

DFB-CWDM-M



DEVICE

CWDM DFB Laser Module

OVERVIEW

The Optilab DFB-CWDM-M series of products are CWDM Distributed Feedback (DFB) laser sources in a module housing, designed for general laboratory applications. The DFB-CWDM-M is a reliable and cost effective DFB laser source for providing a variety of CWDM wavelengths, from 1270nm up to 1610nm. With its simple and intuitive panel interface, the user can control the DFB light source output power level by adjusting the laser drive current, with USB monitoring, as well as provide up to 1 GHz direct modulation RF signal, all enclosed with its inclusive AC/DC power supply. Contact Optilab for more information.

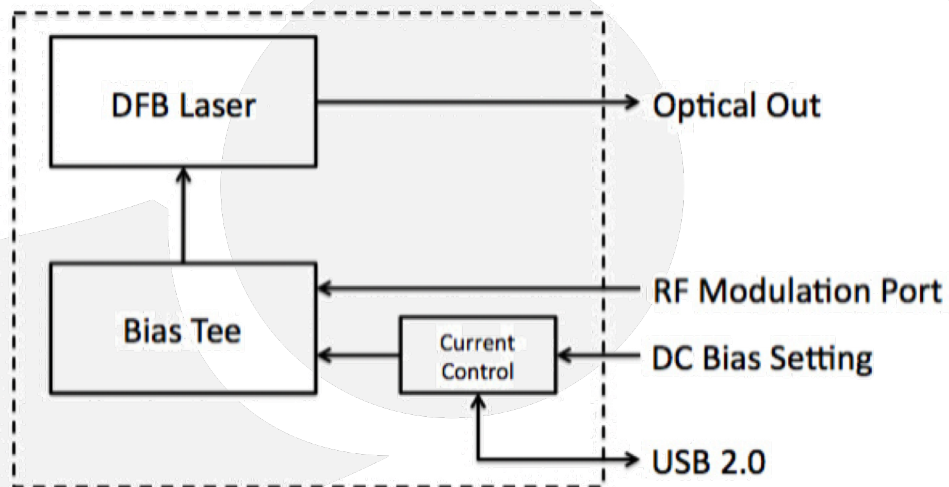
FEATURES

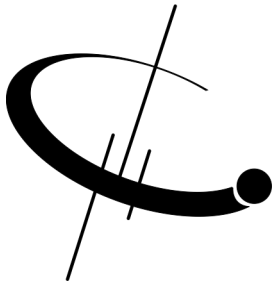
- Modulation RF Signal up to 1 GHz
- Wavelengths from 1270nm up to 1610nm
- Adjustable laser drive current
- USB interface remote monitoring

USE IN

- Long wave (L) RFoF link
- Laboratory test and measurement
- CWDM component qualification

FUNCTIONAL DIAGRAM





DFB-CWDM-M

SPECIFICATIONS

| | |
|--------------------------------|---|
| Available Wavelength Selection | CWDM, 1270 nm - 1610 nm, See attached Table 1.0 |
| Center Wavelength Accuracy | ± 2.5 nm |
| Output Power Level | 2 mW typ. |
| Output Power Stability | ± 0.3 dB over 8 hours |
| Wavelength Stability | ± 200 pm over 8 hours |
| Laser Linewidth | 2 MHz typ., < 1 MHz is available |
| Side Mode Suppression Ratio | 40 dB typ. |
| Optical Isolator | 30 dB min. |
| Relative Intensity Noise (RIN) | -145 dB/Hz max. |
| Polarization Extinction Ratio | 20 dB typ. |

