



633nm Fixed External Cavity Diode Laser

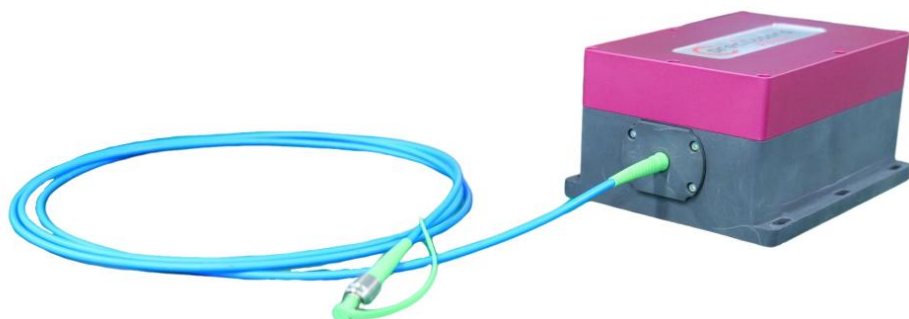
Based on fixed outer cavity semiconductor technology, Precilasers can provide fixed outer cavity semiconductor lasers with a central wavelength of 633nm. The product adopts optical communication-level semiconductor laser packaging technology, combined with a driving source with high modulation bandwidth, to achieve characteristics such as narrow line width, low intensity noise, optional output mode and tunable.

Features

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

Application

- Optical precision measurement



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		/	

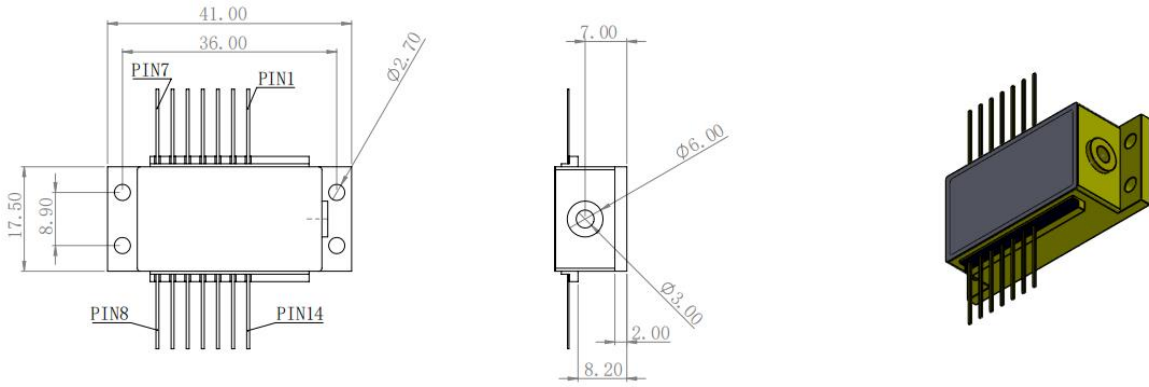
Other Parameters

Weight	Driver version included, < 1.5kg					
Operating Temperature	0-60°C					
Power Consumption	< 3W					
Powered By	5VDC, 1A, power adapter included					

(1) Fiber delay self-heterodyne beat frequency measurement

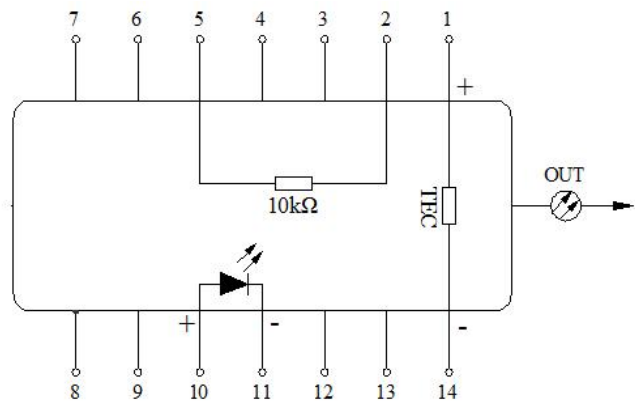
(2) FC/APC interface has non-adjustable fiber coupling, optional fiber port: adjustable fiber coupling efficiency

