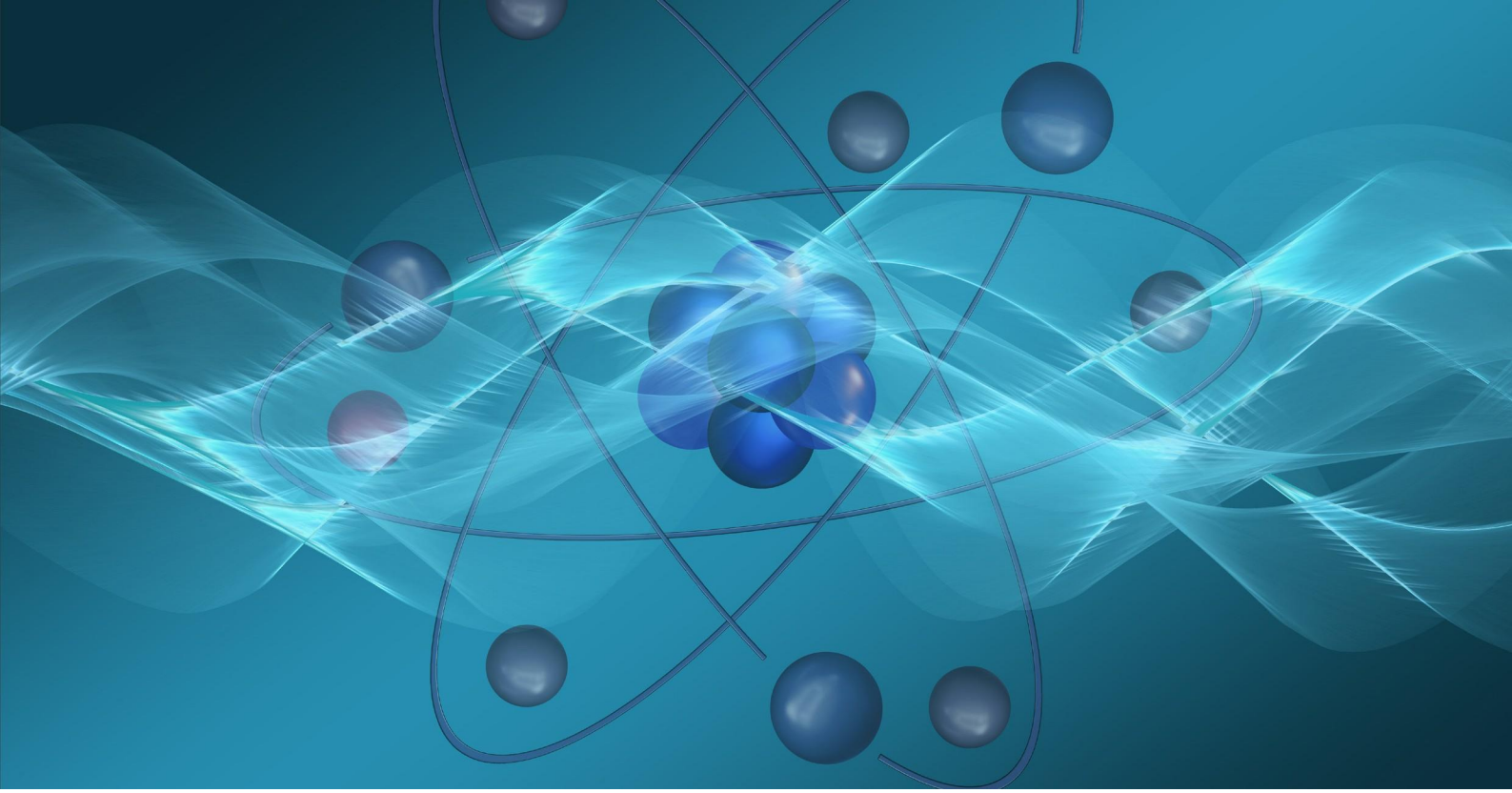


Narrow Linewidth Fixed External Cavity Diode Laser

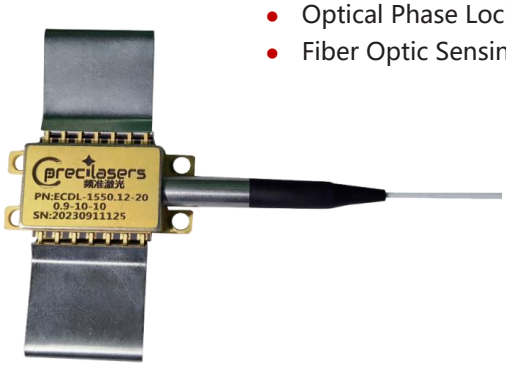
Precilasers' fixed external cavity semiconductor lasers have the characteristics of no mode hopping, narrow line width, ultra-low intensity noise and ultra-large modulation bandwidth. It has important applications in research fields such as atomic gravimeters, optical lattices, lidar, coherent optical 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 Optional Range	770nm-795nm				
Typical Wavelengths	780nm、795nm				
Package Type	Butterfly device, no driver		System integration, small housing, including driver	System integration, large housing, including driver	
Output Mode	Free Space (Built-in isolator)	FC/APC built-in small isolator	FC/APC built-in small isolator	Free Space (Built-in isolator)	FC/APC (2) (Built-in isolator)
Beam Quality	<1.3	<1.1	<1.1	<1.3	<1.1
Output Power	>15mW	>3mW	>3mW	>15mW/30mW (4)	>10mW/20mW (4)
Temperature Frequency Tuning Range	>5GHz				
Line Width (1) (100us)	<100KHz (3) /200KHz				
Polarization Extinction Ratio	>20dB				
Power Stability (3 Hours RMS)	<1%				
Intensity Noise (10Hz-10MHz integration)	<0.03%				
Intensity Noise (10kHz)	<-140dBc/Hz				
Current Tuning Range	>500MHz				
Current Tuning Bandwidth	> 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
(3) Narrow linewidth option
(4) High power option

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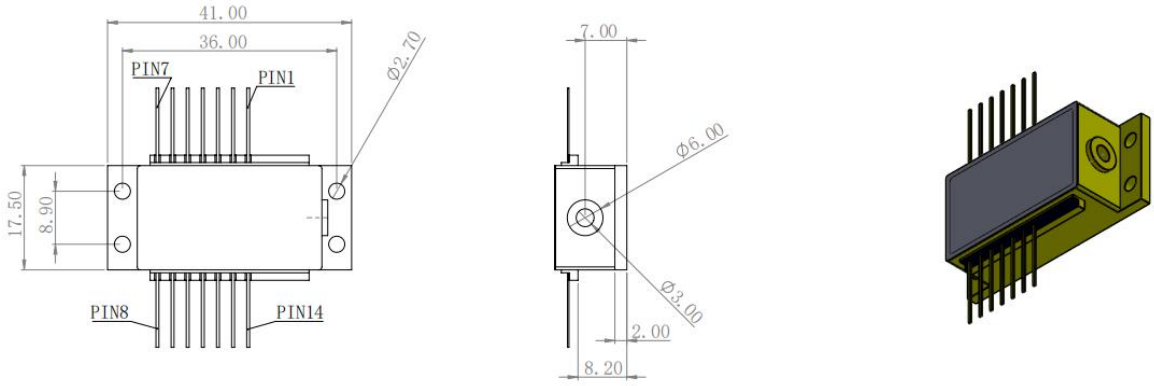
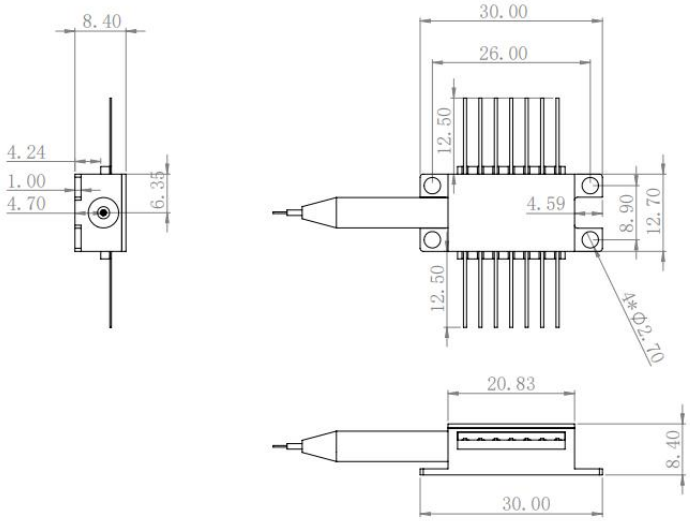
❖ Butterfly device large tube shell size diagram & pin definition diagram

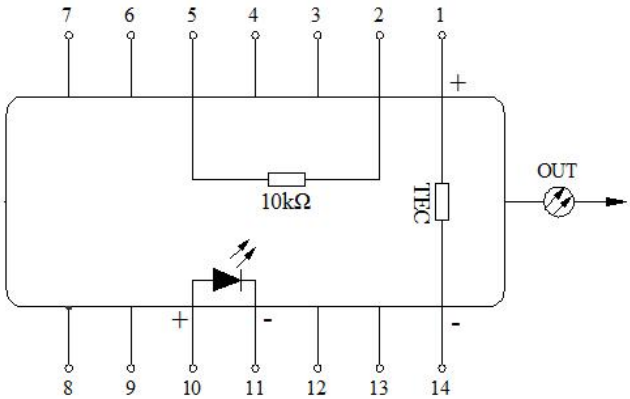


❖ Butterfly device small tube shell size diagram & pin definition diagram

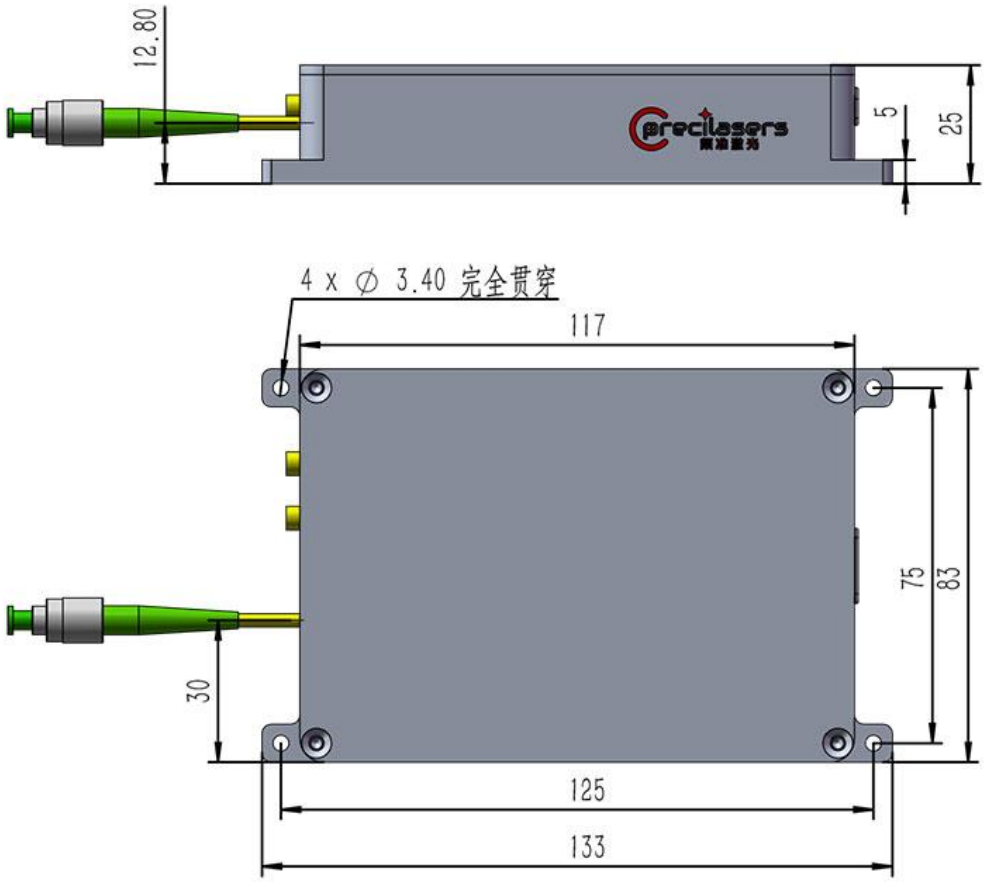


Pin definition diagram

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 (–)

