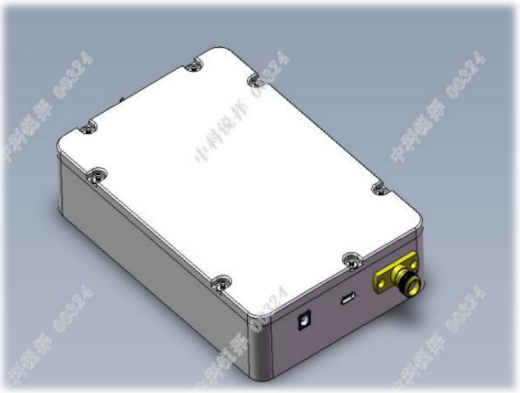
1.5μm Ultra-narrow Linewidth Laser

◆ Product introduction

The 1.5μm single-frequency ultranarrow linewidth laser manufactured by CSRayzer adopts semiconductor DFB chip, utilizes high Q-factor F-P cavity and volume grating (VBG), realizes linewidth narrowing by self-injection locking, reduces the phase noise of the semiconductor laser, and realizes compact ultra-narrow linewidth output. With the ultra-low noise drive circuit module of CSRayzer, it has the advantages of small package size, lower power consumption and better anti-environmental interference ability.



◆ Product features

- Extremely narrow linewidth, as low as 10 Hz
- Strong ability to resist environmental interference
- Extremely low long-term frequency drift
- Low phase relative intensity noise(RIN)
- Stable single frequency operation without mode skip
- Small size and low power consumption
- PZT FM optional
- The wavelength range of 1510-1590nm is selectable.

◆ Application

- Coherent communication
- Mid-infrared OPO pump source
- Spectral synthesis
- Cold atomic physics
- Coherent lidar
- Holovision
- Precise spectral measurement
- Other scientific research

◆ Technical indicators

Model: CSNL-SF-AA-BB-CC-PM-(PZT)(AA: central wavelength, BB: line width, CC: power)

Parameter	unit	Value
Central Wavelength	nm	1535-1590
Output Rating	mW	10-30
Lorentz Linewidth	Hz	≤ 300
Relative Intensity Noise RIN(@10Mhz)	dBc/Hz	-145
Side Mode Suppression Ratio	dB	≥50
Polarization Extinction Ratio	dB	≥20
Output Isolation	dB	≥35
Beam Quality M^2		＜1.1
Frequency Drift @24h	MHz	≤50
Power Stability RMS(24h)	%	≤1
Wavelength Thermal Tuning Range	Ghz	≥20
PZT Voltage Input Range	V	-12.5 to 12.5
PZT Frequency Tuning Coefficient	MHz/V	20MHz/V
Laser Working Mode		Single frequency, CW
Output Type		PM1550
Connector		FC/APC
Working Temperature	℃	-10 to 70
Supply Voltage	V	6-24V
Communication Interface		TypeC/RS485
Pigtail Length	M	≥0.5
Power Consumption	W	2
Dimension	mm	100*65*20

◆ Mechanical dimension diagram