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

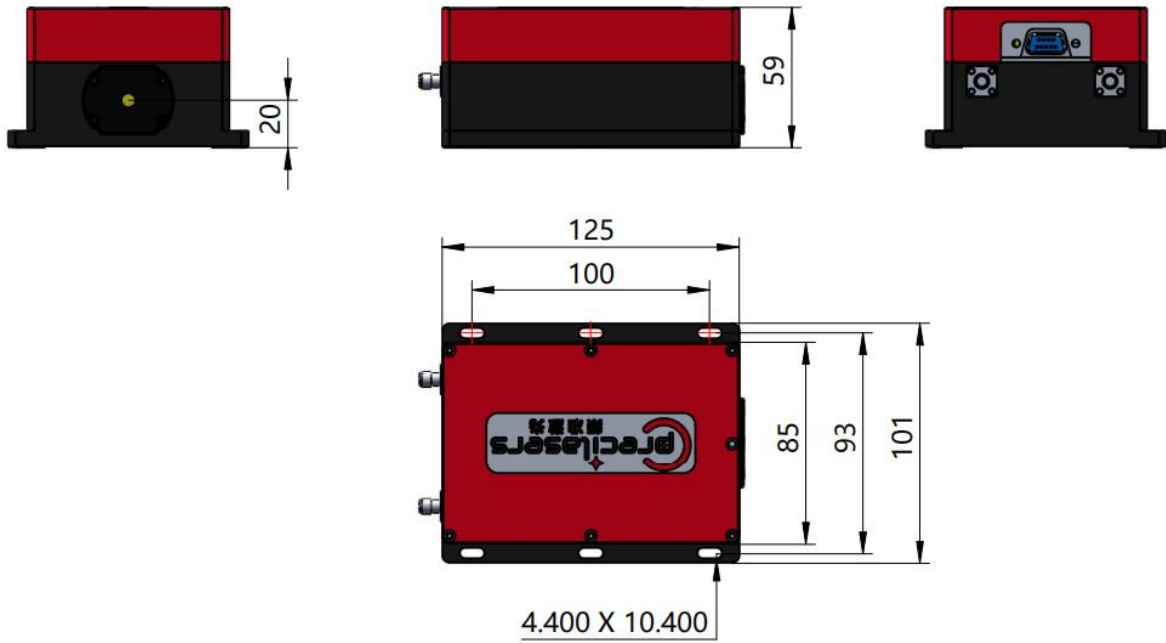


Pin definition diagram

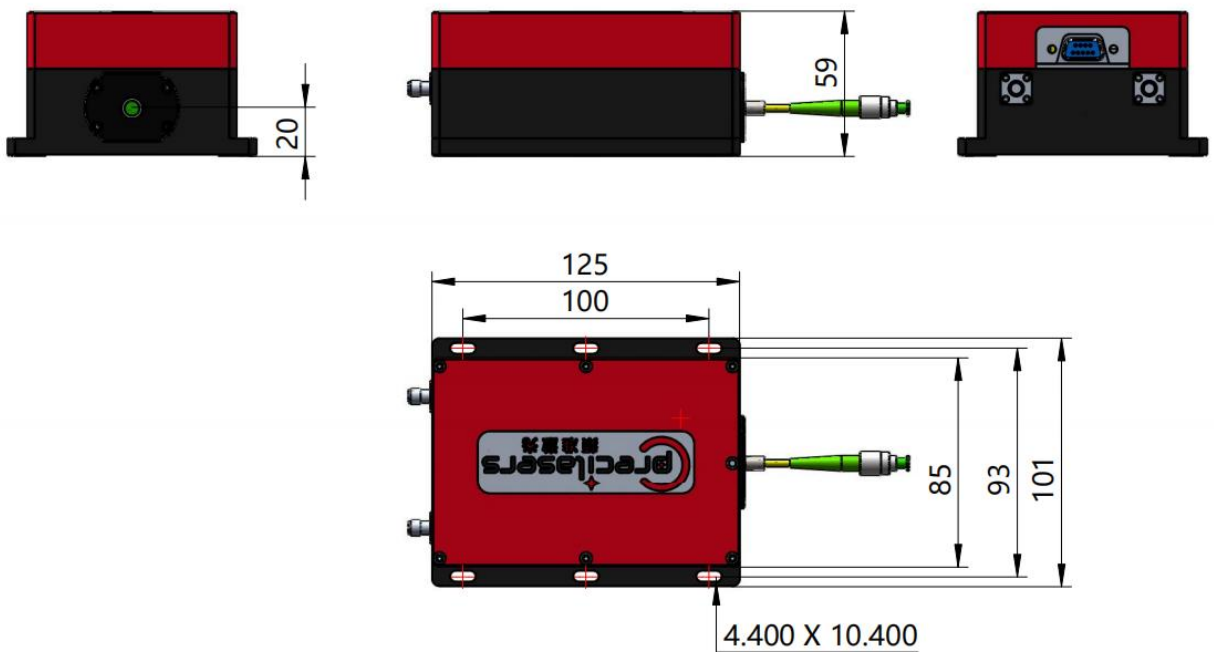
1	Thermoelectric Cooler (+)
2	Thermistor
3	NC
4	NC
5	Thermistor
6	NC
7	NC
8	NC
9	NC
10	LD Anode (+)
11	LD Cathode (-)
12	NC
13	NC
14	Thermoelectric Cooler (-)