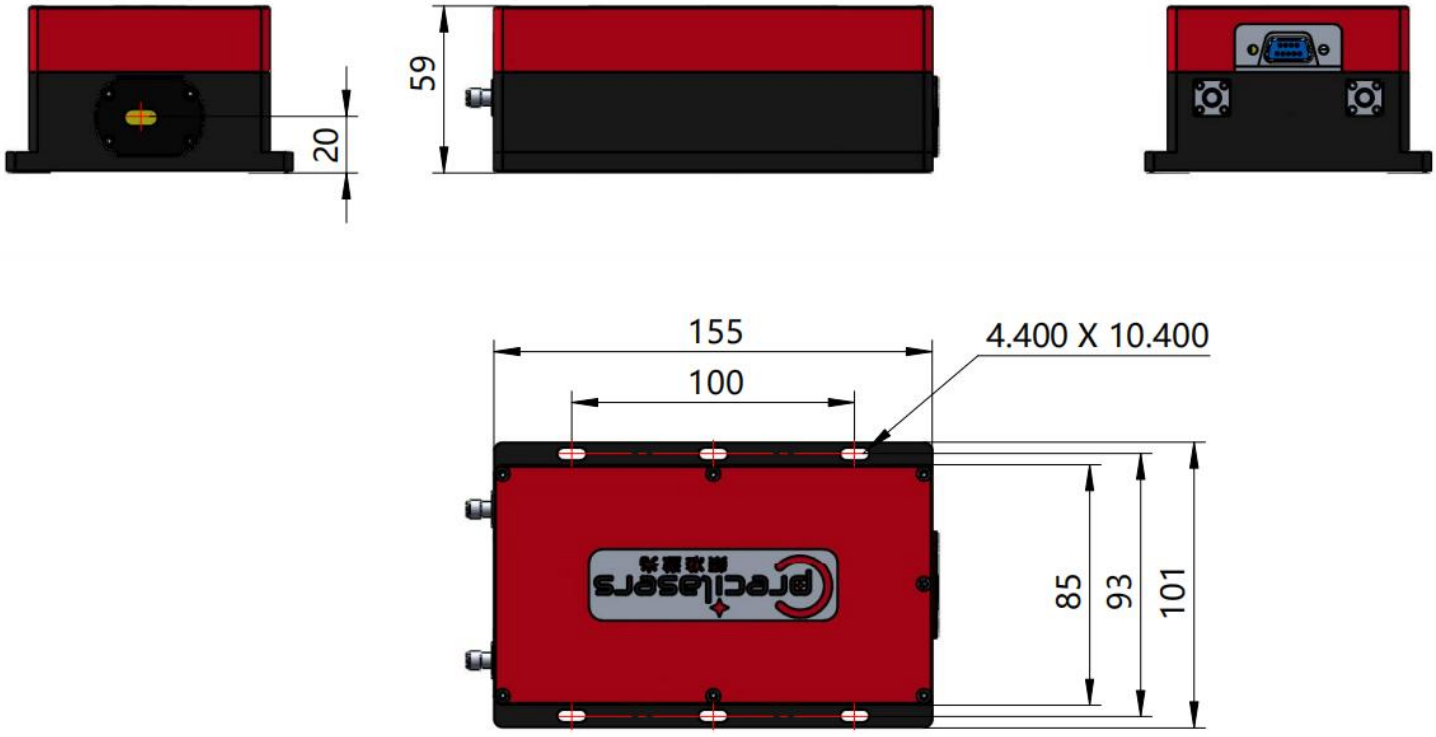


❖ Butterfly Package-Small tube shell-including driver size drawing



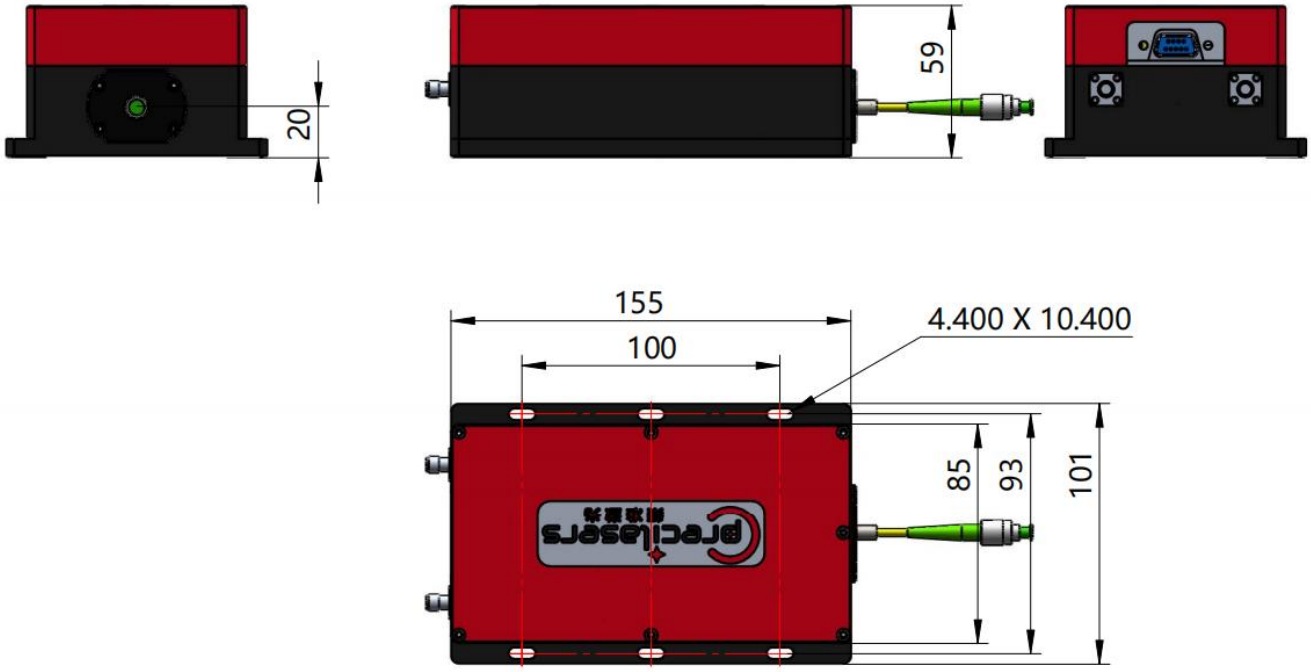
Product Dimensions

❖ Shortwave Universal System Module Dimensions -Spatial Output

