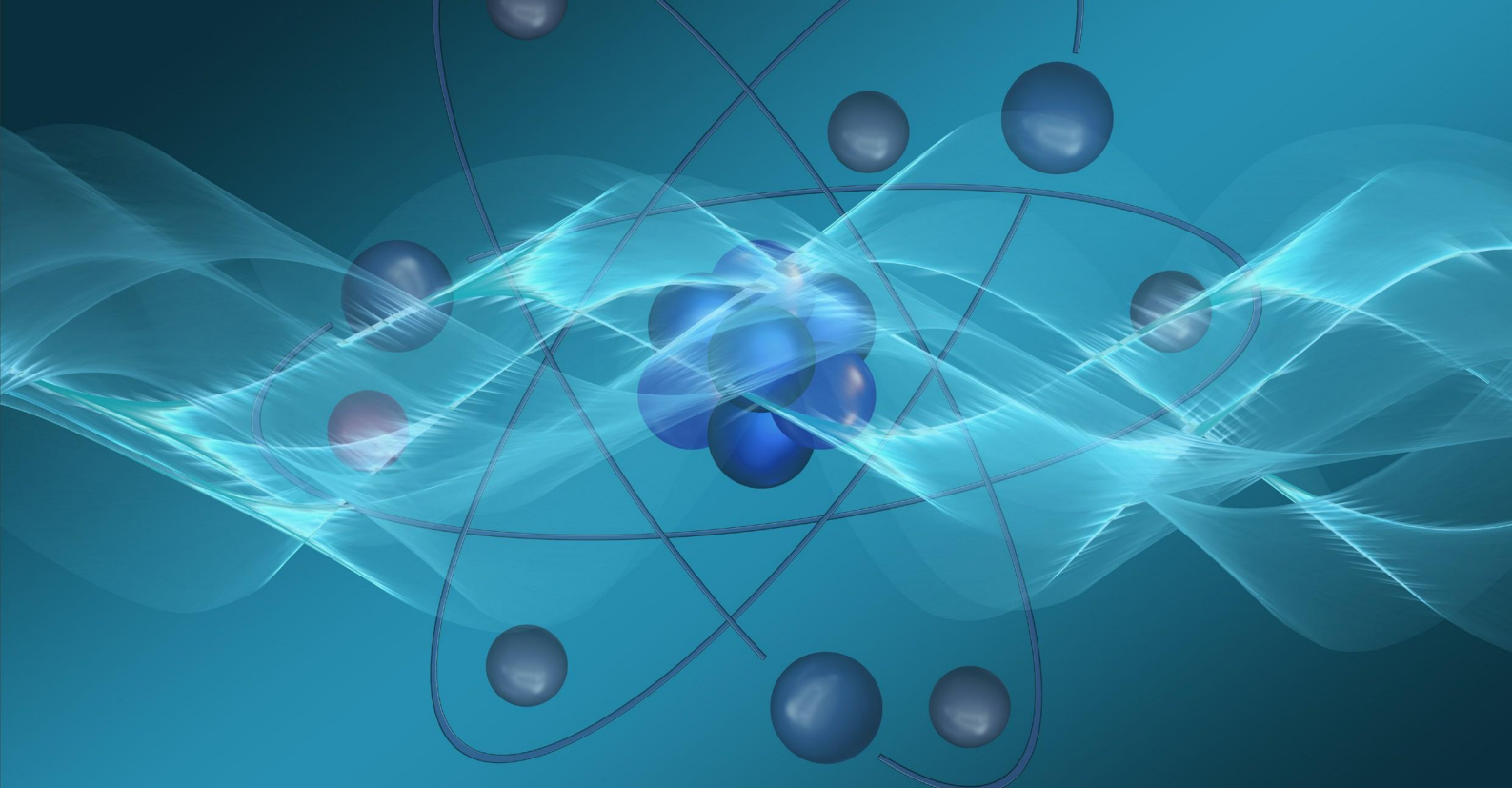




Narrow Linewidth Fixed External Cavity Diode Laser

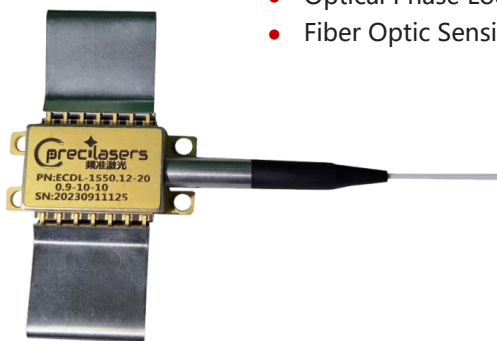
Precilasers' fixed external cavity semiconductor lasers have the characteristics of no mode hopping, narrow line width, ultra-low intensity noise and ultra-large modulation bandwidth. It has important applications in research fields such as atomic gravimeters, optical lattices, lidar, coherent optical communications, high-precision optical sensing, optical measurement and precision spectroscopy.

