



811-880nm Narrow Linewidth Laser

Based on high-power, low-noise fiber lasers amplification and sum-frequency technology, Precilasers can provide high-power, narrow linewidth laser output with a wavelength ranging from 810 to 880 nm.

Features

- Narrow Linewidth
- Low RIN
- High Power
- Power Stability
- Excellent Beam Quality
- Never Mode-hop
- High Temperature And Vibration Resistance

Applications

- Quantum Computing - Rb Quantum Computing
- Quantum Precision Measurement - Sr Atomic Clock
- Quantum Precision Measurement - Cs Fountain Clock
- Quantum Precision Measurement - Rydberg Field Measurement



Specification			
Partnumber	FL-SF-XXXX-YY-CW ⁽¹⁾		
Wavelength Range	811-820nm	821-840nm	841-880nm
Typical Wavelength	813nm, 840nm, 852nm, 866nm		
Output Power	> 2W,4W,6W,8W,10W,15W,25W	> 2W,4W,6W,8W,10W,15W,30W	> 2W,4W,6W,8W,10W,15W,30W
RIN	< 0.05% (10Hz-100MHz, RMS)		
Thermal Tuning Range	> 0.15nm, Never Mode-hop		
Output Mode	Free Space Output, Beam Diameter 0.7-1.0mm		
Linewidth ⁽²⁾ (100us)	< 20kHz		
PER	> 20dB		
Power Stability	< 0.75%@3hours, RMS		
Beam Quality	M ² < 1.1		
Fast Frequency Tuning Range	> 500MHz		
Fast Frequency Tuning Bandwidth	> 1MHz		
PZT Frequency Tuning Range	> 3GHz		
PZT Frequency Tuning Bandwidth	> 5kHz		
Cooling	Air Cooling(Output Power≤2W) Or Water Cooling		

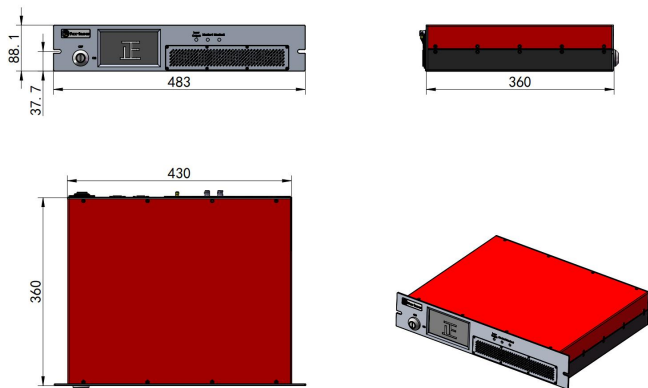
(1)XXXX is the laser center wavelength, YY is the laser power, for a 6W 813nm laser,the partnumber is FL-SF-813-6-CW.

(2)Measured by self-hetrodyne method.

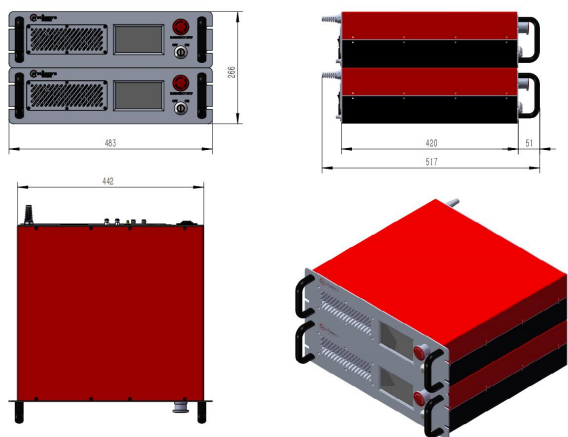
Operation	
PM Fiber Output	For output power≤2W lasers, single-mode polarization-maintaining fiber output can be selected.

Other Parameters	
Temperature	15-30°C
Power Consumption	<400W
Power Supply	100V-240V, AC, 50/60Hz

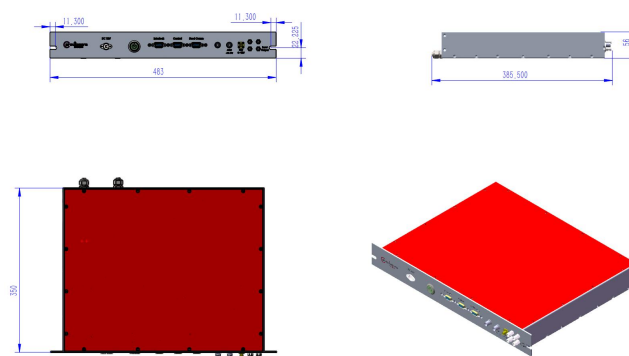
Tm-Doped Fiber DFB Seed Laser (Air Cooling)



