



405-440nm Narrow Linewidth Laser

Based on high-power, low-noise fiber lasers amplification, sum-frequency technology and frequency doubling technology, Precilasers can provide high-power, narrow linewidth laser output with a wavelength ranging from 405 to 440nm.

Features

- Narrow Linewidth
- Low RIN
- High Power
- Power Stability: $<0.75\%_{rms}$, 3hrs
- Excellent Beam Quality ($M^2 < 1.2$)
- Never Mode-hop
- High Temperature And Vibration Resistance

Applications

- Lithium Ion, Calcium Ion, Strontium Atom Cooling
- Quantum Simulation
- Bioscience
- Laser Spectrum
- Electromagnetic Induction Transparency



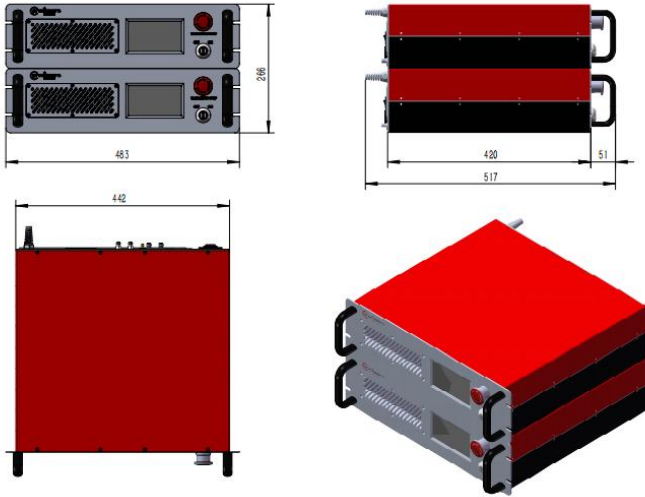
Specification					
Partnumber	FL-SF-XXXX-YY-CW ⁽¹⁾				
Wavelength Range	405-440nm				
Typical Wavelength	421nm				
Operation Mode	CW				
Output Power	> 0.3W	> 1W	> 2W	> 4W	> 8W
Monitor Output Power	>5mW				
Seed Laser Type	FECL+fiber DFB seed laser		double fiber DFB seed laser		
Thermal Tuning Range	> 150GHz, Never Mode-hop		> 350GHz, Never Mode-hop		
Output Mode	Free Space Output				
Beam Diameter	0.7-1.0mm				
Linewidth ⁽²⁾ (100us)	< 40kHz				
PER	> 20dB				
Power Stability	< 0.75%				
Beam Quality	M ² < 1.2				
PZT Frequency Tuning Range	> 3GHz		> 3GHz		
PZT Frequency Tuning Bandwidth	> 5kHz		> 5kHz		
Fast Frequency Tuning Range	> 500MHz		/		
Fast Frequency Tuning Bandwidth	> 1MHz		/		
AOM Tuning Range (Optional)	> ±5MHz				
AOM Tuning Bandwidth (Optional)	> 500kHz				
RIN	< 0.08% (10Hz-100MHz, RMS)				
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

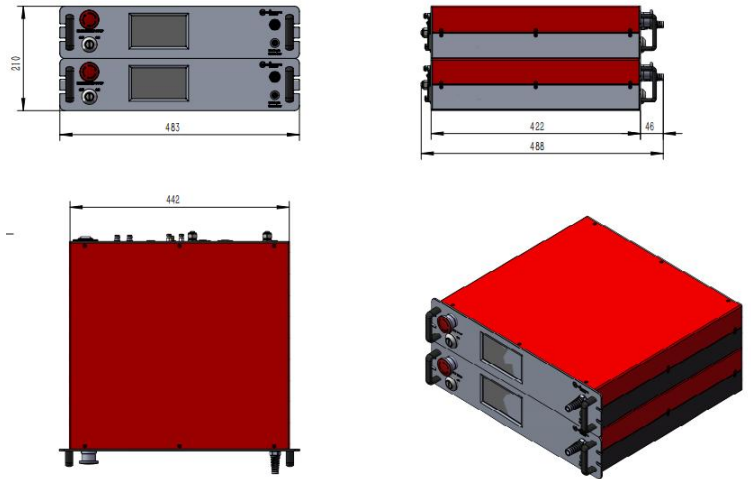
(1)XXXX is the laser center wavelength, YY is the laser power, for a 2W 421nm laser,the partnumberis FL-SF-421-2-CW

(2)Measured by self-hetrodyne method

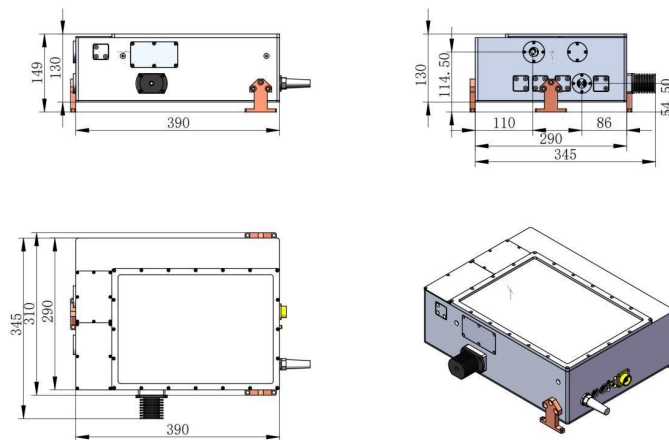
Air Cooling Control Unit Dimension



Water Cooling Control Unit Dimension



Laser Head Output Dimension



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⚠ DANGER

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AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT