

The Rock™ Multi Laser System



Applications

- Interferometric Sensing
- LIDAR
- Test & Measurement
- Metrology

Features

- Vibration Insensitive
- Very narrow linewidth (long coherence length) <1 kHz
- Center wavelength over 1530-1565 nm and 1030 – 1080 nm
- Up to 80 mW output power
- Single longitudinal mode
- Single polarization operation
- Integrated power loop
- Integrated noise reduction
- High wavelength stability
- Integrated with pump laser
- Microprocessor control
- Thermal wavelength tuning
- Fast piezo wavelength modulation
- Customizable

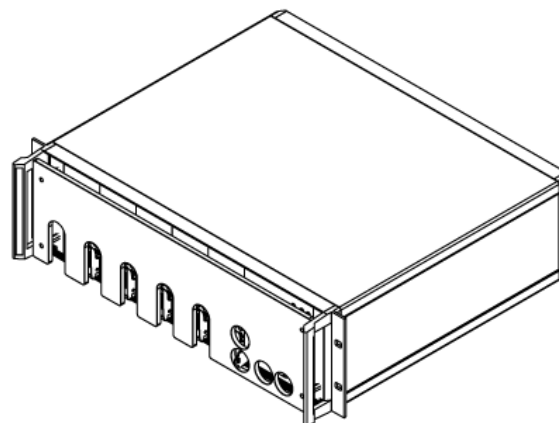
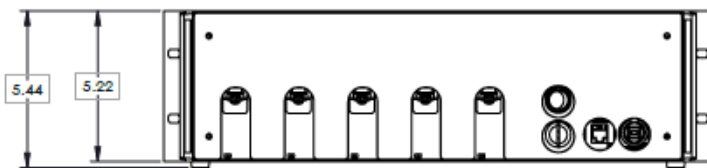
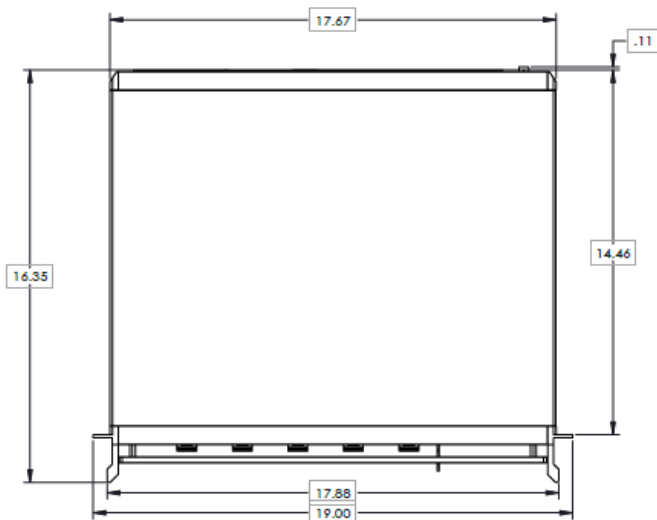
Product Introduction

NP Photonics' ultra narrow linewidth, Fiber Laser Module is the best performing ruggedized laser of its kind for demanding environments.

NP Photonics designs and manufactures a multi-channel system (MCS) that houses up to 5 individual fiber lasers (1-micron and 1.55-micron band) with discrete wavelengths. The MCS can simultaneously control the wavelength of all channels.

NP Photonics Multi-Channel Fiber Laser Systems offers up to 5 ROCK Fiber Laser Modules mounted on interchangeable linecards for convenient and dynamic provisioning. The ROCK laser is a high power, compact fiber laser suitable for sensing, LIDAR, test and measurement, and telecommunication applications. The Fiber Laser Module incorporates proprietary fiber technology developed at NP Photonics. Each Fiber laser provides up to 80 mW of output power (1530-1565 nm and 1030-1080 nm). It provides narrow linewidth with wide thermal tuning and piezo tuning bandwidths. It is most suitable for applications in harsh environments where low noise and wavelength stability are critical.

Mechanical Outline:



PRODUCT SPECIFICATIONS

Parameter	Values
Wavelength Range	1530–1565, 1030-1080 nm
Output Power	25, 50, 80, 100, 125 mW
Longitudinal Mode	Single Frequency
Wavelength Set Resolution	50 MHz
Spectral Line Width (Heterodyne)	< 5 kHz – 10 kHz. 1kHz optional
Frequency Stability (*)	< 50 MHz
Relative Intensity Noise (RIN) @ Peak ~ 1 MHz	<-110 dB/Hz for 1550 nm, <-100 dB/Hz for 1µm
Relative Intensity Noise (RIN) > 50 MHz	Shot Noise Limited
Signal to ASE Noise Ratio (50 pm, bandwidth)	> 65 d
Signal to ASE Noise Ratio (Integrated)	> 35 dB
Side Mode Suppression Ratio (SMSR)	> 50 d
Polarization Extinction Ratio (PER)	Optional
Tuning Range (Thermal)	≥ 30 GHz
Connectors	LC/APC OR SC/APC
Fiber Pigtail	Specify
Package Dimension	19x10.47x21.74
(*) Over 1 hour with base temperature constant to within < 2° c after 30 min warm-up	

Order Information (for example):
RFMLS - LC - OEM – XX - 50 - V – ITU: 20-30-40-50-60



NP Photonics Rock Fiber Laser Sources are protected by a 12-month warranty. All components and assemblies are unconditionally warranted to be free of defects in workmanship and materials for the warranty period, beginning from the date of shipment. This warranty is in lieu of all other warranties, expressed or implied, and does not cover incidental or consequential loss. This warranty does not apply to devices damaged due to operating conditions outside of the specified parameters. Modified warranties for OEM customers are available.



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Specifications subject to change without notice. 01-09