



NLFS-L-20



DEVICE

Narrow Linewidth Fiber Source Rack Mounted

OVERVIEW

The Narrow Linewidth Fiber Source (NLFS) utilizes cutting edge frequency noise technology allowing it to possess low phase noise characteristics. As a result, this device has the ability to significantly reduce the optical linewidth of the DFB laser diode, while maintaining advantages of a typical semiconductor laser. The applications include: interferometer source, fiber sensors, long coherence laser system and laboratory testing. Based on a DFB semiconductor laser, Optilab NLFS series products are constructed with 100% Telcordia-qualified components to ensure 15+ years of continuous operating life, backed by a three year limited warranty on complete system functionality. Our customer service team provides technical support for any inquires for the operation of the product.

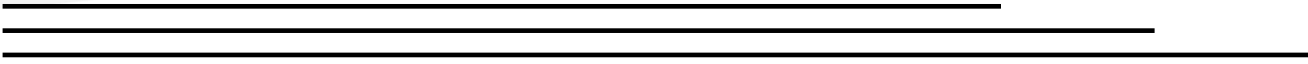
FEATURES

- Front panel plus LabVIEW program monitoring and control
- Can be ordered with options including: EDFA, Modulator, etc.
- Polarization Maintaining Output (PM)
- 100 kHz laser linewidth
- Up to 40 mW output
- Frequency stabilized
- Customer specifies wavelength

ORDERING OPTIONS

NLFS-L-yy-zz

- yy** Output power level: 20 mW or 40 mW
- zz** Options: OM10, Optical Modulator with 10 GHz bandwidth;
OM03, Optical Modulator with 3 GHz bandwidth





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SPECIFICATIONS

Wavelength	1570 - 1607 nm
Laser Linewidth	< 100 kHz
Output Power	20 or 40 mW
Side Mode Suppression Ratio	> 40 dB
Frequency Noise	$< 5 \times 10^7$ (0 - 500 Hz) (Hz ² /Hz), $< 1 \times 10^5$ (1 - 100 MHz)
Relative Intensity Noise	< -150 (1 MHz - 1 GHz) (dBc/Hz)
Frequency Accuracy	± 6 GHz
Frequency Stability	$< 5 \times 10^{-10}$ @ 1 s (Std Dev)
Frequency Modulation Amplitude	± 4 GHz
Laser Current Modulation Bandwidth	Up to 40 MHz
Frequency Tuning	± 25 MHz
Output Type	CW
Polarization Extinction Ratio	20 dB

GENERAL

ADJUSTABLE FEATURES/RANGES

Channel Output Control	On/Off
Output Power Level	0 dBm to 13 dBm typ.
Wavelength via TEC	± 500 pm

MECHANICAL

Temperature Range	0°C to +50°C (operating), -20°C to +60°C (storage)
Operating Humidity	0% to 85% Relative Humidity
Power Supply	80 - 240 V, 43 - 63 Hz AC or 40 - 58 V DC (optional)
Power Consumption	80 W max.
Housing Dimensions	3 RU 19"(W) x 17.5"(D) x 3.5"(H)
Control/Monitoring	Laser Temp. and Current, Output Power, Wavelength
Computer Interface	LabVIEW program via RS-232 Port
Display	Output Power Level, Wavelength via TEC Temperature
Alarms	Over Temperature, Over Current
Optical Connectors	FC/APC, FC/UPC, PM Type
Optical Fiber Type	PANDA (standard)