Features

- Narrow Line Width
- Low Intensity Noise
- High-Speed Tuning Possible
- Linear Polarization
- Never Mode-hop
- Excellent Beam Quality

Applications

- Rb Atom Experiment and Application
- Optical Phase Locking
- Fiber Optic Sensing



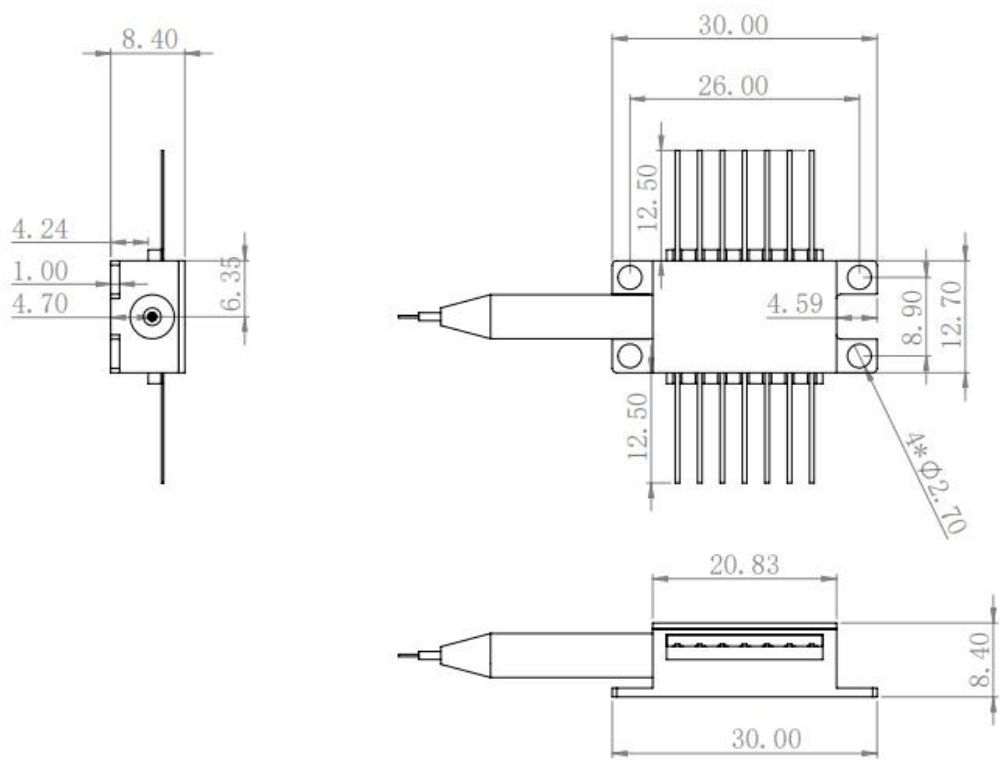
Specification					
Wavelength Optional Range	1000-1260nm	1260-1360nm	1360-1525nm	1525-1575nm	1575-1625nm
Typical Wavelengths	1064nm,1178nm	1319nm	1396.89nm	1550.12nm,1560.48nm	1589.95nm
Output Power	>10mW				
Line Width ⁽¹⁾ (100us)	<20kHz	<20kHz	<20kHz/10kHz ⁽²⁾	<10kHz/5kHz ⁽²⁾	<10kHz/5kHz ⁽²⁾
Tuning Range (Temperature)	> 4GHz	> 7GHz	> 4GHz/7GHz ⁽³⁾	> 7GHz/10GHz ⁽³⁾	> 7GHz/10GHz ⁽³⁾
Current Tuning Range	> 500MHz				
Current Tuning Bandwidth	>1MHz				
Intensity Noise (10Hz-10MHz integration)	<0.03%				
Intensity Noise (10kHz)	< -140dBc/Hz				
Polarization Extinction Ratio	> 20dB				
Power Stability (3 Hour RMS)	< 1%				
Beam Quality	M² < 1.1				
Output Mode	Single-mode polarization-maintaining fiber output, FC/APC connector				
Package	Including power supply and temperature control driver, volume: 117mm*83mm*25mm OR undriven Butterfly Package Package				
Operating environment and power consumption					
Weight	< 0.5kg				
Operating Temperature	0-60℃				
Power Consumption	< 3W				
Powered By	5VDC, 1A, power adapter included				

