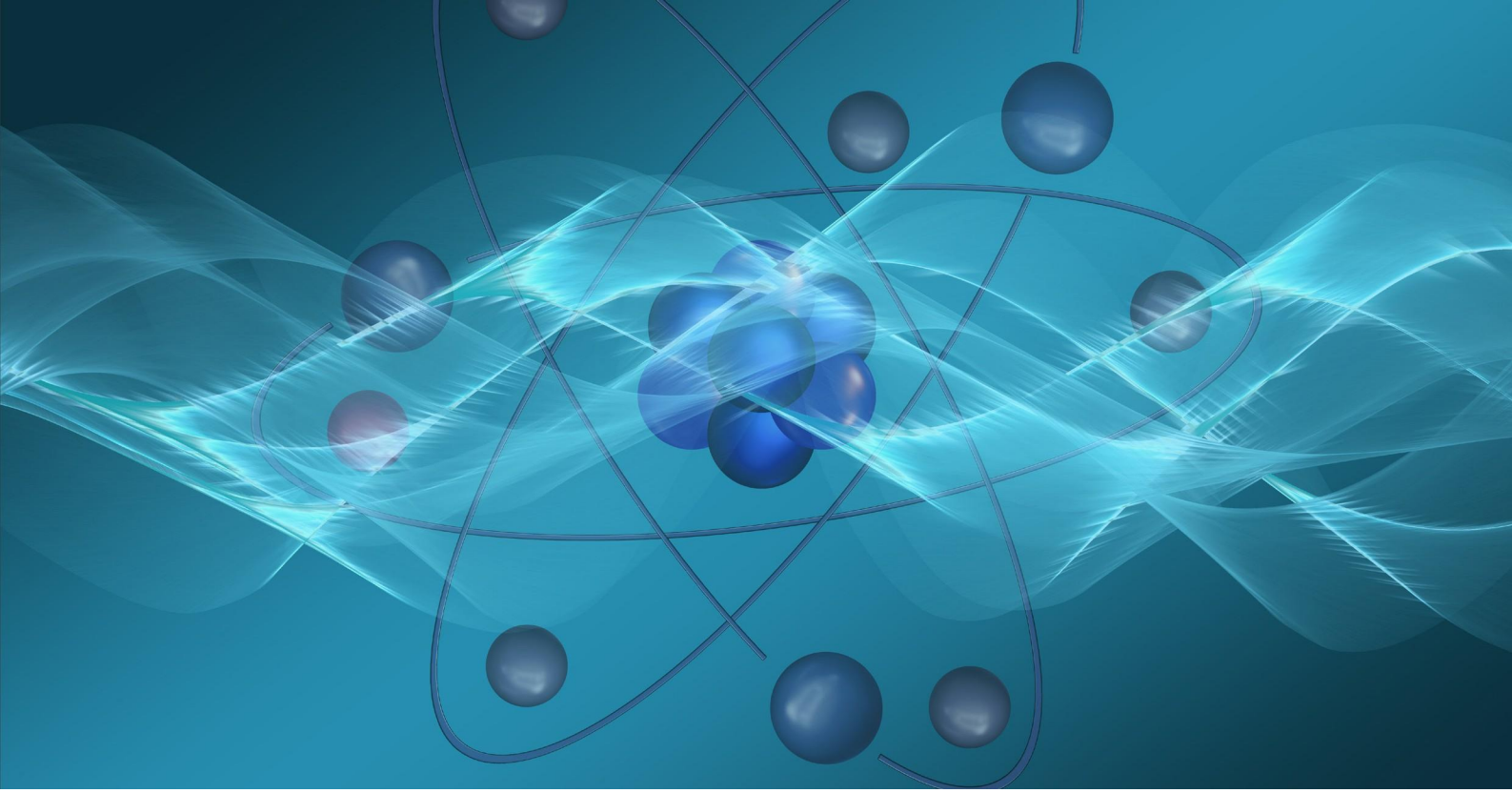


Narrow Linewidth Fixed External Cavity Diode Laser

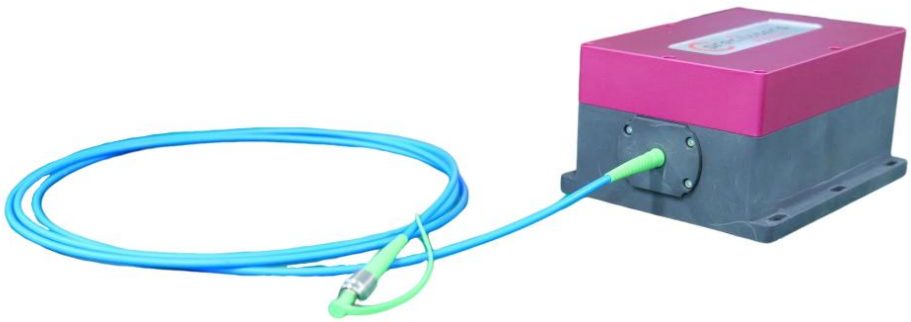
Precilasers' fixed external cavity semiconductor lasers have the characteristics of no mode hopping, narrow line width, ultra-low intensity noise and ultra-large modulation bandwidth. It has important applications in research fields such as atomic gravimeters, optical lattices, lidar, coherent optical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



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Specification						
Wavelength	633nm					
Line Width (1) (100us)	<200KHz					
Package Type	Butterfly Package , Without drive , No isolator		System Integration, With current source and temperature control drive (Built-in isolator)			
Output Mode	Free Space		Free Space	FC/APC (2)	Free Space	FC/APC (2)
Beam Quality	<1.3		<1.3	<1.1	<1.3	<1.1
Output Power	>15mw	>30mw	>15mw	>10mw	>30mw	>20mw
Tuning	Tunable	Not Tunable	Tunable		Not Tunable	