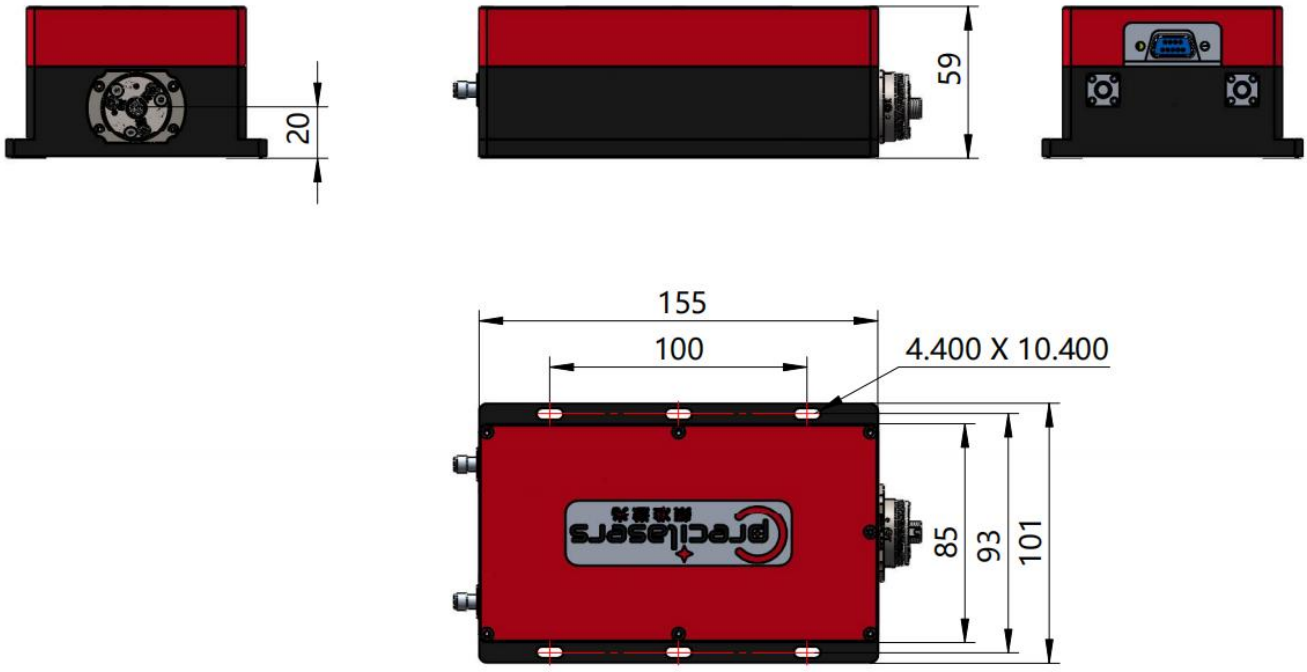


Shortwave Universal Free Space Output Product Dimensions

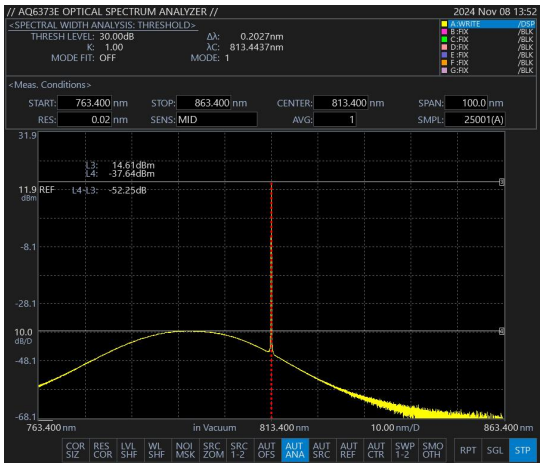
❖ Shortwave Universal System Module Dimensions - Fiber Optic Output



