LASER

LAZ-LAB-NL-1560

Narrow Linewidth Single Frequency Fiber Laser

Exail's single frequency fiber lasers are based on UV Bragg grating technology applied to active rare-earth photosensitive fibers. Ultra short cavity length and phase-shifted design permit ultra-narrow linewidth and robust mode-hop-free laser source properties, ideal for various sensor applications (acoustic, interferometry and spectroscopy).

Combined with in-house ultra-stable pump driver and integrated into tailored-made benchtop, it delivers stable single frequency laser line with ultra-low intrinsic noise and linewidth lower than 0.1 kHz.

Available in C-band, LAZ-LAB-NL-1560 is tunable over 1 nm with an output power up to 40 mW and provides a single longitudinal linear polarization.

Benefits & Features

- Narrow linewidth < 0.1 kHz
- Low intrinsic phase noise
- Single longitudinal mode
- Output power up to 40 mW
- Linear polarization
- Mode-hop-free
- 1 nm range tunability

Applications

- Sensing
- Coherent LIDAR
- Hydrophone
- Cold atoms
- Laser seeder
- Interferometry
- Spectroscopy

Ordering information

LAZ-LAB-NL-1560-FA: 1560 nm, Narrow Linewidth Laser Module, FC/APC

PSD-L-Q-E-086 L

LAZ-LAB-NL-1560_edA_02012023

contact.photonics@exail.com | www.exail.com
Europe +33 1 30 08 94 50 | Americas +1 508 745 3487 | APAC +60 11 1623 1698

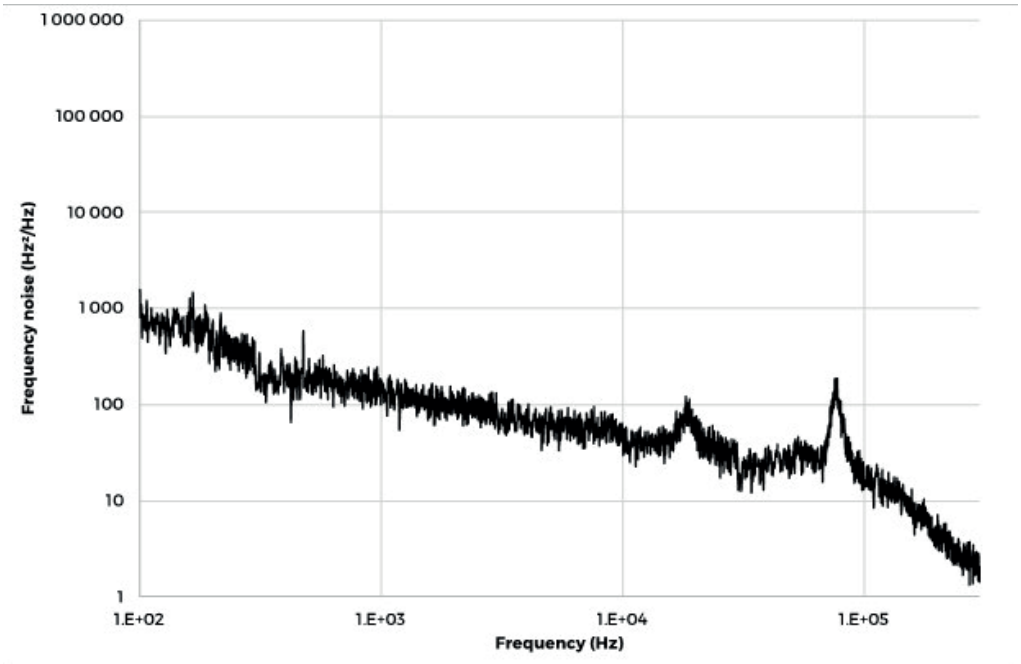
LAZ-LAB-NL-1560
PERFORMANCE HIGHLIGHTS

Parameters

Wavelength (nm)	1560 Other wavelengths available in C-Band
Wavelength tuning range (nm)	1
Laser output power tunability (mW)	1 to 40
Output power stability (%) [1]	< 1
Linewidth (kHz) [2]	< 0.1
Frequency noise @ 100 Hz (Hz^2/Hz)	750
Frequency noise @ 1 kHz (Hz^2/Hz)	130
Frequency noise @ 10 kHz (Hz^2/Hz)	30
Relaxation peak (kHz)	~ 75
RIN @ peak frequency (dBc/Hz)	< -80
RIN @ 10 MHz (dBc/Hz)	< -130
Output fiber	Polarization maintaining fiber, Panda
Polarization Extinction Ratio (PER) (dB)	> 23
Operating temperature range (°C)	18 - 35
Optical connector	FC/APC
Power supply (VAC)	110 - 220
Communication interface	RS232 over USB
Dimensions (mm)	270 x 270 x 59
Weight (kg)	5

[1] Over 12h, 40 mW output power, 23°C room temperature
[2] Intrinsic linewidth

Frequency Noise Curve



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