Temperature Frequency Tuning Range	>5GHz	/	>5GHz		/	
Polarization Extinction Ratio	>20dB					
Power Stability (3 Hours RMS)	<1%					
Intensity Noise (10Hz-10MHz integration)	<0.03%	<0.05%	<0.03%		<0.05%	
Intensity Noise (10kHz)	<-140dBc/Hz	<-130dBc/Hz	<-140dBc/Hz		<-130dBc/Hz	
Current Tuning Range	>500MHz	/	>500MHz		/	
Current Tuning Bandwidth	> 1MHz	/	> 1MHz		/	
Other Parameters						
Weight	Driver version included, <1.5kg					
Operating Temperature	0-60℃					
Power Consumption	< 3W					
Powered By	5VDC, 1A, power adapter included					

(1) Fiber delay self-heterodyne beat frequency measurement
(2) FC/APC interface has non-adjustable fiber coupling, optional fiber port: adjustable fiber coupling efficiency

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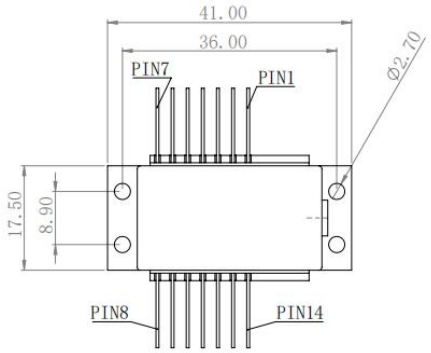
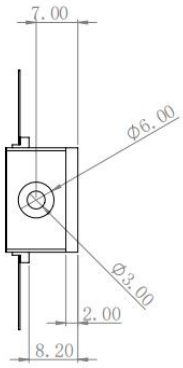
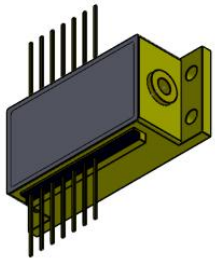
❖ Butterfly device large tube shell size diagram & pin definition diagram

