



External Cavity Diode Lasers

Based on cat eye laser architecture, Precilasers' external cavity diode laser has very narrow linewidth and wide tuning range, has been widely used in optical precision measurement, quantum computing, quantum precision measurement.

Features

- Narrow Line Width
- Wide Tuning
- No Mode Hopping in a Wide Range
- Ultra-low Intensity Noise

Application

- Optical Precision Measurement
- Quantum Computing
- Quantum Precision Measurement

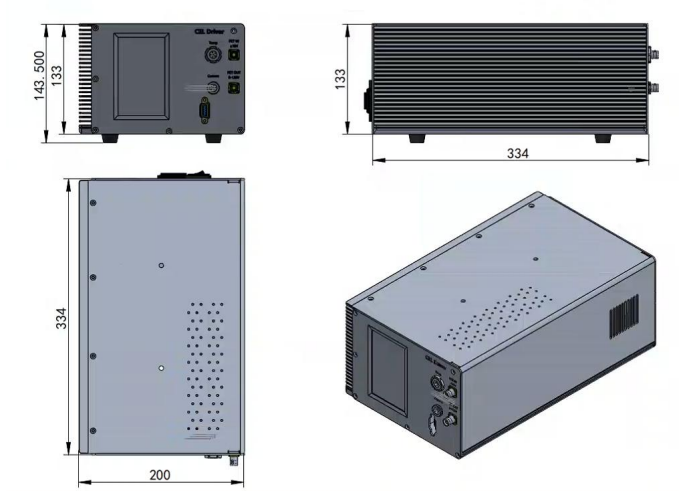


Specification	
Central Wavelength	760-1600nm
Tuning Range	760-780nm/775-795nm/1010-1030nm/1030-1053nm/1040-1063nm/1050-1070nm
Working Mode	continuous
Output Power	> 20mW
Output Mode	Single-mode polarization-maintaining fiber output, FC/APC connector
Line Width ⁽¹⁾ (100us integration time)	< 50kHz(Typical value < 30kHz)
Mode-hop-free Tuning Range	>5GHz
Frequency Stability	<100MHz/°C
Polarization Extinction Ratio	linear, > 23dB
Power Stability (3 Hours RMS)	< 0.75% @3hrs, RMS
Beam Quality	M ² < 1.1
Intensity Noise (10Hz-10MHz integration)	< 0.015%
Intensity Noise (10MHz)	< -140dBc/Hz
PZT Tuning Range	> 5GHz
PZT Tuning Bandwidth	> 5kHz
Current Tuning Bandwidth, DC	>1MHz
Current Tuning Bandwidth, AC	400kHz-400MHz
Current Tuning,DC	250MHz
Temperature Control Accuracy	±1mK, rms, 3hrs
ASE Spectral Signal-to-noise Ratio	>40dB
Output Isolation	>35dB
Cooling	Air Cooling
Other Parameters	
Controller Weight	< 10kg
Laser Head Weight	< 5kg
Operating Temperature	15-30°C, No condensation conditions
Power Consumption	< 20W
Power Supply	100V-240V, AC, 50/60Hz
Communication	RS422

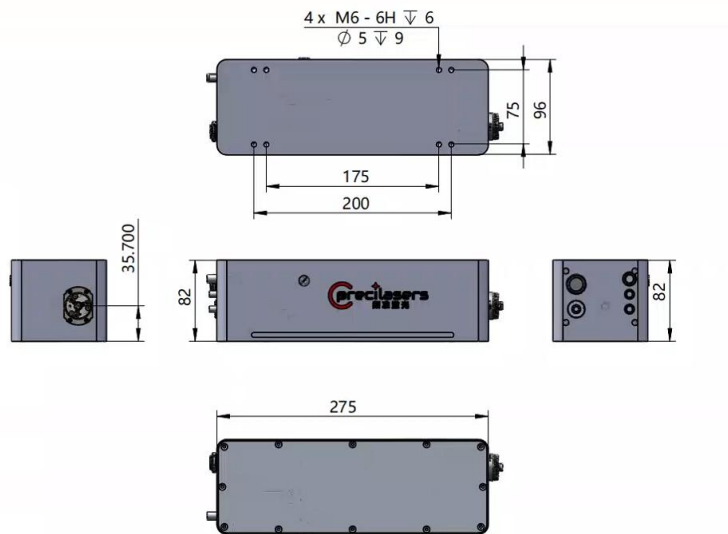
(1) Fiber delay self-heterodyne beat frequency measurement

❖ Product Dimensions

The laser consists of two parts: the laser controller and the laser head, which are connected by a pluggable cable



Laser Controller: includes power supply, current source and temperature control



Laser Head



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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