



Tm-Doped Single-Pass FHG Narrow Linewidth Laser

Based on high-power, low-noise Tm-doped fiber lasers amplification and frequency quadrupling technology, Precilasers can provide high-power, narrow linewidth laser output with a wavelength ranging from 440 to 506 nm.

Features

- Narrow Linewidth
- Low RIN
- High Power
- Power Stability: $<0.75\%$ rms, 3hrs
- Excellent Beam Quality ($M^2 < 1.1$)
- Never Mode-hop
- High Temperature And Vibration Resistance

Applications

- Lithium Ion, Calcium Ion, Strontium Atom Cooling
- Quantum Simulation
- Laser Spectroscopy
- Medicine And Biophotonics
- Electromagnetically Induced Transparency



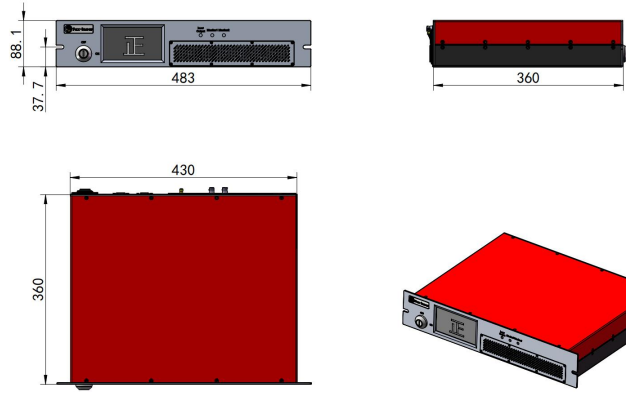
Specification			
Partnumber	FL-SF-XXXX-YY-CW ⁽¹⁾		
Wavelength Range	440-460nm	460-475nm	475-506nm
Typical Wavelength	455nm	461nm	480nm
Seed Laser Type	Fiber DFB Seed Laser (1760-2024nm)		
Output Power	> 1W	> 2W/3W	> 2W/5W
Thermal Tuning Range	> 0.25nm, Never Mode-hop		
Output Mode	Free Space Output		
Beam Diameter ⁽²⁾	0.7-1.0mm		
Power Tuning Range	10-100%		
Beam Pointing Stability	< 50μrad		
Linewidth ⁽³⁾ (100us)	< 40kHz		
PER	linear, > 20dB		
Power Stability	< 0.75%@3hours, RMS		
Beam Quality	TEM ₀₀ , M ² < 1.1		
Fast Frequency Tuning Range	> 3GHz		
Fast Frequency Tuning Bandwidth	> 5kHz		
AOM Tuning Range (Optional)	> ±5MHz		
AOM Tuning Bandwidth (Optional)	> 500kHz		
RIN	< 0.3% (RMS,10Hz-100MHz)		
Cooling	Air Cooling/Water Cooling		
Operation 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 is the laser center wavelength, YY is the laser power, for a 1W 455nm laser,the partnumberis FL-SF-455-1-CW

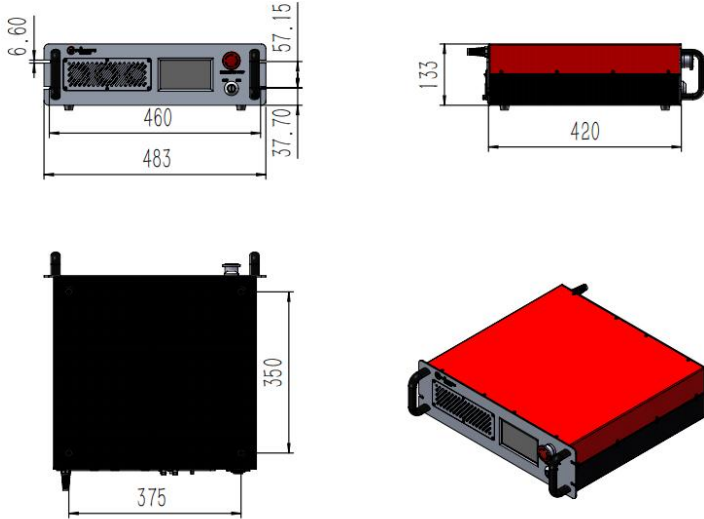
(2)Beam diameter is only applicable to free space output mode