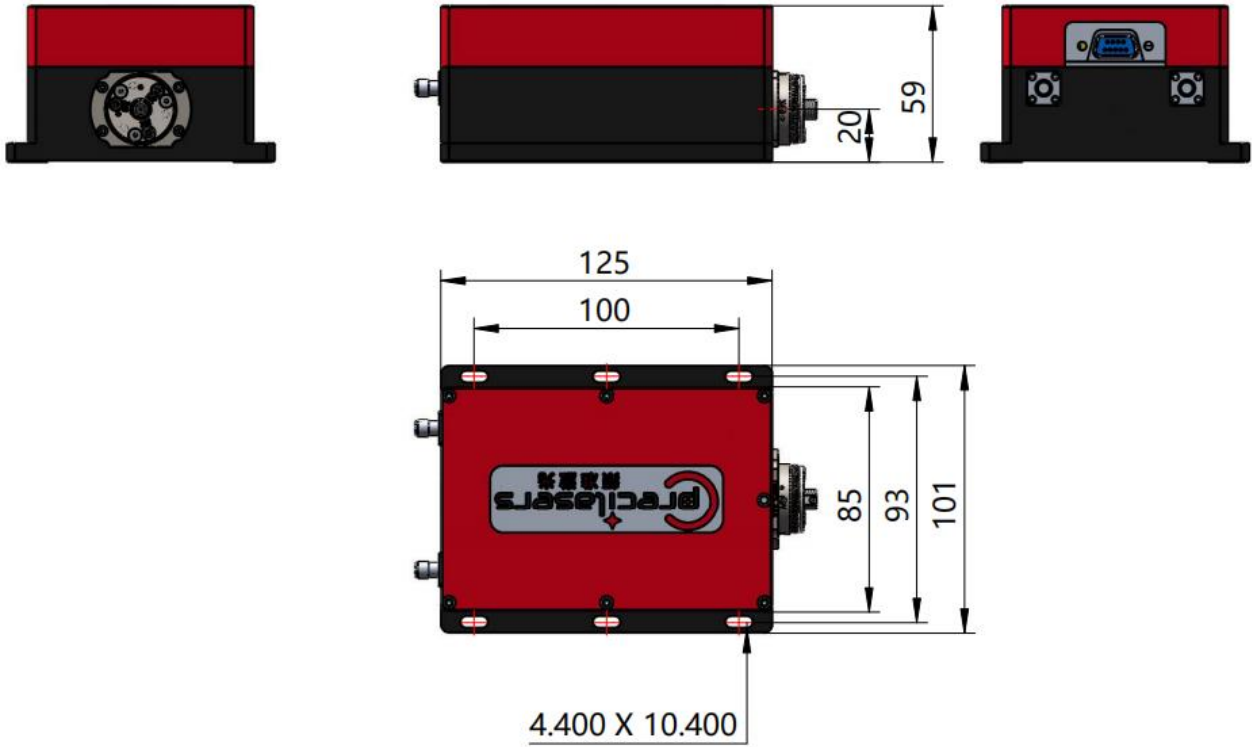
❖ 633nm system module size diagram-space output



