

High-power infrared laser at 813-880nm

Based on low-noise erbium-doped fiber laser, doped laser and high-efficiency sum-frequency module, PreciLasers can provide high power 811-880nm laser. With the Features of high power and low intensity noise, it can be applied to the fields such as Quantum computing and quantum precision measurement.

Features

- narrow linewidth
- high power
- Low intensity noise

Applications

- Quantum computing- -Rb Quantum computing
- Quantum precision measurement- -the Sr atomic light clock
- Quantum Precision Measurement-Cs, the fountain clock
- Quantum Precision measurements- -Rydberg electric field measurements



Optical parameters						
Available range of wavelengths	811-880nm					
Commonly used wavelength	813nm , 840nm, 852nm					
Output power	> 2W	> 4W	> 6W	> 8W	> 10W	> 15W
Tuning range (temperature)	> 0.15nm					
Output mode	Spatial collimation output, 0.7-1mm in diameter					
Line width ⁽¹⁾ (100us integration time)	< 20kHz					
Polarized extinction ratio	> 20dB					
Power Stability (3-hour RMS)	< 0.3%					
Beam quality	$M^2 < 1.1$					
Intensity noise (10Hz-10 MHz integration)	< 0.05%					
Range of current tuning	> 500MHz					
Current tuning bandwidth	> 1MHz					
PZT tuning range	> 3GHz					
PZT tuning bandwidth	> 5kHz					
Cooling method ⁽²⁾	Water cooling					

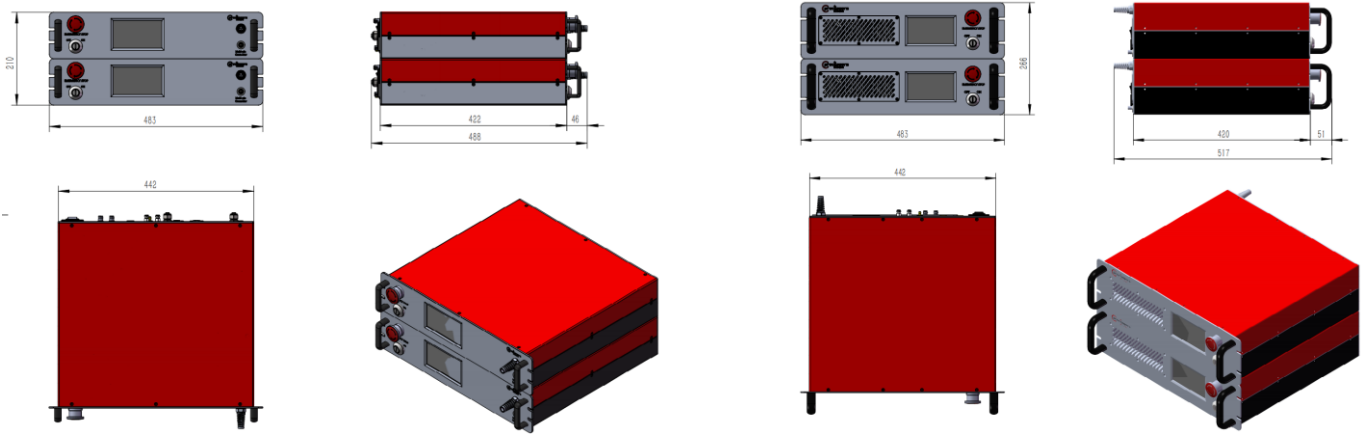
(1) The optical fiber delay is measured from the heterotropic beat frequency method

(2) The Output power is 2W, and you do not pay attention to the intensity noise, so you can choose air cooling

Option	
Fiber output	For the laser with power 2W, single mode bias fiber output can be selected

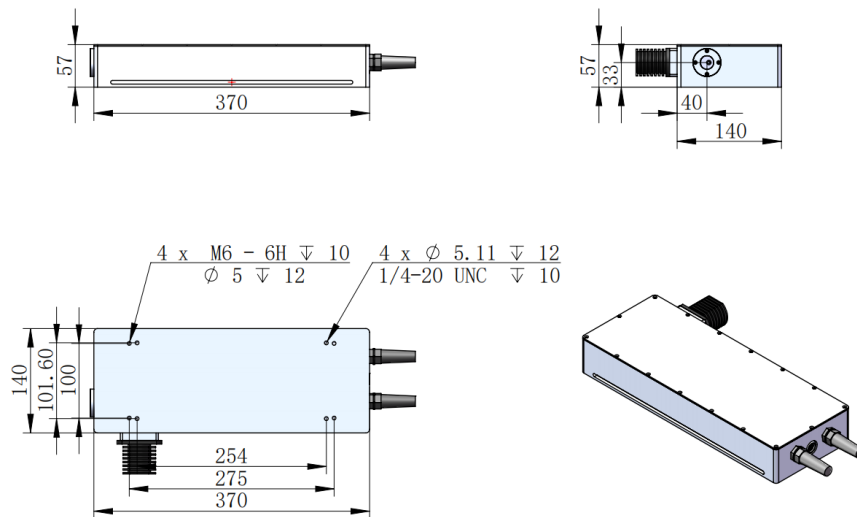
Other parameters	
Working temperature	15-25°C
Power consumption	400W
Supply electricity	100V-220V, AC , 50Hz