GENERAL

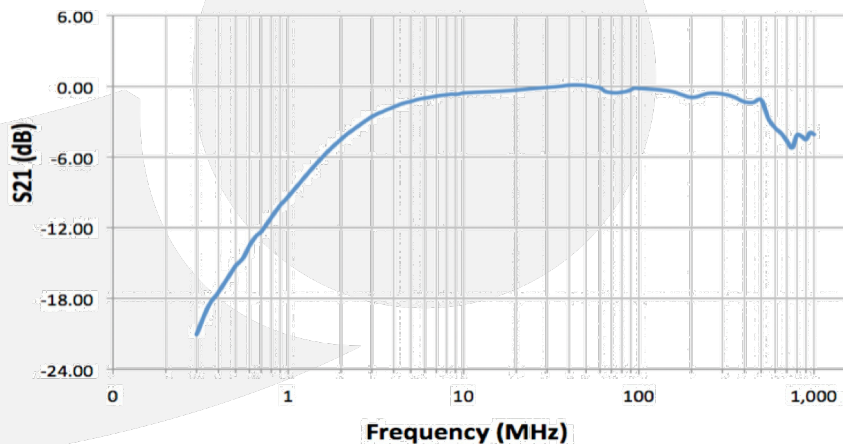
ADDITIONAL FEATURES

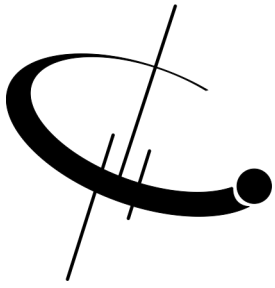
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|------------------------|----------------------------|
| DFB Power Output | 10 - 100% adjustable range |
| RF Modulator Bandwidth | 1 GHz typ., 2 GHz useable |

MECHANICAL

| | |
|-----------------------|-------------------------------------|
| Operation Temperature | 10°C to +50°C |
| Storage Temperature | -65°C to +85°C |
| Operating Humidity | 0% to 85% Relative Humidity |
| Power Supply | 120/220 VAC, 50/60 Hz |
| Power Consumption | 5 W max. |
| Dimensions | 150 x 114 x 30 (mm) |
| Control/Monitoring | LD Current, Output Power |
| Remote Control | USB |
| Optical Connectors | FC/APC, other options are available |
| Optical Fiber Type | SMF-28 |
| RF Connector | SMA Female |
| Accessories Included | USB cable |

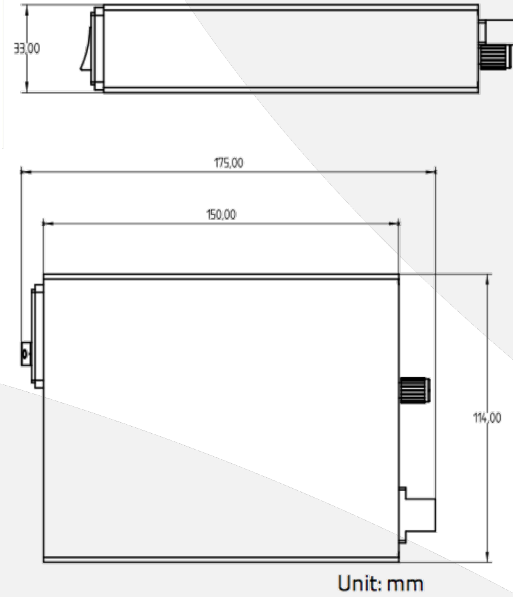
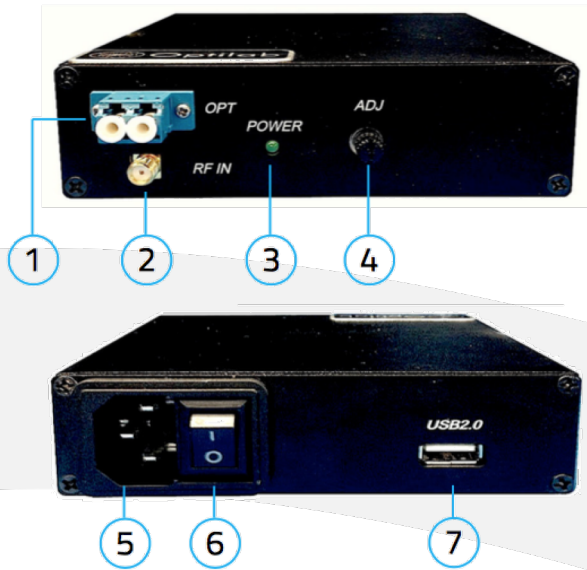
S21 MODULATION BANDWIDTH, NORMALIZED





DFB-CWDM-M

MECHANICAL DRAWING



PORT FUNCTION DESCRIPTION

| | |
|---|-------------------|
| 1 | Optical Output |
| 2 | RF In |
| 3 | Power LED |
| 4 | DC Current Adjust |
| 5 | AC Power Socket |
| 6 | AC Power Switch |
| 7 | USB 2.0 |

TABLE 1.0 AVAILABLE CWDM WAVELENGTHS

| Wavelength | |
|------------|---------|
| 1270 nm | 1450 nm |
| 1290 nm | 1470 nm |
| 1310 nm | 1490 nm |
| 1330 nm | 1510 nm |
| 1350 nm | 1530 nm |
| 1370 nm | 1550 nm |
| 1390 nm | 1570 nm |
| 1410 nm | 1590 nm |
| 1430 nm | 1610 nm |

