

# 578nm-610nm Narrow Linewidth Laser

The 977.5nm seed is amplified by an ytterbium-doped fiber amplifier and then frequency-coupled with an erbium-doped fiber laser to produce a high-power, narrow-linewidth laser output.



#### **Features**

- Narrow Linewidth
- Low Intensity Noise
- High Power
- Active Power Stabilization: < 0.75%rms, 3hrs</li>
- Excellent Beam Quality (M<sup>2</sup> <1.1)
- Never Mode-hop
- Resistant to high and low temperature and vibration working environment

### **Applications**

- Optical Lattices, Atomic Cooling And Trapping
- Laser Medical Treatment
- Solar Cell Processing



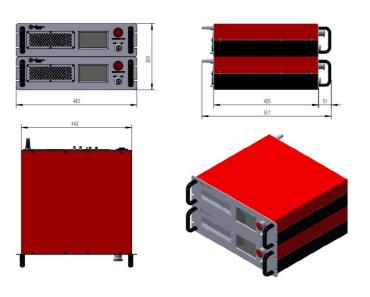
Specification	
Partnumber	FL-SF-XXXX-YY-CW <sup>(1)</sup>
Selectable Center Wavelength	578-610nm
Common Wavelengths	606nm
Output Power	> 2W > 5W
Tuning Range (temperature) (2)	> 15GHz,Continuous without mode-hop
Output Mode	Spatially collimated output
Beam Waist Diameter	0.7-1.0mm
Power Adjustment Range	Power adjustment range 5-100%
Pointing Stability	<10µrad
Linewidth (3) (100 us integration)	< 30kHz
Polarization Extinction Ratio	Linear, Vertical, > 20dB
Power Stability	< 0.75%@3hours, RMS
Beam Quality	$TEM_{00}$ , $M^2 < 1.1$
Current Tuning Range	> 500MHz
Current Tuning Bandwidth	>1MHz
Relative Intensity Noise	< 0.08% (RMS, 10Hz-100MHz integral)
Cooling	Air Cooling/Water cooling
Operating Environment & Power Supply	
Temperature	15-30 °C (Air Cooling) or 15-35 °C (Water cooling)
Power Supply	100V-240V, AC, 50/60Hz
Power Consumption	RS422



<sup>(1)</sup> XXXX center wavelength, in nm, YY laser power, in W. For example, 578nm output power > 5W: FL-SF-578-5-CW. (2) The 1.5um seed or 977nm seed can be replaced with a wide-tuning seed laser to achieve a tuning range of >2nm (3) Measurement of fiber delay by self-heterodyne beat frequency method

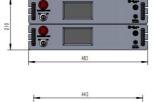
## **Air Cooling Version Dimensions**

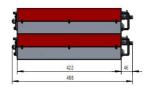
#### **Air-cooled chassis dimensions**

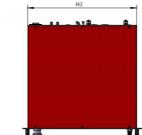


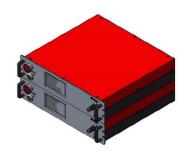
## **Water Cooling Version Dimensions**

### Water cooling chassis dimensions

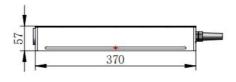


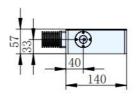


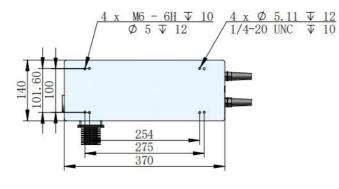


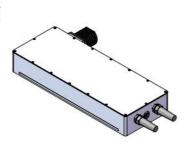


#### **Laser Head**











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## **△** Laser Hazard

Visible or invisible laser radiation, avoid eye or skin exposure to direct, reflected or filtered radiation.

**CLASS 4 Laser Products** 

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