



# 1002 Coaxial DFB Laser Diode

## DFB-CX



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

The DFB-CX is a 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, single mode coupling, and an FC/APC connector.

Laser Source Diode

Laser Source Diode

#### FEATURES

- Selectable Wavelength: 1270 nm to 1610 nm
- 4-PIN Coaxial-pigtailed, Single Mode Coupling
- High Reliability DFB Laser Chip
- Built-in InGaAsP Monitor Photodiode
- Built-in Optical Isolator

#### USE IN

- CWDM Analog Communication
- R&D Applications
- Laboratory Instrument
- HFC Transmission Teturn-paths

#### ORDERING OPTIONS

##### DFB-CX-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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Laser Source  
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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<br>(See Order Option for More Detail) |
| 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 | 35 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 Types Available                            |
| Optical Fiber               | SMF-28 with 900 μm or 3 mm Jacket                        |
| Housing                     | Coaxial with Fiber Pigtail                               |