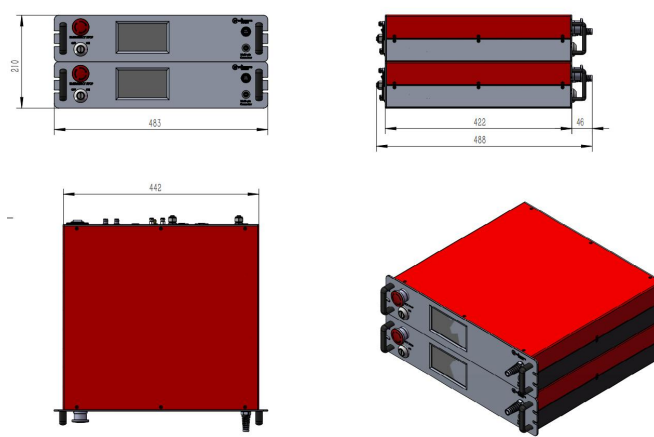
Air Cooling Control Unit Dimension



Tm-Doped Fiber DFB Seed Laser (Water Cooling)



Water Cooling Control Unit Dimension



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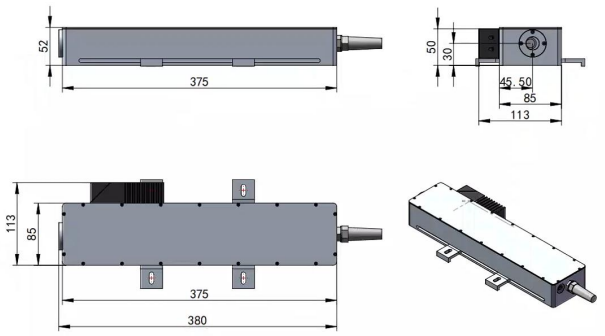
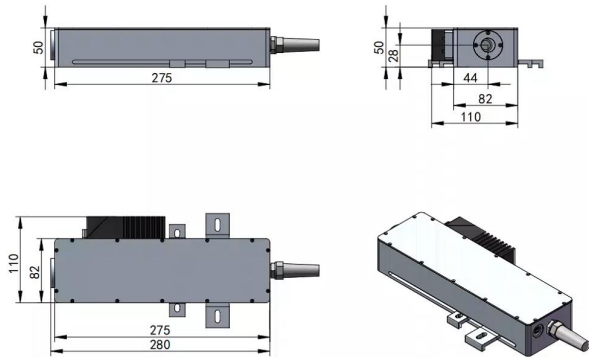
VISIBLE AND INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT



Laser Head-Spatial Output

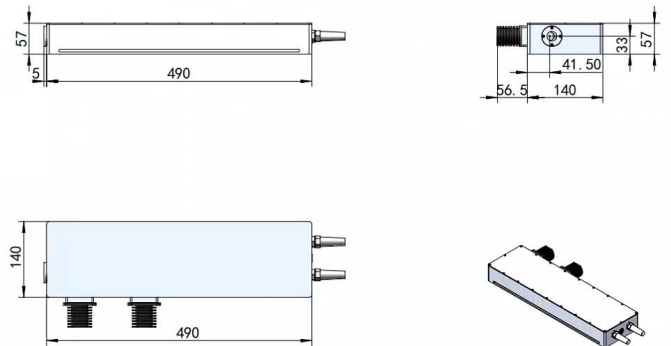
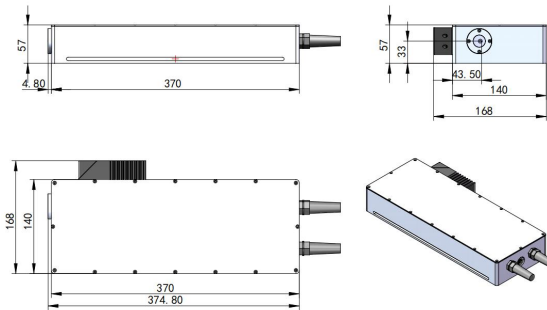
Laser head-power:0W-2W