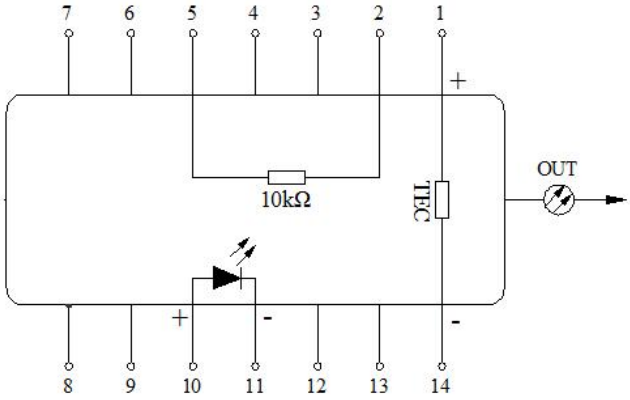




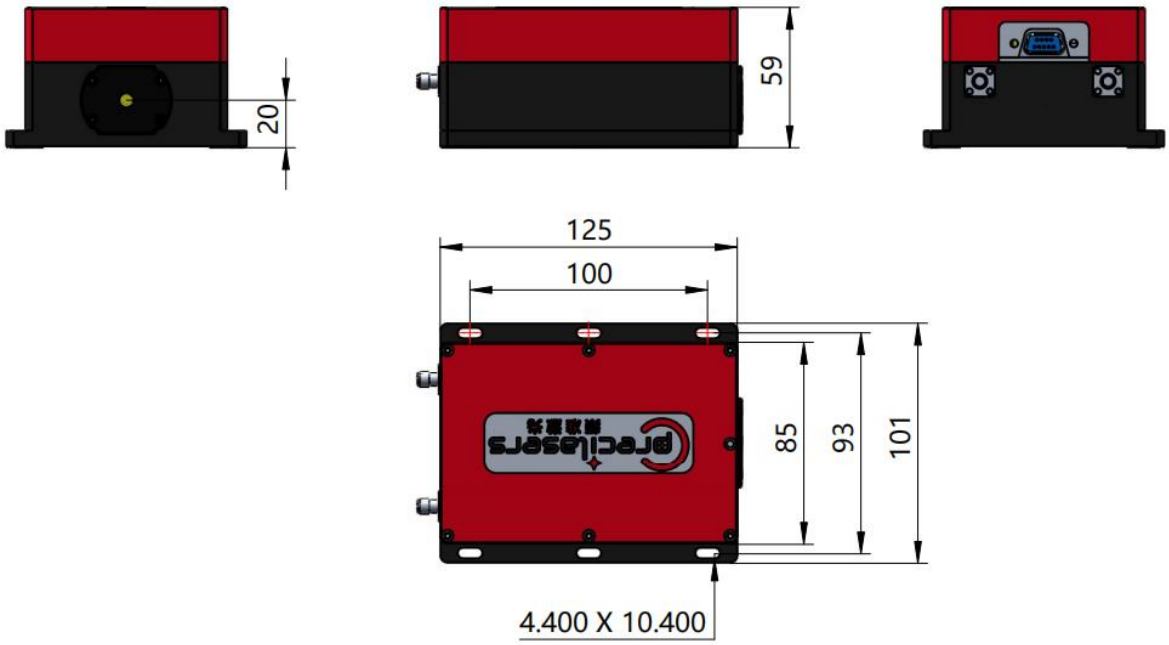


Pin definition diagram

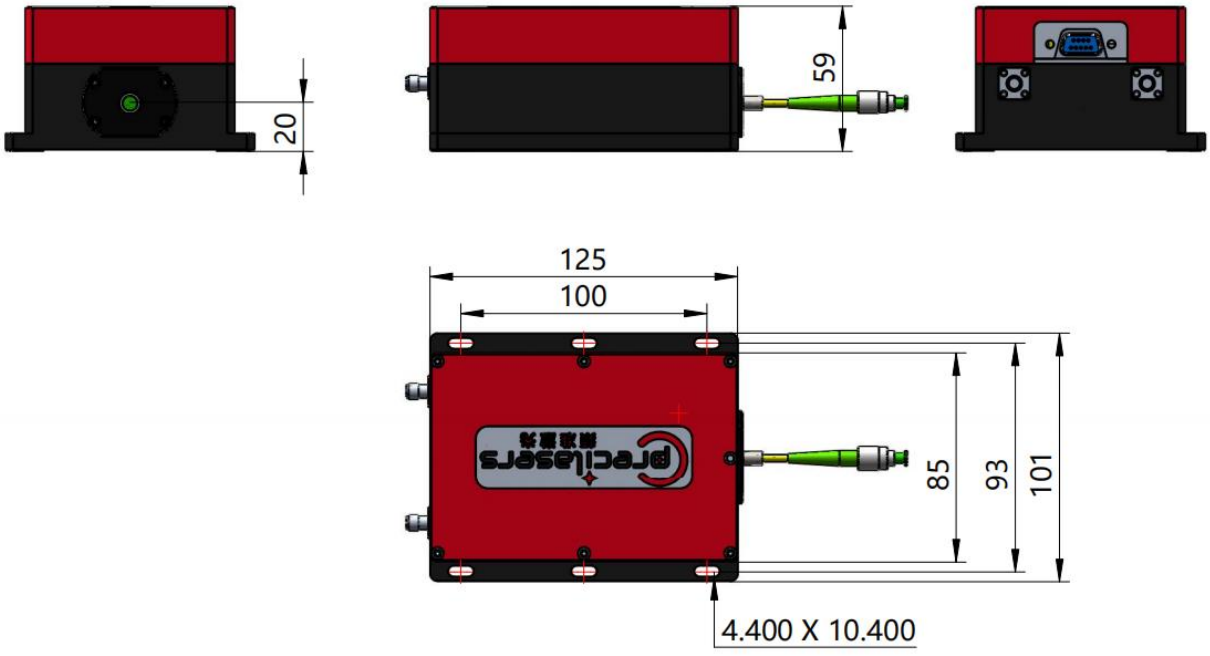
1	Thermoelectric Cooler (+)
2	Thermistor
3	NC
4	NC
5	Thermistor
6	NC
7	NC
8	NC
9	NC
10	LD Anode (+)
11	LD Cathode (–)
12	NC
13	NC
14	Thermoelectric Cooler (–)



