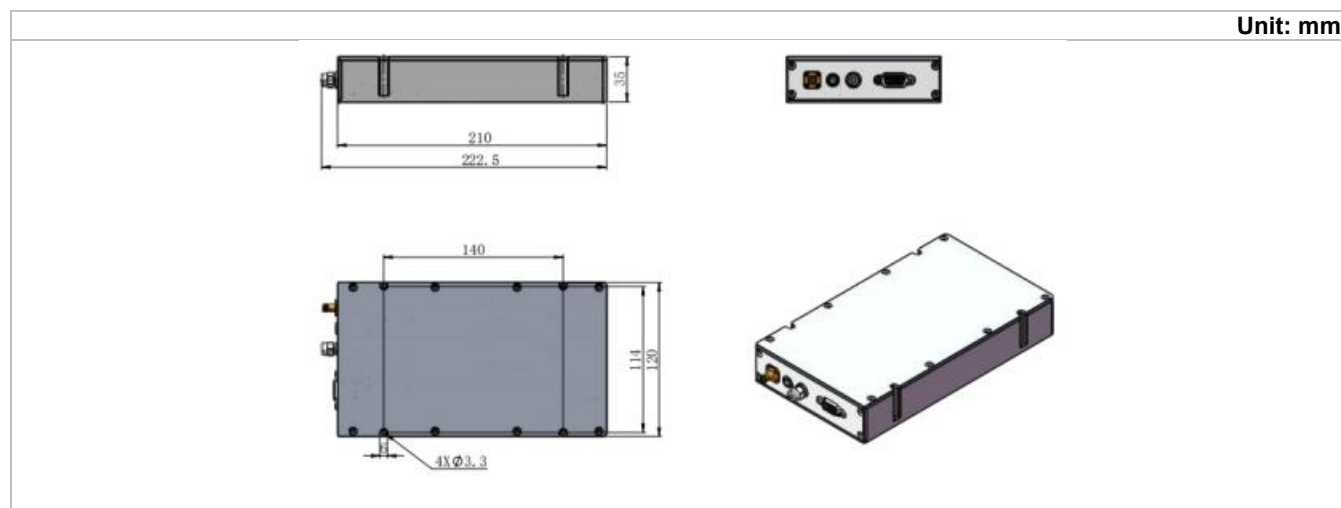
Selectable wavelength range	1800-2000 nm
Typical wavelength	1908, 1952 nm
Operating mode	CW
Output power ⁽¹⁾	1-10 mW
Power stability (rms, over 4 hours $\pm 3^{\circ}\text{C}$)	<3%, <2%, <1%
Temperature turning range	>0.5 nm
Transverse mode	TEM ₀₀
Output mode	Single-mode PM fiber
Numerical aperture	0.14 NA
Fiber connector	FC/APC
Fiber length	1 m
Spectral linewidth	<50 kHz
Polarization ratio	>15dB, after PM fiber
M ² factor	<1.05
Relative intensity noise (rms, 10Hz-3MHz)	<0.1%, <0.05%, <0.03%
Cooled method	Conduction cooled
Operating temperature	15-30°C
Power dissipation	12 W
Operating voltage	12V/11.5A
Expected lifetime	>10,000 hours

Remarks:

1. Any output power level can be selected within this range.
2. Specifications of the CW laser is based on the laser performance at full power output after the specified warmup period. The stability of output power may change when output power is adjusted at a different power level.
3. Specifications are subject to change without notice.

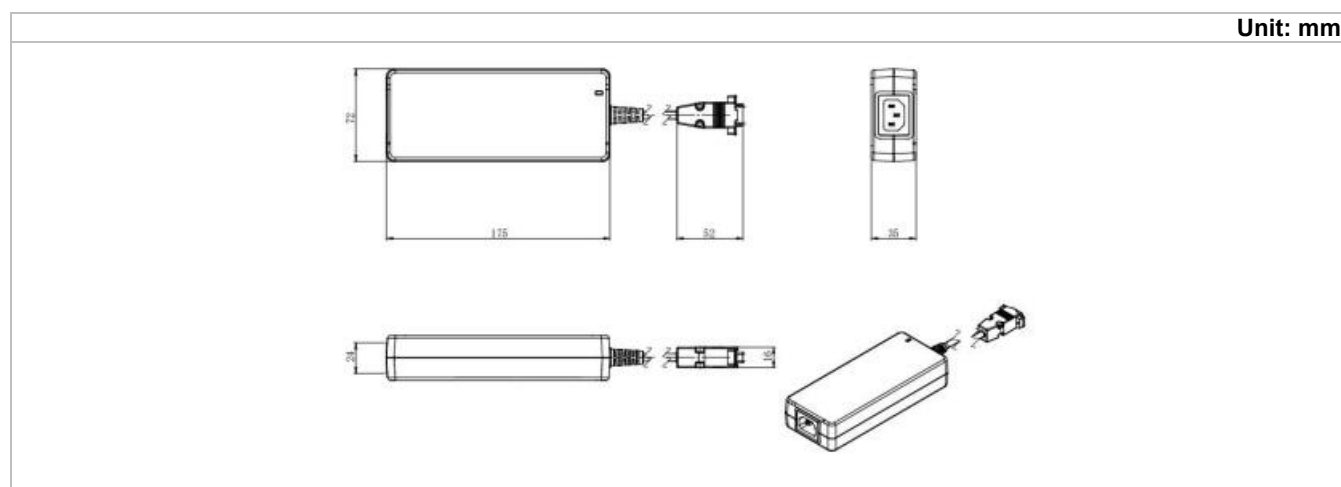


FLSL Series Laser Head Dimensions



Parameter	FLSL Series
Dimensions	210(L)×120(W) ×35(H) mm ³
Weight	1 kg
Operating voltage	12 VDC

FLSL Series Power Supply Dimensions



Parameter	100-240 VAC Power Supply
Dimensions	350 (L) ×185(W) ×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 FLSL[1][2][3][4]				
FLSL = Laser Model Series	[1] = Wavelength	[2] = Output Power	[3] = Power Stability	[4] = Relative Intensity Noise
			E= <3% 2= <2% D= <1%	

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

