



# DFB-CX-PM-M



DEVICE

## CWDM DFB Laser Source Module, 18 Channels, Polarization Maintaining 10mW output, TEC Control

OVERVIEW

The Optilab DFB-CX-PM-M is a Distributed Feedback (DFB) Polarization Maintaining (PM) laser source module designed for CWDM coaxial laser diode. The DFB-CX-PM-M can be ordered from 18 wavelengths, 1270nm ~ 1610nm, with the DFB laser's operating temperature and output power precisely controlled to ensure constant wavelength and power stability. Utilizing the USB /RS-485 port, the user can control the laser drive current and wavelength via PC interface. Contact Optilab for more information.

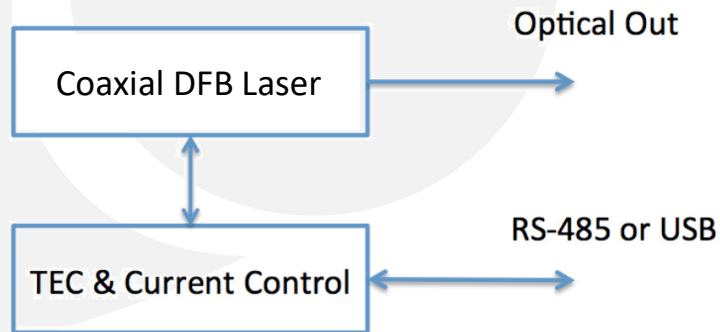
FEATURES

- Polarization Maintaining (PM) output
- Up to 10 mW output
- 18 wavelengths available, 1270nm ~ 1610nm
- Wavelength stability to +/- 10 pm
- RS-485 or USB interface
- Wavelength tuning range: +/- 1 nm

APPLICATIONS

- External Light source
- CWDM networks
- Laboratory testing and measurement
- HFC fiber link

FUNCTION DIAGRAM





# DFB-CX-PM-M

## SPECIFICATIONS

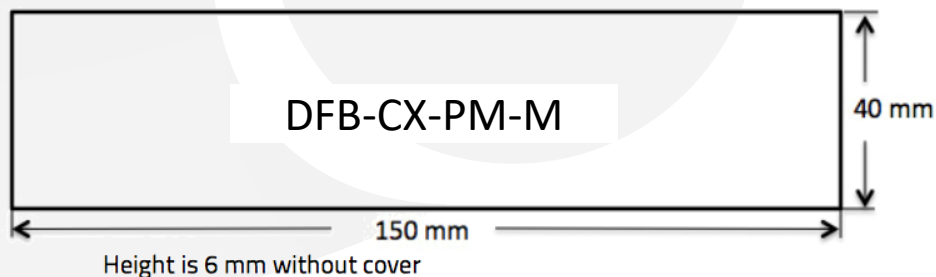
Available Wavelength Range	1270nm ~ 1610nm (See ordering option)
Wavelength Accuracy	Within $\pm 50$ pm
Output Power Level	5 mW, 8mW, 10 mW
Output Power Stability	$\pm 0.2$ dB over 8 hours
Wavelength Stability	$\pm 20$ pm over 8 hours
Laser Linewidth	2 MHz typ
Side Mode Suppression Ratio	40 dB min.
Optical Isolation	30 dB typ.
Relative Intensity Noise (RIN)	-145 dB/Hz typ
Polarization Extinction Ratio	20 dB typ.
DFB Wavelength Tuning	$\pm 1$ nm (from wavelength center)

## GENERAL

Operating Temperature	+10°C to +50°C
Operating Temperature (TQ Version)	-55°C to +70°C
Storage Temperature	-65°C to +85°C
Operating Humidity	0% to 85% Relative Humidity
Power Supply	5 V DC, 500 mA
Power Consumption	5 W max.
Dimensions	130 x 49.50 x 21 mm
Control/Monitoring	LD Current, Laser Wavelength
Remote Control	RS-485 or USB
Optical Connectors	FC/APC; Other options are available
Optical Fiber Type	PANDA for PM Output
Accessories included	USB cable, power supply

## MECHANICAL

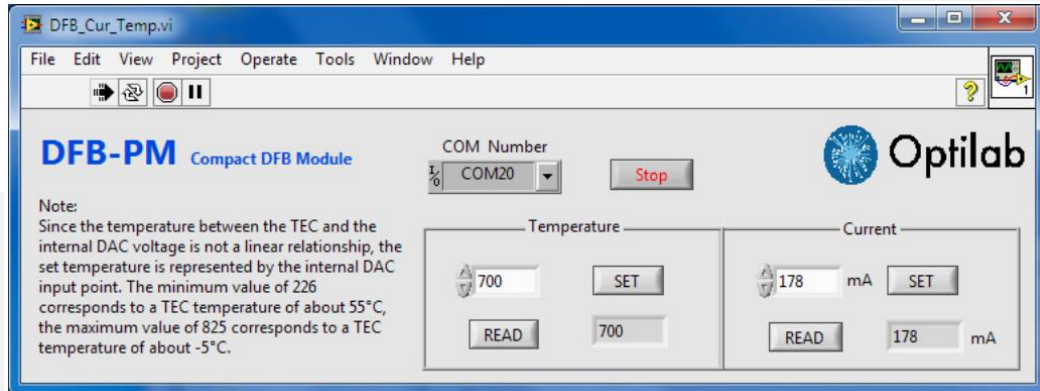
## MECHANICAL DRAWING AND PIN OUT



# DFB-CX-PM-M

## REMOTE LABVIEW INTERFACE

Optilab offers remote interface via Labview software, for parameter adjustment and status monitoring, contact Optilab for more details.



## DETAILED MECHANICAL DRAWING

**PROPRIETARY AND CONFIDENTIAL**

**Optilab**

DO NOT SCALE DRAWING  
ALL UNITS ARE IN MILLIMETERS  
TOLERANCES:  
X.XX±0.1, X.XXX±0.05  
X.XXXX±0.025, ANGLES 0.5°

**TITLE:**  
OPTILAB DFB-XXXX-CX-M

SIZE A3	FILE NO. DFB-XXXX-CX-M.SLDRW	DWG. NO. DFB-XXXX-CX-M	REV 01
SCALE: 1:1	SOFTWARE: SolidWorks 2018.SP5.0.Premium		SHEET: 1 OF 1





# DFB-CX-PM-M

ORDERING  
OPTIONS

**DFB-CX-PM-M-xxxx-yy**

**xxxx** Wavelengths: 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610 nm

**yy** Output Power : 5, 8, 10 mW

CWDM Wavelengths	
1270nm	1450nm
1290nm	1470nm
1310nm	1490nm
1330nm	1510nm
1350nm	1530nm
1370nm	1550nm
1390nm	1570nm
1410nm	1590nm
1430nm	1610nm

