



578nm-610nm Narrow Linewidth Laser

Based on high-power, low-noise thulium-doped fiber amplification and frequency tripling technology, high-power narrow-linewidth laser output with any central wavelength in the range of 578-610nm is achieved.



Features

- Narrow Linewidth
- Low Intensity Noise
- High Power
- Active Power Stability: $<0.75\%$ rms, 3hrs
- Excellent Beam Quality ($M^2 < 1.1$)
- 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 ⁽¹⁾
Selectable Center Wavelength	578-610nm
Common Wavelengths	578nm
Seed Laser Type	Thulium-doped fiber DFB seed laser
Output Power ⁽²⁾	> 0.8W
Tuning range (temperature)	> 0.33nm, Continuous without mode hop
Output Mode	Spatially Collimated Output
Beam Waist Diameter ⁽²⁾	0.7-1.0mm
Power Adjustment Range	Power Adjustment Range 5-100%
Pointing Stability	< 10 μ rad
Linewidth ⁽³⁾ (100 us integration)	< 30kHz
Polarization Extinction Ratio	Linear, > 20dB
Power Stability	< 0.75%@3hours, RMS
Beam Quality	TEM ₀₀ , M ² < 1.1
Fast Tuning Range	> 3GHz
Fast Tuning Bandwidth	> 5kHz
AOM Tuning Range (Option)	> \pm 5MHz
AOM Tuning Bandwidth (Option)	> 500kHz
Relative Intensity Noise	< 0.08% (RMS,10Hz-100MHz integration)
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
Communication	RS422

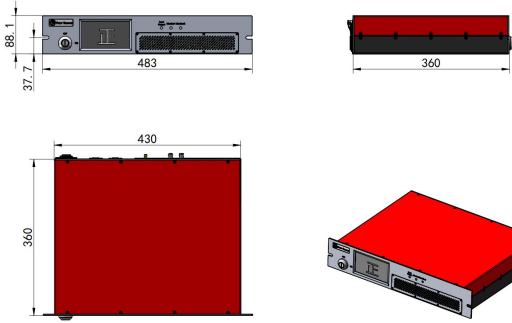
(1) XXXX center wavelength, in nm, YY laser power, in W. For example, 578nm output power > 0.8W: FL-SF-578-0.8-CW.

(2) The spot diameter is only for the spatial collimation output mode. For single-mode polarization-maintaining fiber output, there is no collimator at the output end.

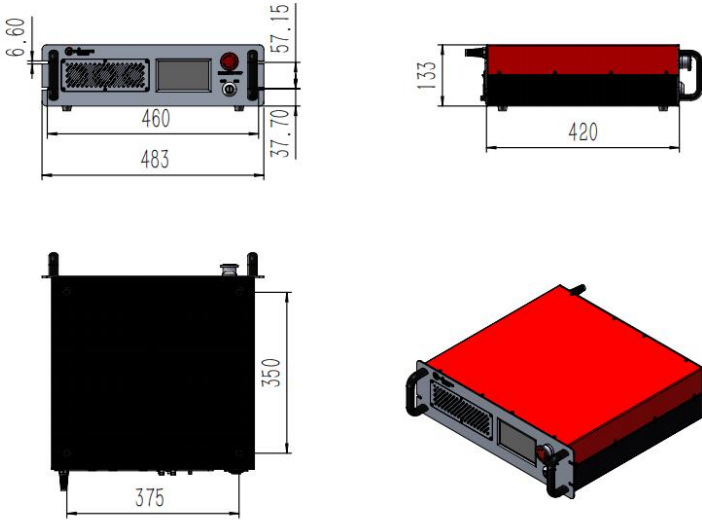
(3) Fiber delay self-heterodyne beat frequency method measurement.

Air Cooling Version Dimensions

Thulium-doped Fiber DFB Seed Laser (Air Cooling)

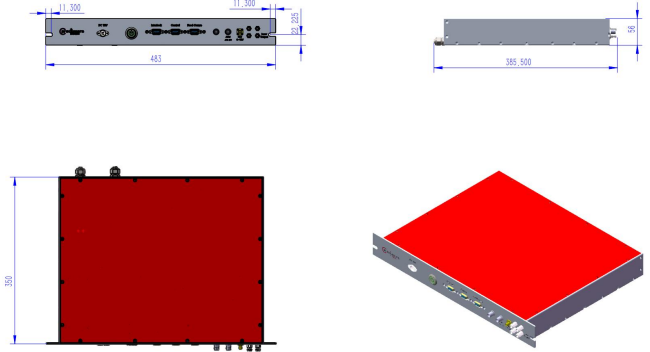


Air Cooling Chassis Dimensions

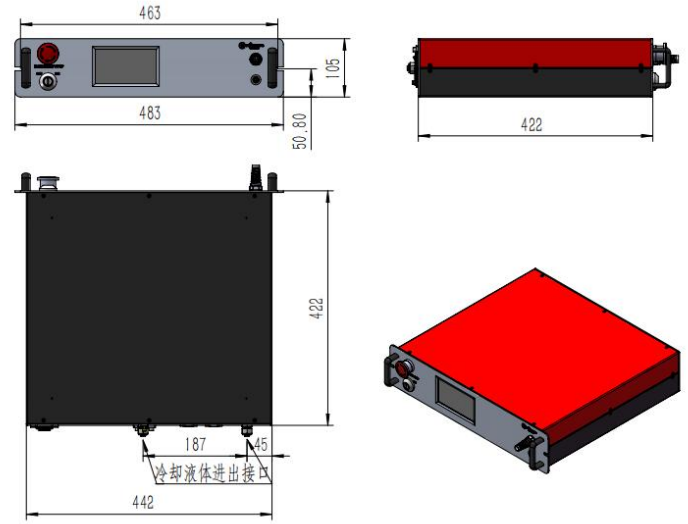


Water Cooling Version Dimensions

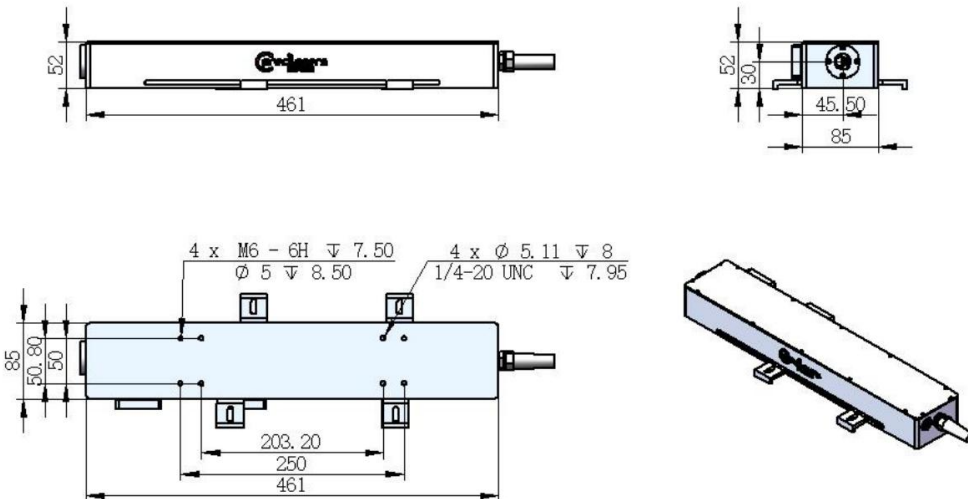
Thulium-doped fiber DFB seed laser (Water Cooling)



Water Cooling Chassis Dimensions



Laser Head Output Dimensions



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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