(1) Fiber delay self-heterodyne beat frequency measurement

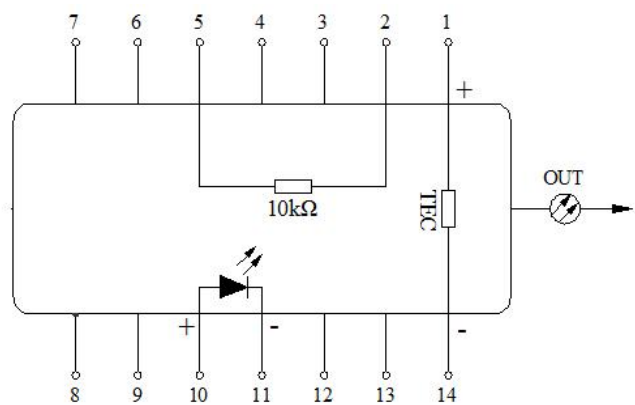
(2) Narrow linewidth option

(3) Wide tuning option

❖ undriven Butterfly Package Package Dimensions & Pin Definitions



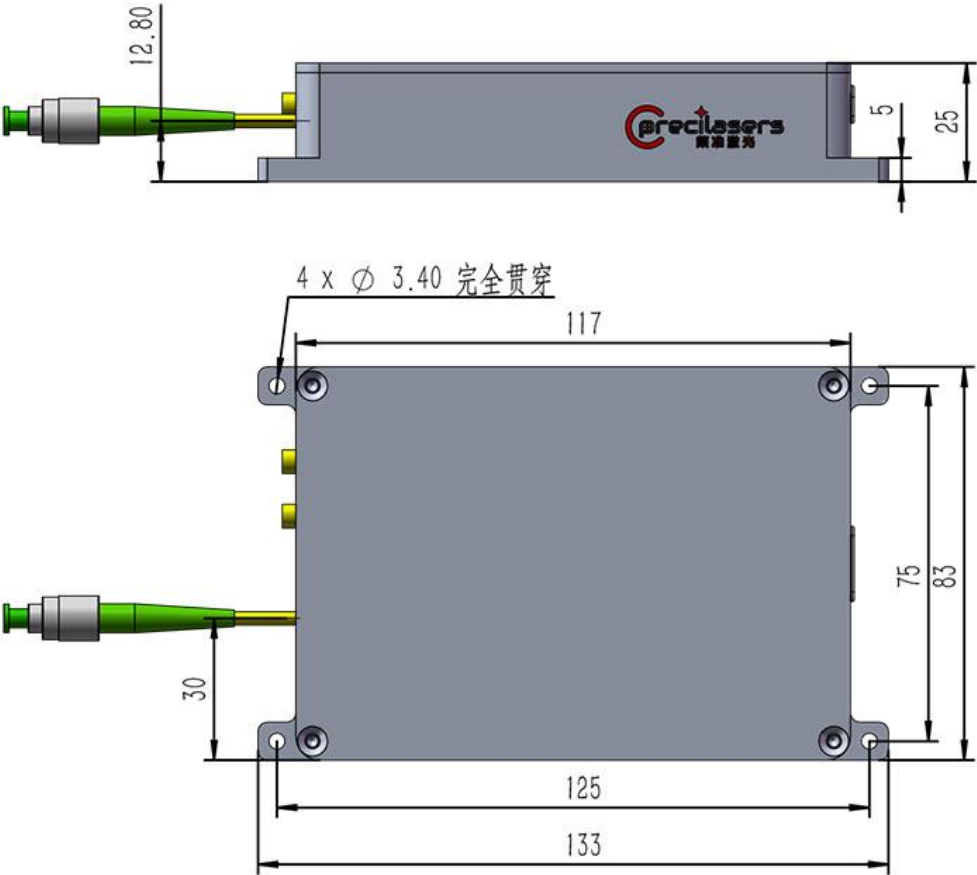
Product Dimensions



1	Thermoelectric Cooler (+)
2	Thermistor
3	NC
4	NC
5	Thermistor
6	NC
7	NC
8	NC
9	NC
10	LD Anode (+)
11	LD Cathode (-)
12	NC
13	NC
14	Thermoelectric Cooler (-)