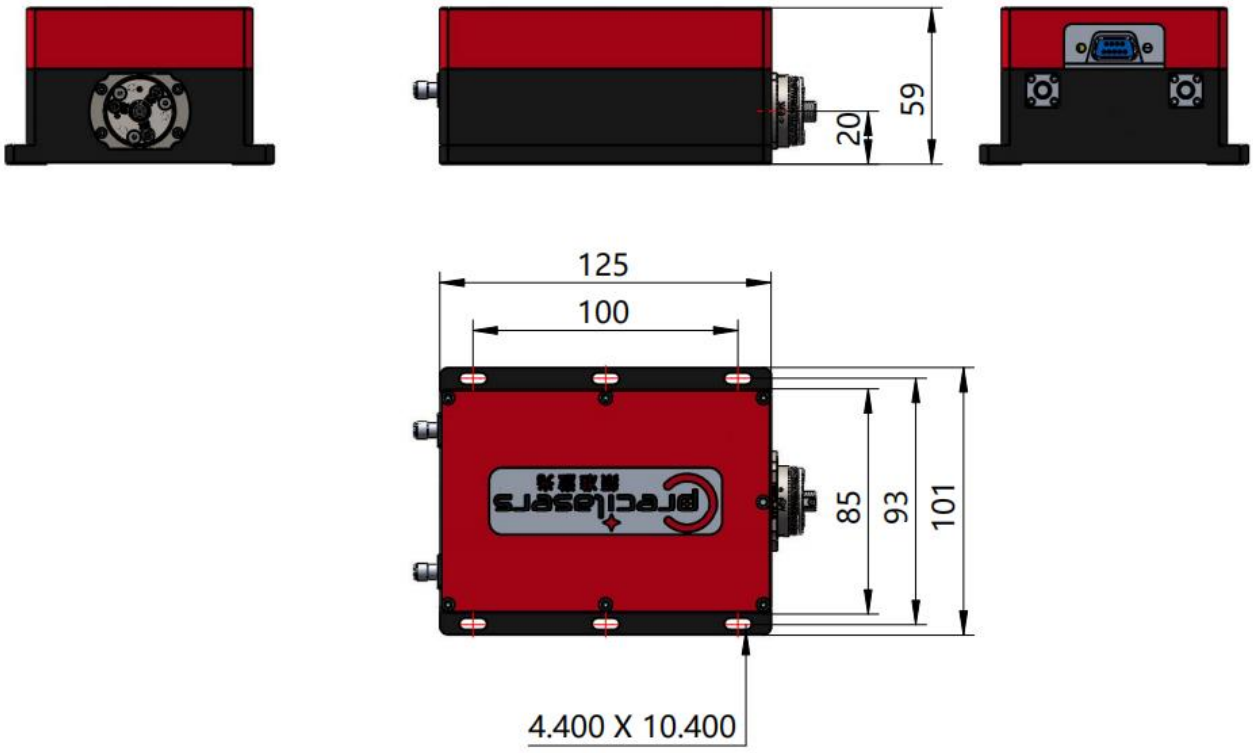
❖ 633nm system module size diagram-space output