(3)Measured by self-hetrodyne method

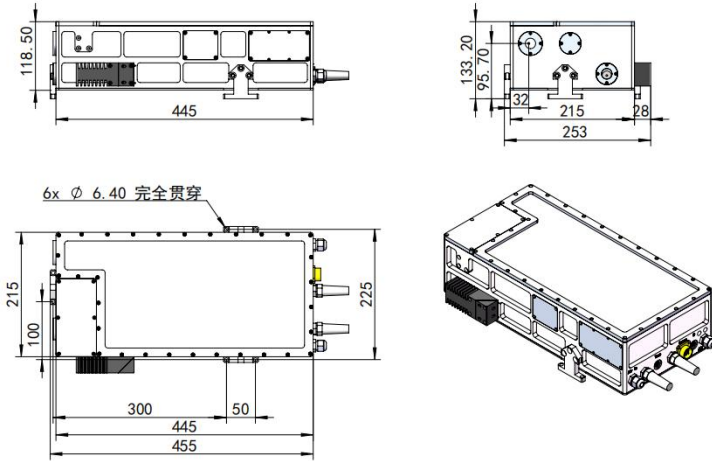
Tm-Doped Fiber DFB Seed Laser (Air Cooling)



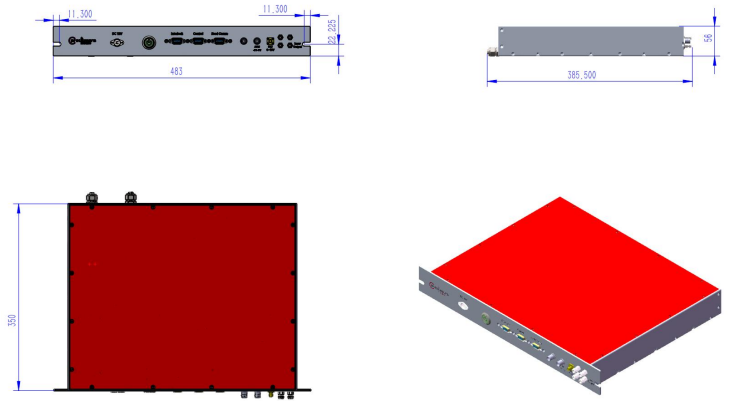
Air Cooling Control Unit Dimension



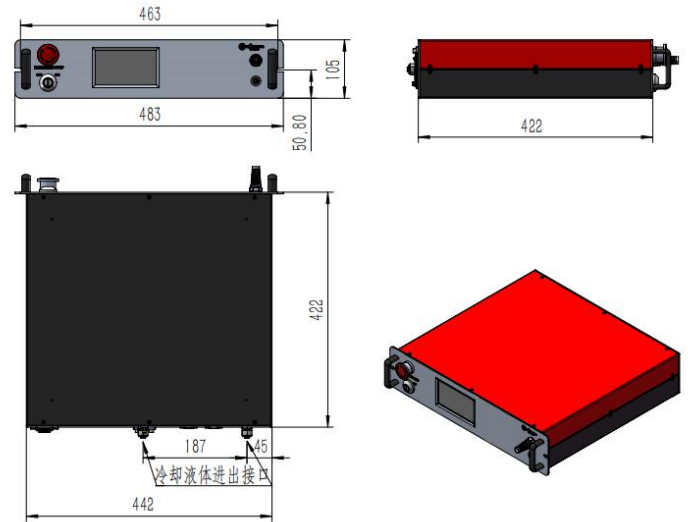
Laser Head Output Dimension



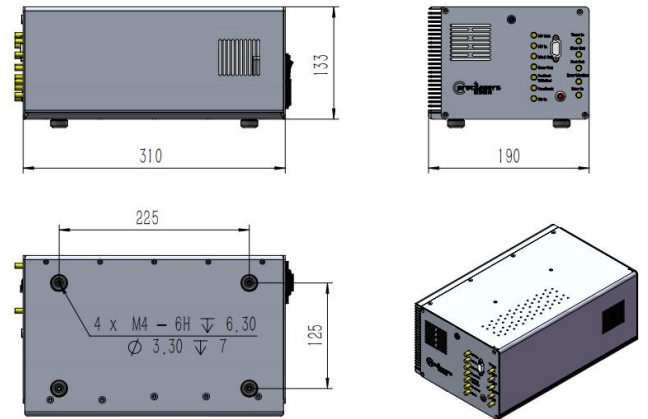
Tm-Doped Fiber DFB Seed Laser (Water Cooling)



Water Cooling Control Unit Dimension



Precilock Dimension



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⚠ DANGER

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