



FL-631-SLM/1mW-1.5W

SINGLE LONGITUDINAL MODE FIBER LASER AT 631 nm

The single-longitudinal-mode, PM fiber laser at 631nm comprises a seed laser and an amplifier. It is optimized for narrow linewidth operation and applications that require higher optical power, which has been designed for operation in optical lattice, optical tweezer, scientific research, etc.



SPECIFICATIONS

Wavelength (nm)	631±1
Operating mode	CW
Free space output power (mW) ¹	1mW-1.5W
Fiber coupled output power (mW)	1-500
Power stability (rms, 4 hours ±3°C)	<2%, <1%
Transverse mode	TEM ₀₀
Longitudinal mode	SLM
Current adjustment range	1-100%
Spectral linewidth (kHz)	<20
Temperature turning range (nm)	>0.2
PZT Turning range (GHz)	>5
PZT Turning bandwidth (kHz)	>5
Relative intensity noise (rms, 10Hz-3MHz)	<0.3%, <0.1%, (<0.05% optional)
Frequency shift (MHz) (over ±2°C and 8 hours)	<±200
M ²	<1.1
Numerical aperture	0.12NA
Fiber connector ²	FC/APC
Fiber length(m) ³	1
Fiber jacket	PVC, Metal optional
Beam diameter (mm)	~1@free space output
Pointing stability over temperature (urad/°C)	<50
Polarization ratio(dB)	>15 Horizontal (Vertical optional)
Warm-up time (minutes)	<30
Cooled method	Air cooled or Water cooled
Operating temperature (°C)	15-30
Operating voltage (VAC)	110/220V
Expected lifetime (hours)	>10000



DIMENSION ⁴		
Fundamental Frequency (Free space)	SFG Module (Free space)	Fiber coupled
<p style="text-align: center;">417(L)×480(W)×134(H) mm³, 10kg</p>	<p style="text-align: center;">280.5(L)×136.5(W)×39(H) mm³, 3kg</p>	<p style="text-align: center;">417(L)×480(W)×134(H) mm³, 13kg</p>
DIMENSION ⁵		
Fundamental Frequency (Free space)	SFG Module (Free space)	Fiber coupled
<p style="text-align: center;">461(L)×483(W)×120(H) mm³, 13kg</p>	<p style="text-align: center;">280.5(L)×136.5(W)×39(H) mm³, 3kg</p>	<p style="text-align: center;">507(L)×483(W)×120(H) mm³, 16kg</p>

1 Any power level can be selected in this range.

2 Other output mode can be customized.

3 Other lengths are available on request.

4 Air cooled.

5 Water cooled.