Laser head-power:2W-4W

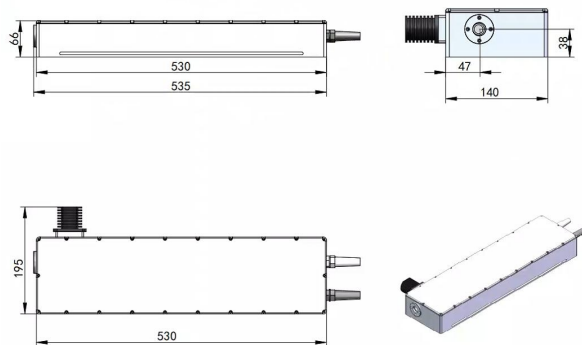


Laser head-power:4W-10W

Laser head-power:10W-15W



Laser head-power:15W-30W



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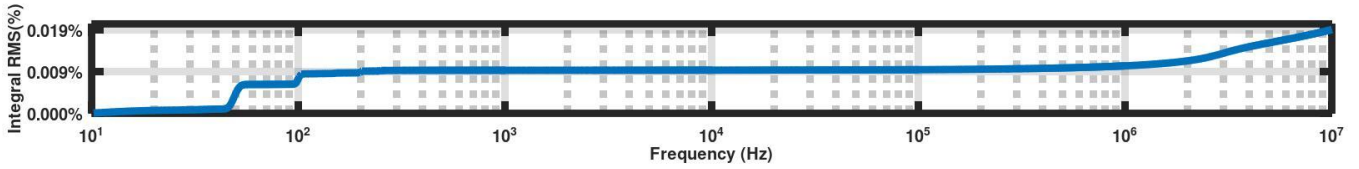
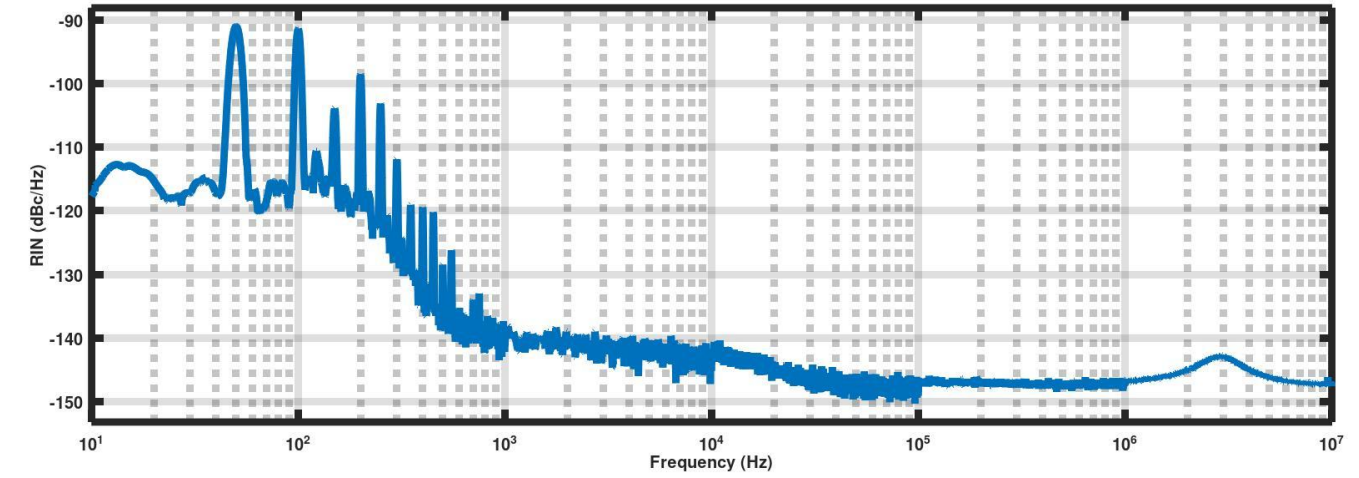


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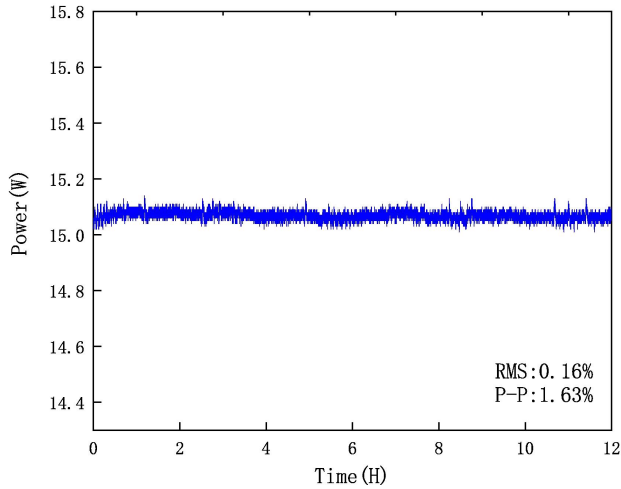
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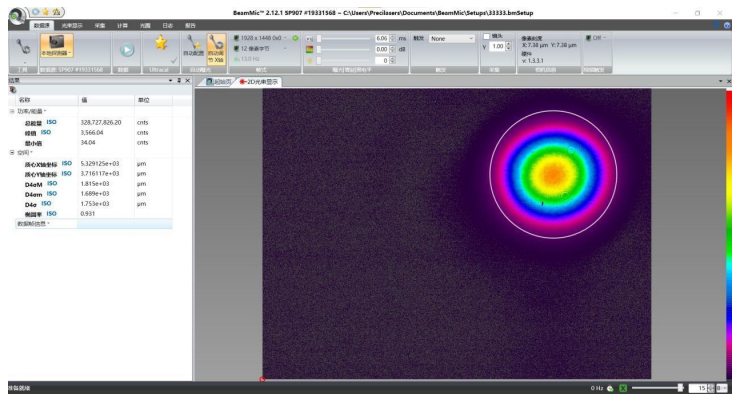
❖ Performance Test (Typ)



RIN:0.019%[10Hz-10MHz]



Power Stability



Beam Quality



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