

405nm Narrow Linewidth Laser

Based on single frequency seed laser, fiber laser amplification and high efficiency frequency conversion technology, Precilasers can provide narrow linewidth lasers with a maximum output of 1W, high frequency stability, long lifetime and excellent beam quality.

Features

- High Power
- Narrow Linewidth
- Excellent Beam Quality
- High Power Stability
- Never Mode-hop

应用

- Precision Measurement
- Interference Exposure
- Laser Spectroscopy
- Gas Detection



Specification		
Partnumber	FL-SF-405-X ⁽¹⁾ -CW	
Center Wavelength	405.00nm	
Linewidth ⁽²⁾ (100 us integration)	<40kHz	
Operation Mode	Continuous	
Output Power	>100mW	>1W
Beam Waist Diameter	1±0.15 mm	
Beam Waist Location Relative to Output Window (m)	Output window within ±0.5m	
Beam Divergence (Full Angle)	<1mrad	
Beam Ellipticity	0.9-1.1	
Pointing Stability (μrad)	<50μrad	
Beam Quality	TEM ₀₀ , M ² <1.3	
Polarization	Linear, >20dB	
Power Stability	<0.75% @3hours, RMS	
Relative Intensity Noise	<0.2%(RMS, 10Hz-10MHz integration)	
Cooling	Air Cooling	Water Cooling
Warm-up Time		
Cold Start	<2 hours	
From Standby	<30 minutes	
Dimensions & Weights		
Laser Controller Dimensions	≤483mm x 420mm x 266mm (100mW)	≤483mm x 422mm x 210mm (1W)
Laser Head Dimensions	≤455mm x 225mm x 133.2mm	
Chiller Dimensions	NA	≤58cm x 29cm x 52cm
Chiller Weight	≤25kg	
Cable Length between Controller and Head	Fiber length>1.5m	
Operating Environment & Power Supply		
Temperature (No condensation conditions)	15-30 °C (Air Cooling)	15-35 °C (Water Cooling)
Power Supply	100V-240V, AC, 50/60Hz	
Communication	RS422	

(1) X: laser power, in unit of W, for example, output power 1W: FL-SF-405-1-CW.

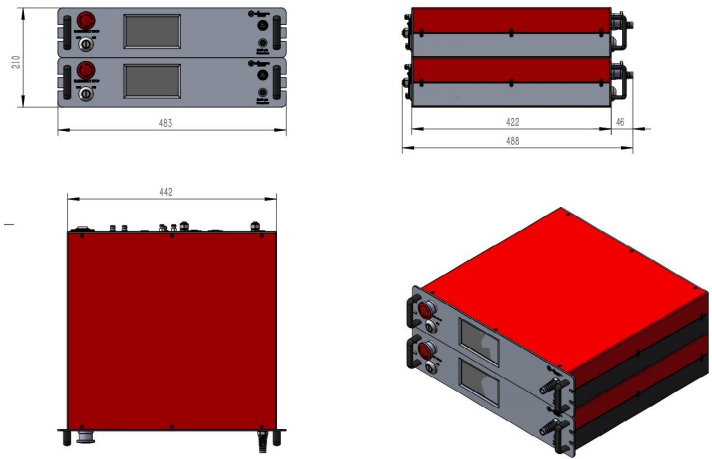
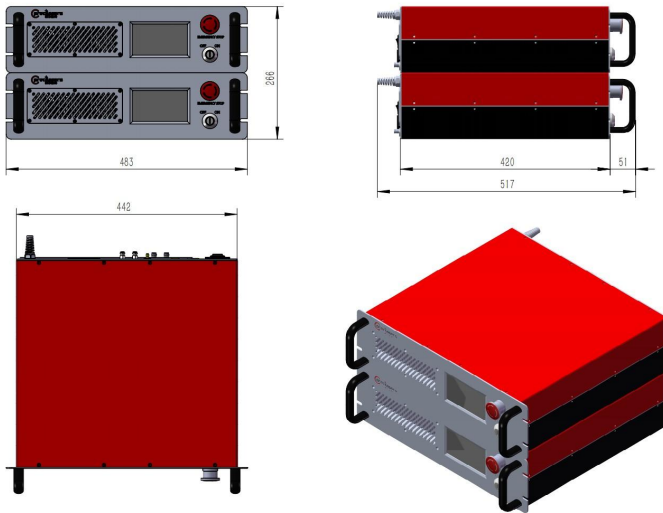
(2) Measurement of fiber delay by self-heterodyne beat frequency method

**Air-cooled Version Dimensions
(Power: 100mW)**

**Water Cooling Version Dimensions
(Power: 1W)**

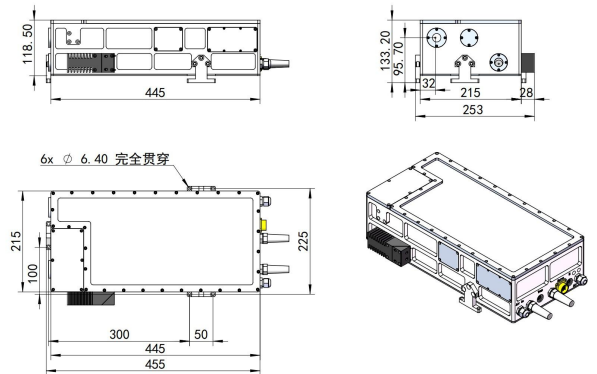
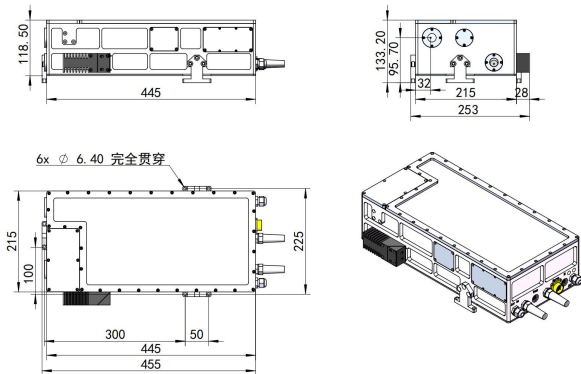
Laser Controller

Laser Controller



Laser Head

Laser Head




The controller and the output head are connected by a non-detachable optical fiber, the length of the optical fiber is > 1.5 meters

The controller and output head are connected by a detachable cable, the cable length is > 1.5 meters



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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