❖ 633nm system module dimensions - optical fiber output

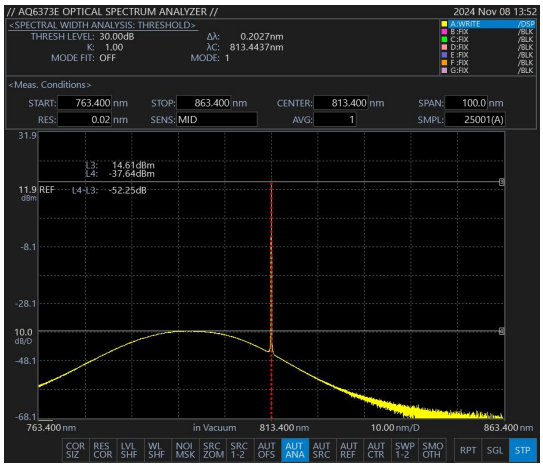


❖ 633nm system module dimensions-fiber port output

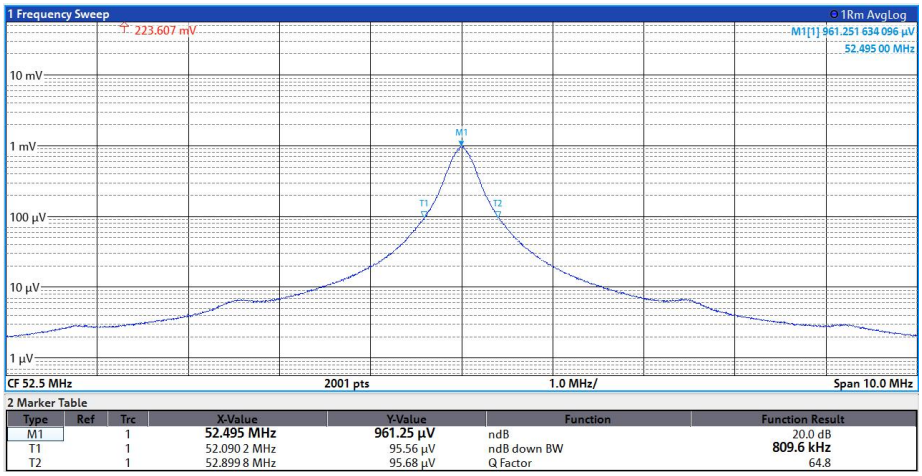


633nm Fiber Port Output Product Dimensions

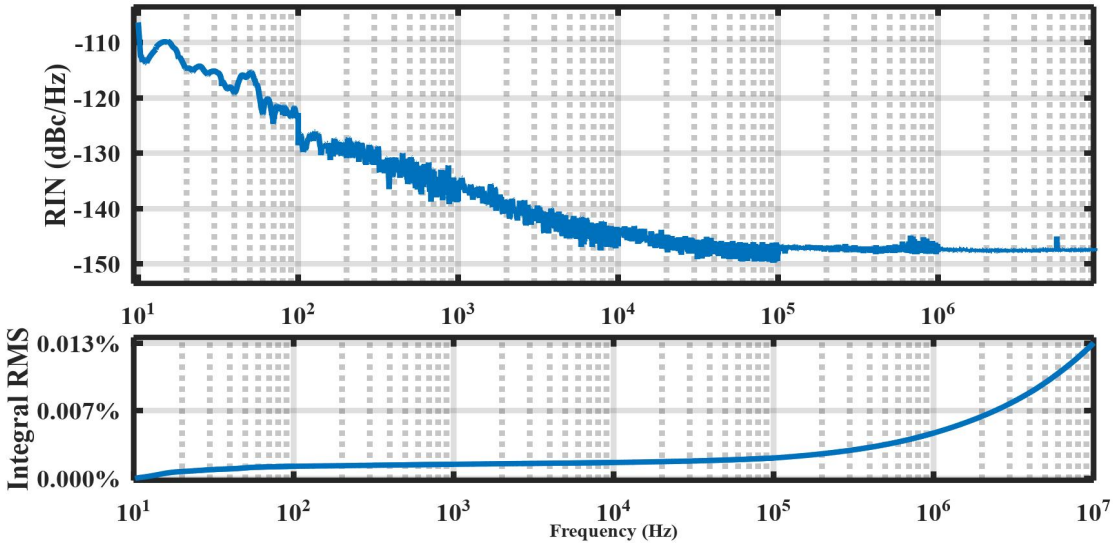
❖ Performance (typical value)



Spectral signal-to-noise ratio： > 50 dB



Line width test chart：40.5kHz



Relative intensity noise test（RIN）:0.013%[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