

## FIXED EXTERNAL CAVITY DIODE LASER

Ultra narrow linewidth, Low intensity noise, No mode hopping, Tunable

Compared with the traditional external cavity diode laser, FECL (fixed external cavity diode laser) has no movable elements in the structure. Thus it is able to work under heavy environment temperature variation and vibration, still free of mode-hop.

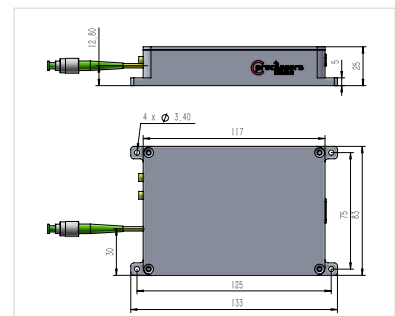
Adopting optical communication diode laser packaging technology, Precilasers developed FECL in a tiny butterfly-package. Meanwhile with the low-noise and high modulation-bandwidth driver, Precilasers' FECL shows ultra-narrow linewidth (< 10 kHz), ultra-low intensity noise (<-150 dBc/Hz @100 kHz), and large modulation bandwidth(> 5MHz).

FECL is widely used in areas like transportable atomic clock, and gravity meter, optical lattice, radar, coherent optical communication, high-precision optical sensing, quantum metrology.



Types	Precilasers-Fiber DFB	Precilasers-Fixed-ECDL
Linewidth, kHz	< 2	< 10
Thermal Tuning Range	1(nm)	7(GHz)
Fast Tuning Range, GHz	3	0.5
Tuning bandwidth	>5(kHz)	>1(MHz)
Tuning method	PZT	Current
Mode hopping	Free	Free

Model	FECL-SF-1064-S	FECL-SF-15xx-S
Central Wavelength <sup>1</sup> , nm	1064	1530-1590
Linewidth, kHz	<20	<10 <5
Output Power, mW	>10	>10
Thermal Wavelength tuning Range, GHz	>5	>7
Fast Frequency Tuning Range, MHz	>250	>500
Fast Frequency Tuning Bandwidth (Option), MHz	0.5	1
Optical S/N, dB	>55	>50
Polarization, dB	Linear, > 20	Linear, > 20
RMS Power Stability	<1 %@3hrs	<1 %@3hrs
Beam Quality	TEM <sub>00</sub> , M <sup>2</sup> <1.1	TEM <sub>00</sub> , M <sup>2</sup> <1.1
RIN@>10KHz, dBc/Hz	<-140	<-145
Output Connector	FC/APC	FC/APC
Dimensions, mm	133×83×25	133×83×25
Power Supply	5 V DC/1A	5 V DC/1A
Power Consumption, W	<12	<12



Size for FECL

1: Wavelength can be customized