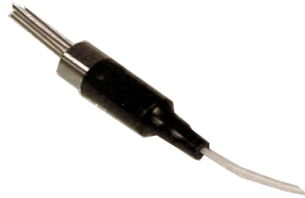


# DFB-CWDM



## 1290 nm to 1610 nm DFB-LD, DFB Laser

The DFB-CWDM is a CWDM Coaxial DFB-LD Module for CWDM analog communication, CATV return-path, laboratory instrument, and R&D applications. Formerly known as the LDM5S513, this cost-effective, high stability DFB laser chip has a selectable wavelength with range between 1290 nm to 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. Contact Optilab for more information.

### Features

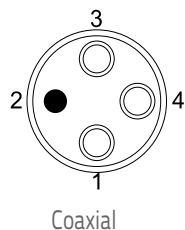
- Selectable wavelength: 1290 nm to 1610 nm
- High-stability DFB laser chip
- Built-in InGaAsP monitor photodiode
- 4-pin coaxial-pigtailed, single mode coupling
- Built-in optical isolator

### Applications

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

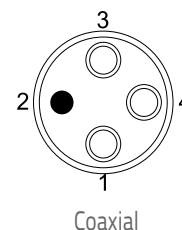
### Functional Diagram

PIN Out Diagram, LD configuration 1



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

PIN Out Diagram, LD configuration 2



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

# 1290 nm to 1610 nm DFB-LD, DFB Laser

## OPTIONS

	<b>DFB-CWDM-x-y</b>
x	Wavelength of DFB: 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
	Fiber Connector and Jacket Type: FC/APC (3 mm jacket) SC/APC (3 mm jacket) FC/APC (900 μm jacket) SC/APC (900 μm jacket)
	y

Electrical 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 μA 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	1290 nm ±2 nm to 1610 nm ±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 Intensity 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
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

## TECHNICAL INFO

For technical info and support:

[sales@optilab.com](mailto:sales@optilab.com)

[www.optilab.com](http://www.optilab.com)

## WEB ORDER

To order, please visit [OEQuest.com](http://OEQuest.com).



# 1290 nm to 1610 nm DFB-LD, DFB Laser

## 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

## Available Configurations for LDM5S513

Part No.	DFB Wavelength	Fiber/Connector
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
LDM5S513-011	1310 nm DFB	SC/APC; 3mm Jacket
LDM5S513-012	1330 nm DFB	SC/APC; 3mm Jacket
LDM5S513-013	1350 nm DFB	SC/APC; 3mm Jacket
LDM5S513-014	1370 nm DFB	SC/APC; 3mm Jacket
LDM5S513-015	1390 nm DFB	SC/APC; 3mm Jacket
LDM5S513-016	1410 nm DFB	SC/APC; 3mm Jacket
LDM5S513-017	1430 nm DFB	SC/APC; 3mm Jacket
LDM5S513-018	1450 nm DFB	SC/APC; 3mm Jacket
LDM5S513-021	1310 nm DFB	SC/APC; 0.9mm Jacket
LDM5S513-022	1330 nm DFB	SC/APC; 0.9mm Jacket
LDM5S513-023	1350 nm DFB	SC/APC; 0.9mm Jacket
LDM5S513-024	1370 nm DFB	SC/APC; 0.9mm Jacket
LDM5S513-025	1390 nm DFB	SC/APC; 0.9mm Jacket
LDM5S513-026	1410 nm DFB	SC/APC; 0.9mm Jacket
LDM5S513-027	1430 nm DFB	SC/APC; 0.9mm Jacket
LDM5S513-028	1450 nm DFB	SC/APC; 0.9mm Jacket
LDM5S513-031	1310 nm DFB	FC/APC; 0.9mm Jacket
LDM5S513-032	1330 nm DFB	FC/APC; 0.9mm Jacket
LDM5S513-033	1350 nm DFB	FC/APC; 0.9mm Jacket
LDM5S513-034	1370 nm DFB	FC/APC; 0.9mm Jacket
LDM5S513-035	1390 nm DFB	FC/APC; 0.9mm Jacket
LDM5S513-036	1410 nm DFB	FC/APC; 0.9mm Jacket
LDM5S513-037	1430 nm DFB	FC/APC; 0.9mm Jacket
LDM5S513-038	1450 nm DFB	FC/APC; 0.9mm Jacket