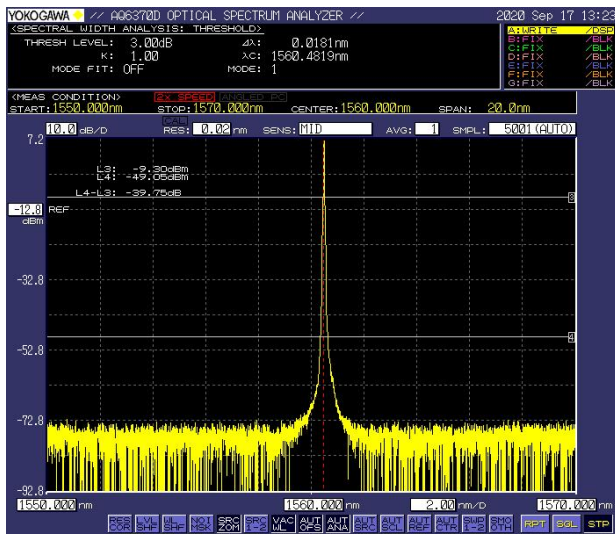
Pin Definition

❖ Drive integrated Fiaxed external cavity diode laser dimensions

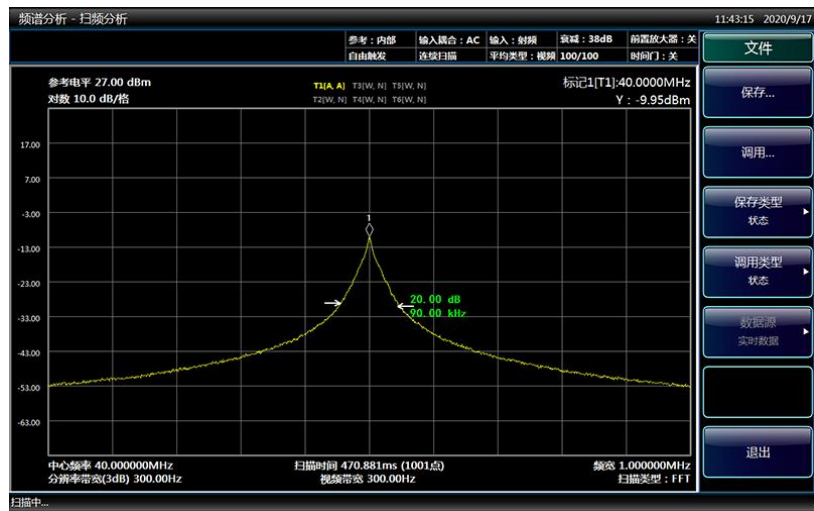


Product Dimensions

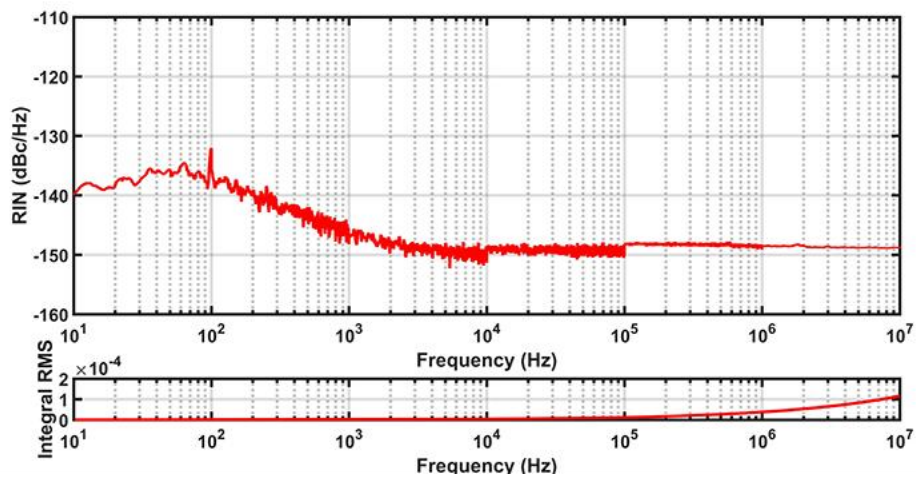
❖ Performance (typical value)



Spectral signal-to-noise ratio: > 70 dB



Line width test chart: 4.5kHz



Relative intensity noise test (RIN) :0.01%[10Hz-10MHz]



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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