

# DFB-CWDM-TO



## 1290 nm to 1610 nm DFB Laser Diode, TO Can

The DFB-CWDM-TO is a DFB Laser Diode in TO Can package for CWDM analog communication, laboratory, and R&D applications. Formerly known as the LDT5S515, this cost-effective, high-stability DFB laser chip has a selectable wavelength with ranges between 1290 nm to 1610 nm. The versatile also features a built-in InGaAsP monitor photodiode also features a built-in InGaAsP monitor photodiode, built-in optical isolator and 4-pin TO Can package. Contact Optilab for more information.

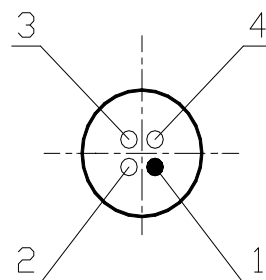
### Features

- Selectable wavelength of 1290 nm to 1610 nm
- High-stability DFB laser chip
- Built-in InGaAsP monitor photodiode
- 4-pin TO Can Package
- Spherical lens standard

### Applications

- Multi channel analog communication
- Laboratory instrument
- R&D applications
- CWDM digital links

### Functional Diagram



PIN out Diagram

Pin 1  
Pin 2  
Pin 3  
Pin 4

LD anode (case)  
LD cathode  
PD cathode  
PD anode

# 1290 nm to 1610 nm DFB Laser Diode, TO Can

## OPTIONS

### DFB-CWDM-TO-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

x

## 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).

 **OEQuest.com**

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 $\mu$ 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	1290 nm $\pm$ 2 nm to 1610 nm $\pm$ 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 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.
Housing Dimensions	20 mm x 5.5 mm x 5.5 mm