❖ 633nm system module dimensions - optical fiber output

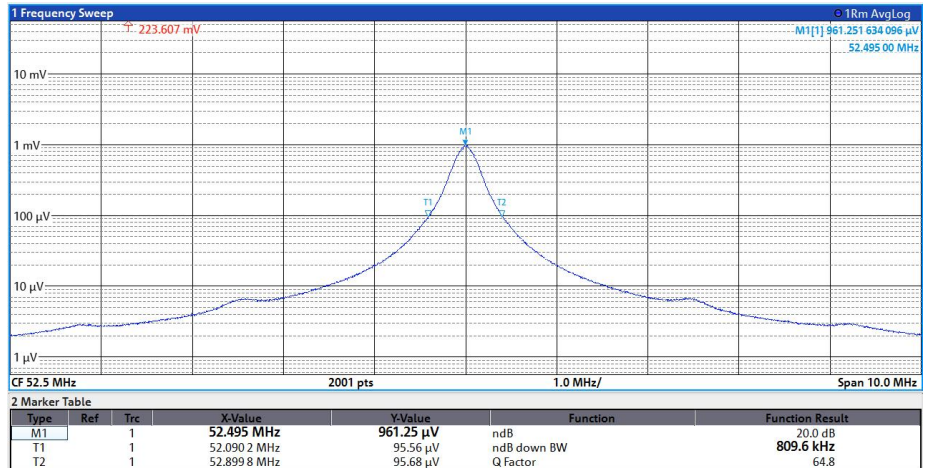
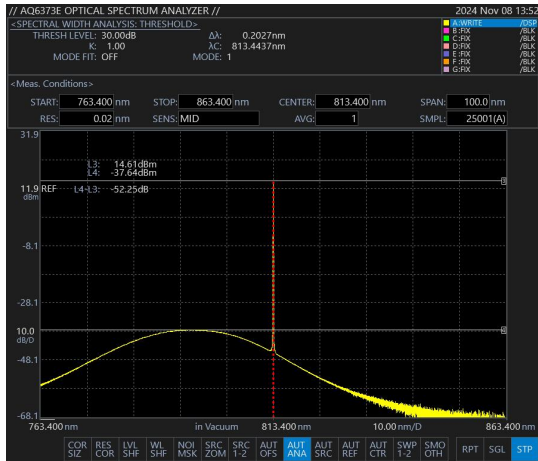


❖ 633nm system module dimensions-fiber port output



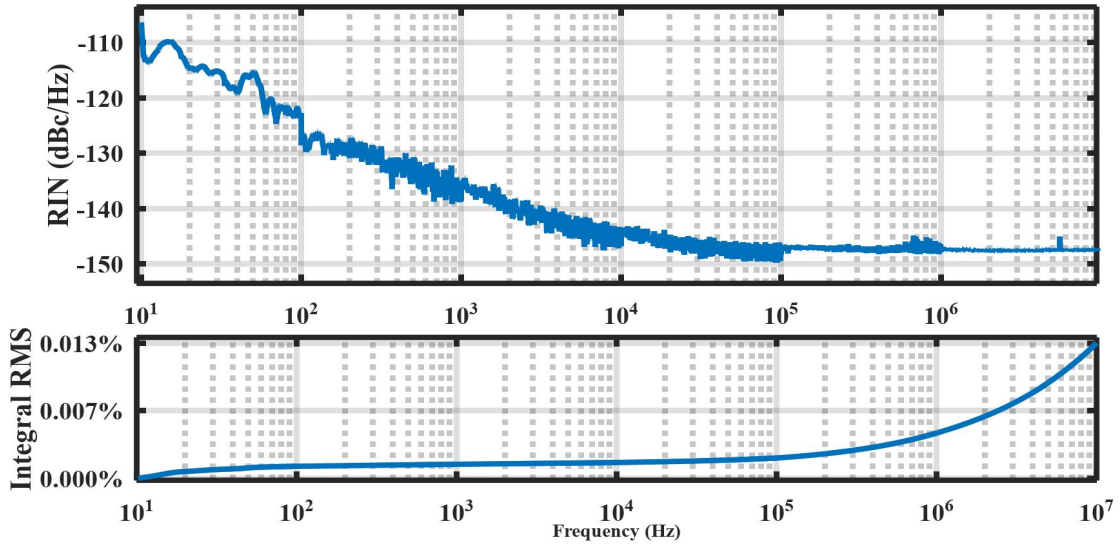
633nm Fiber Port Output Product Dimensions

❖ 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