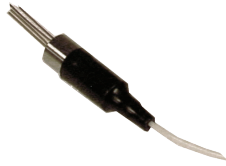


1290 nm to 1450 nm CWDM Coaxial DFB-LD Module

The LDM5S513 is a 1290 nm to 1450 nm CWDM Coaxial DFB-LD Module for CWDM analog communication, CATV return-path, laboratory instrument, and R&D applications.



1290 nm to 1450 nm CWDM Coaxial DFB-LD Module

Product Description

The LDM5S513 is a CWDM Coaxial DFB-LD Module for CWDM analog communication, CATV return-path, laboratory instrument, and R&D applications. The user can select the wavelength on this high-stability DFB laser chip with ranges between 1290 nm to 1450 nm. It has built-in InGaAsP monitor photodiode, built-in optical isolator and 4-pin coaxial-pigtailed package, single mode coupling, and FC/APC connector.

Features

- User can select operating wavelength between 1290 nm to 1450 nm
- High-stability DFB laser chip
- Built-in InGaAsP monitor photodiode
- 4-pin coaxial-pigtailed package, single mode coupling
- Built-in optical isolator

Applications

- CWDM analog communication
- CATV transmission return-paths
- Laboratory instrument
- R&D applications

PRODUCT SPECIFICATIONS

Electical Specifications

Threshold Current	8 mA typ., 15 mA max.
Operating Current	100 mA max.
Analog Bandwidth	2.5 GHz typ. @ 30 mA
Monitor PD Current	50 μ A 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

Optical Specifications

Center Wavelength	$\lambda \pm 2$ nm
Optical Isolation	20 dB
Optical Output Power	3 dBm typ.
Laser Linewidth	0.1 nm max.
Slope Efficiency	0.05 W/A min., 0.15 W/A max.
Side Mode Supression Ratio	30.0 dB min.
Spurious Noise w/ Carrier	-60 dBc typ.
Spurious Noise w/o Carrier	-52 dBc typ.
Relative Itensity Noise	-150 dB/Hz max.

Maximum Rating Specifications

Laser Diode Reverse Voltage	2 V
Laser Diode Forward current	150 mA
Monitor PD Reverse Voltage	15 V
Monitor PD Reverse Current	2 mA

Ordering Information

LDM5S513-0x-y

Wavelength of DFB:

0, 1290 nm DFB; 1, 1310 nm DFB;
2, 1330 nm DFB; 3, 1350 nm DFB;
4, 1370 nm DFB; 5, 1390 nm DFB;
6, 1410 nm DFB; 7, 1430 nm DFB;
8, 1450 nm DFB

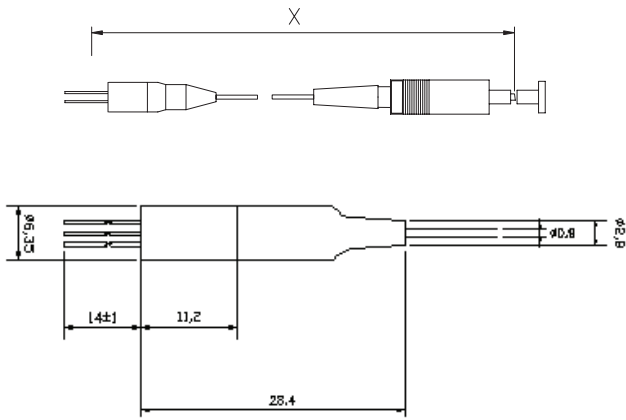
Fiber Connector and Jacket Type:

0, FC/APC (3 mm jacket);
1, SC/APC (3 mm jacket);
2, FC/APC (900 μ m jacket)
3, SC/APC (900 μ m jacket)



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Product Drawings



Available Configurations for LDM5S513

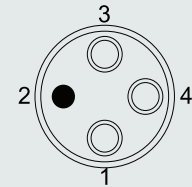
Part No.	DFB Wavelength	Fiber/Connector
LDM5S513-000	1290 nm DFB	FC/APC; 3mm Jacket
LDM5S513-001	1310 nm DFB	FC/APC; 3mm Jacket
LDM5S513-002	1330 nm DFB	FC/APC; 3mm Jacket
LDM5S513-003	1350 nm DFB	FC/APC; 3mm Jacket
LDM5S513-004	1370 nm DFB	FC/APC; 3mm Jacket
LDM5S513-005	1390 nm DFB	FC/APC; 3mm Jacket
LDM5S513-006	1410 nm DFB	FC/APC; 3mm Jacket
LDM5S513-007	1430 nm DFB	FC/APC; 3mm Jacket
LDM5S513-008	1450 nm DFB	FC/APC; 3mm Jacket

1290 nm to 1450 nm CWDM Coaxial DFB-LD Module

Mechanical Specifications

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, SC/APC
Optical Fiber	SMF-28 with 900 μm or 3 mm jacket
Housing Dimensions	28 mm x 6 mm x 6 mm
Housing	Coaxial with Fiber Pigtail

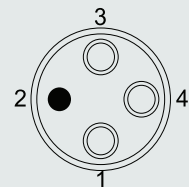
PIN Out Diagram, LD configuration 1



Coaxial

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

PIN Out Diagram, LD configuration 2



Coaxial

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