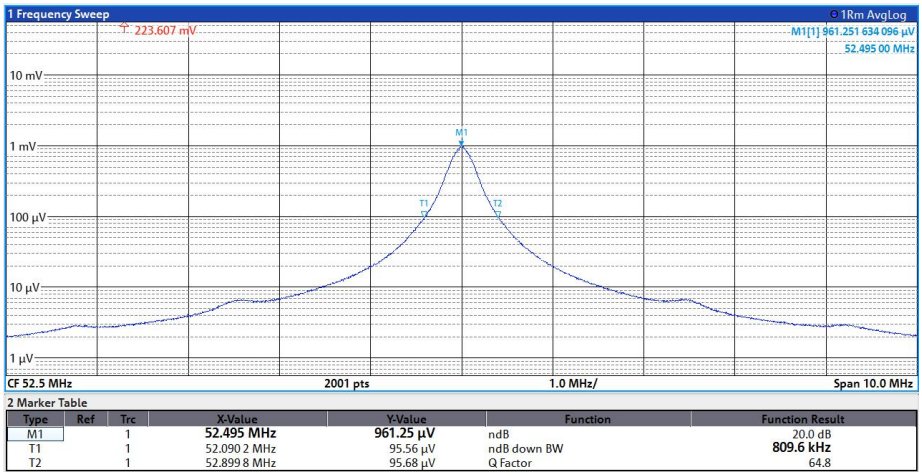
❖ Shortwave universal system module dimensions-fiber port output



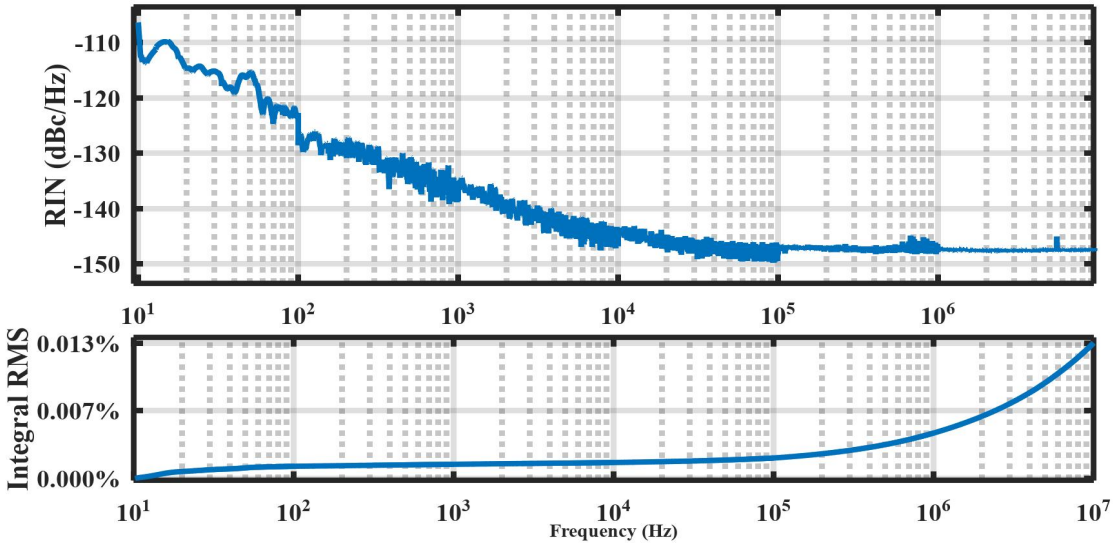
❖ Performance (typical value)



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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Shanghai Precilasers Technology Co., Ltd.
Floor 2, Building 2, No. 1918, Xupan Road, Jiading District, Shanghai
021-59160265

info@precilasers.com | www.precilasers.com

⚠ Laser Hazard

Visible or invisible laser radiation, avoid eye or skin exposure to direct, reflected or filtered radiation.

CLASS 4 Laser Products