

Narrow Linewidth Ytterbium-Doped Fiber DFB Seed Laser

The narrow-linewidth Ytterbium-doped fiber DFB laser with frequency-accurate laser is realized by writing fiber gratings on Ytterbium-doped fiber. It can achieve any wavelength in the range of 1016-1156nm, and the linewidth is only 3kHz/10kHz.

Features

- Narrow linewidth
- Tunable
- Never mode-hop
- Linear polarization
- Continuous laser

Applications

- Quantum computing
- Quantum precision measurement
- Optical precision measurement



Optical parameters	
Part Number	FL-SF-XXXX-S ⁽¹⁾
Wavelength optional range	1016-1156nm
Frequently used wavelength	1018nm, 1064nm, 1112nm
Output power	>10mW >50mW
Tuning range (temperature)	>0.7nm, Continuous without mode-hop
Output mode	Single-mode polarization-maintaining fiber
Linewidth ⁽²⁾ (100us integration time)	<3kHz ⁽³⁾ <10kHz
Polarization extinction ratio	>20dB
Power stability (3 hour RMS)	<0.5%
Beam quality	$M^2 < 1.1$
Intensity noise (10hz-10mhz integral)	<0.05%
Intensity noise (10mhz)	<-140dBc/Hz
Intensity noise (peak)	<-130dBc/Hz
Relaxation oscillation peak frequency ⁽⁴⁾	1-3MHz
PZT tuning range	>3GHz
PZT tuning bandwidth	>5kHz
Cooling method	Heat sink conduction

(1)XXXX represents the integer part of the central wavelength, for example, a seed laser of 1064.00 nm is model FL-SF-1064-S.

(2)Fiber Delay Self-Heterodyne Beat Frequency Measurement.

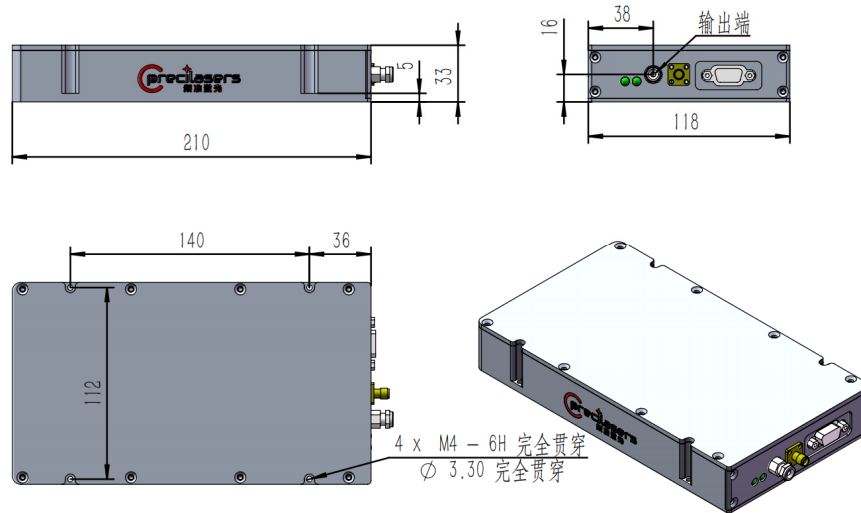
(3)Narrow linewidth option, available for 1016-1156nm.

(4)No relaxation oscillation peak can be selected, and the relaxation oscillation peak frequency is less than -140dBc/Hz

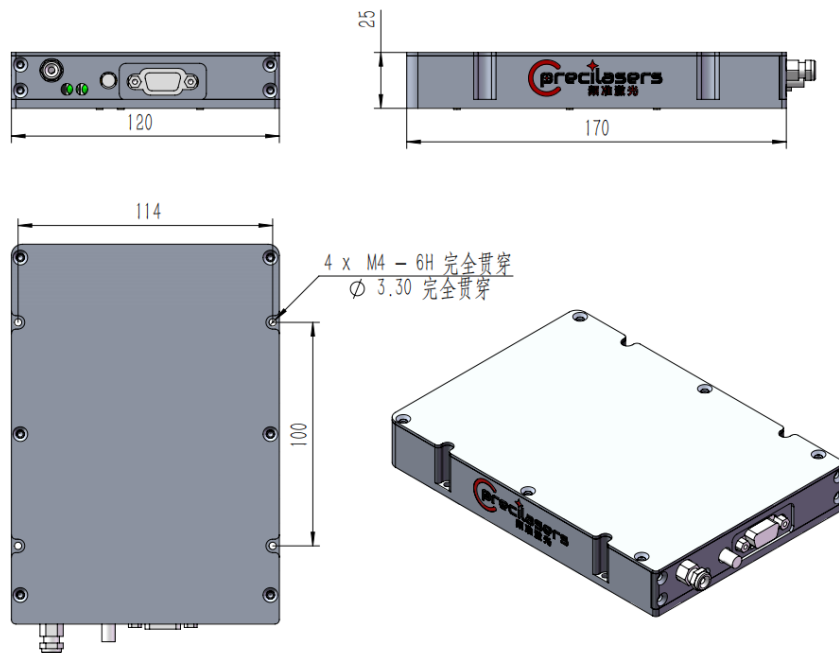
Options	
AOM Options	Adding AOM and VCO driver between seed and amplifier enables 500kHz tuning bandwidth and ± 5 MHz tuning range
EOM-RF Options	Adding EOM between the seed and the amplifier to achieve sideband modulation

