

# 1102 Coaxial DFB Laser Diode

DFB-CX-PM



## CWDM Laser 1270 nm to 1610 nm, Coaxial DFB w/PM Fiber Output

The DFB-CX-PM is a polarization maintaining CWDM coaxial DFB-LD for CWDM analog communication, HFC return-path, laboratory instrument, and R&D applications. This cost-effective, high reliability DFB laser chip has a selectable wavelength with range between 1270 nm and 1610 nm. The versatile DFB-CWDM also features a built-in InGaAsP monitor photodiode, built-in optical isolator and 4-pin coaxial-pigtailed package, SM Fiber coupling, and an FC/APC connector.

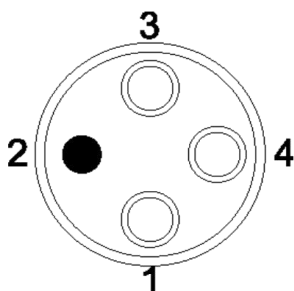
### FEATURES

- Selectable Wavelength: 1270 nm to 1610 nm
- 4-PIN Coaxial-pigtailed, PM Coupling
- Polarization Maintaining (PM) Output
- Built-in InGaAsP Monitor Photodiode
- Built-in Optical Isolator
- High-stability DFB Laser Chip

### USE IN

- CWDM Analog Communication
- HFC Transmission Return-paths
- Laboratory Instrument
- R&D Applications
- Fiber Sensing

### FUNCTIONAL DIAGRAM



#### Type 1 Pinout

Pin 1	PD(+)
Pin 2	LD(+) Case
Pin 3	LD(-)
Pin 4	PD(+)

**Order notes to our customers:** The default parameters are as follows. For special needs, please contact sales.

**1) Connector FC/APC, 900 um, 1 m by default for all devices except for high power devices.**

**2) Slow axis working, fast axis blocked, connector key is aligned to slow axis by default for PM devices.**

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Threshold Current	8 mA typ.
Operating Current	100 mA max.
Analog Bandwidth	2.5 GHz typ.; 30 mA
Monitor PD Current	50 uA min.; 2 mA max.
Monitor PD Dark Current	10 nA max.
Photodiode Capacitance	10 pF min.
RF Passband Flatness	1.0 dB max.
Noise Power Ratio	40/14 min. @ 25 °C
Rise/Fall Time	500 ps max. to 3 Gb/s
Center Wavelength	1270 nm to 1610 nm (See Table 1)
Wavelength Tolerance	±2 nm
Optical Isolation	20 dB
Optical Output Power	2, 4, 6, 8 mW.
Laser Linewidth	0.1 pm max.
Side Mode Suppression Ratio	40 dB typ.
Relative Intensity Noise	-145 dB/Hz typ.
Laser Diode Reverse Voltage	2 V
Laser Diode Forward Current	150 mA
Monitor PD Reverse Voltage	15 V
Monitor PD Reverse Current	2 mA
Operating Temperature	-20 °C to +75 °C
Storage Temperature	-40 °C to +85 °C
Power Supply Voltage	1.2 V typ.; 2.0 V max.
Optical Connectors	FC/APC, Other Available
Optical Fiber	PM Fiber, 900 μm
Housing	Coaxial with Fiber Pigtail

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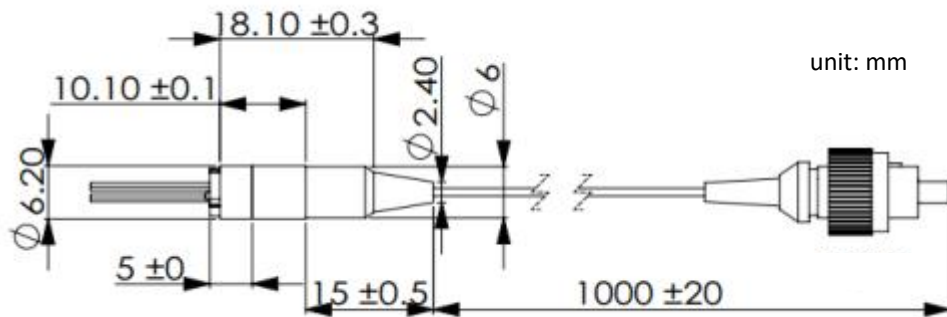
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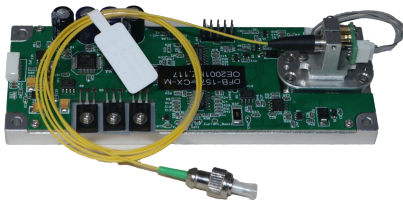


## MECHANICAL DRAWING



## MODULE VERSION

- DFB-XXXX-CX-PM-M



The DFB-XXXX-CX-PM-M is a high-performance integrated laser current and TEC controller, on-board heat sink. Designed specifically for DFB-CX-PM.

## ORDERING OPTIONS

DFB-CX-PM-XX-YY

XX : Wavelength in Nanometer

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

YY : Optical Power in mW

02 mW, 04 mW, 06 mW, 08 mW

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