❖ Product Dimensions



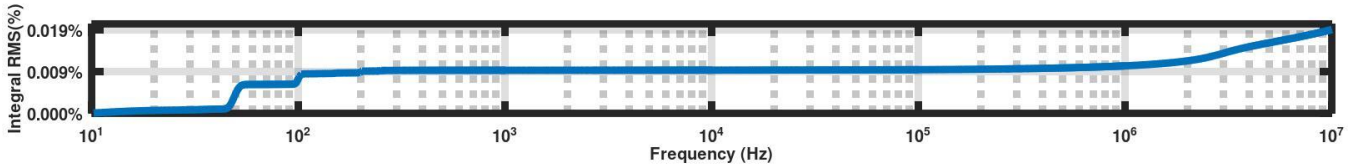
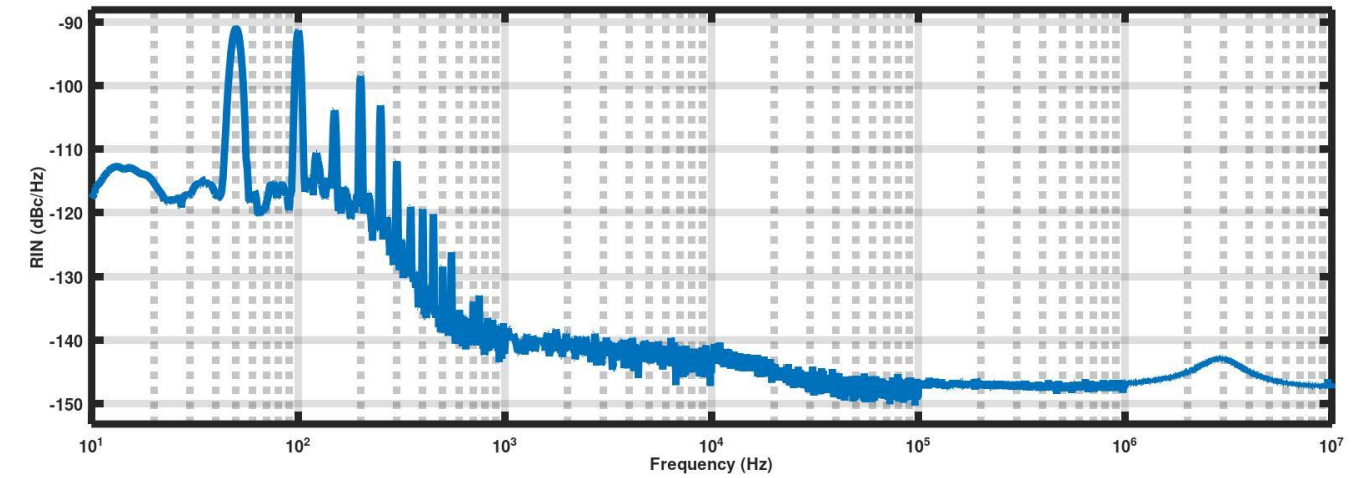
Case-Water Cold

Case-Air-cooled (power 2W)

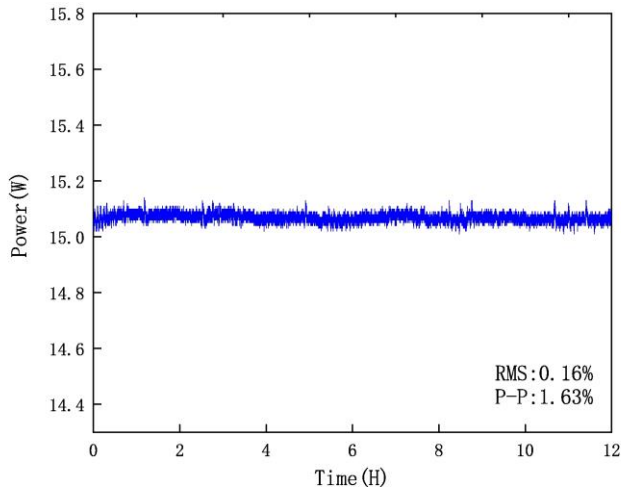


Laser head- -space output

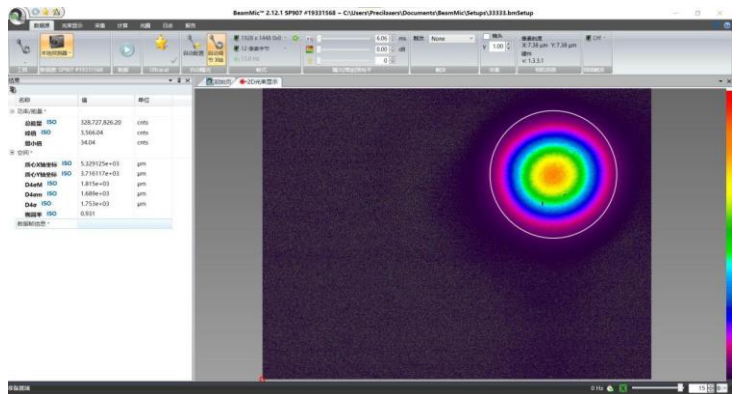
❖ Performance indicator test (typical value)



Relative Intensity Noise Test (RIN): 0.019% [10Hz-10 MHz]



power stability



Spot mode



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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