Other parameters	
weight	>1.1kg
Operating temperature	15-25°C
Power consumption	<12W
Power consumption	12V, 1A, DC
Power Adapter	Input: 100-240V AC, 50-60Hz, 1.4A; Output: 12V 5A DC

❖ Product Dimensions

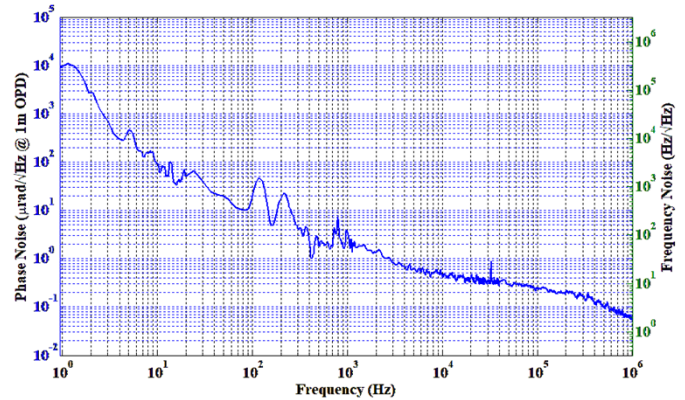
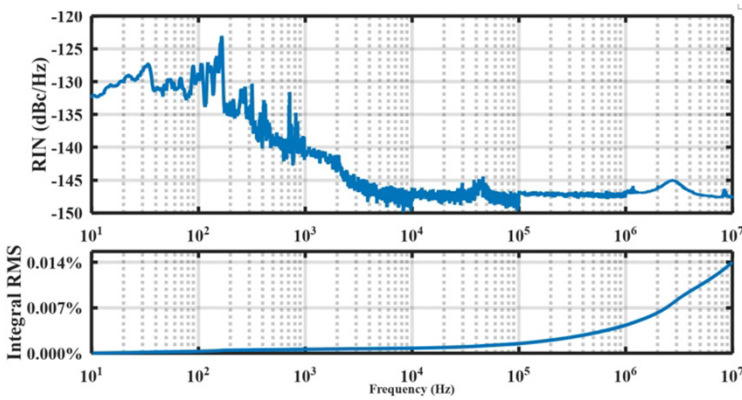
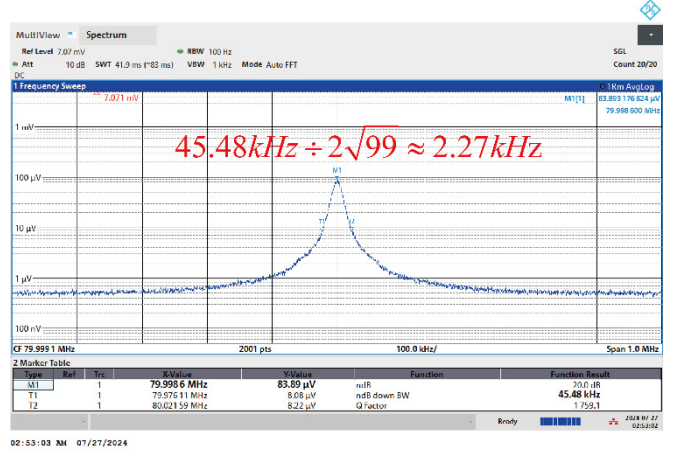
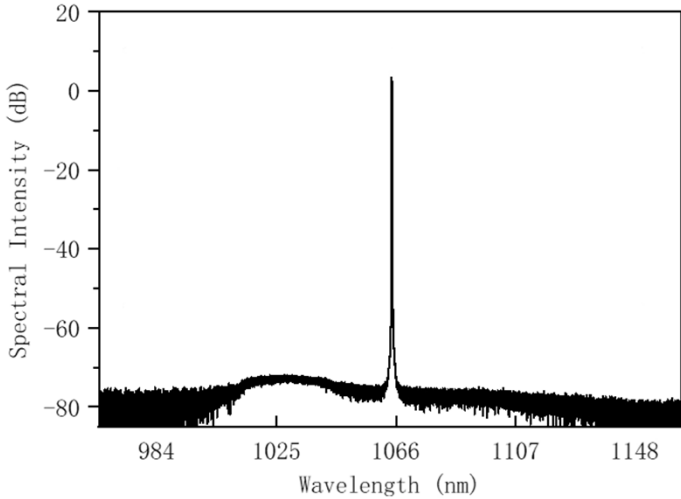


Product Dimensions - conventional



Product Dimensions - Small Version

❖ Performance index test (typical value)



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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