

1270 nm ~ 1610 nm DFB LD MODULES

2.5 Gbps CWDM MQW-DFB LD RECEPTACLE

FEATURES

- 2 18-wavelength CWDM: from 1270 nm to 1610 nm, each Step 20 nm
- 2 $P_f \geq 3\text{mW}$ @ $I_{th}+20\text{ mA}$
- 2 High reliability, long operation life
- 2 $0\text{ }^{\circ}\text{C} \sim +70\text{ }^{\circ}\text{C}$ operation
- 2 Up to 2.5 Gbps Operation
- 2 Single frequency operation with high SMSR
- 2 Build-in InGaAs monitor

APPLICATION

OC-3, OC-12, OC-48, and Gigabit Ethernet Optical communication system

DESCRIPTION

DL-5500S-CXX0 series are MQW-DFB laser diodes that provide a durable, single frequency oscillation with emission wavelength from 1270 nm to 1610 nm CWDM, each step 20 nm.

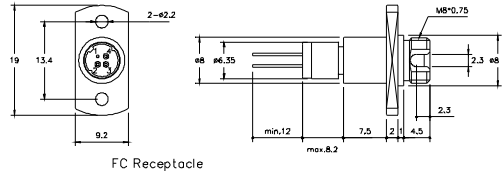
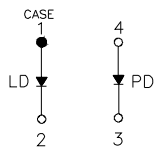
ELECTRICAL AND OPTICAL CHARACTERISTICS ($T_C=25\text{ }^{\circ}\text{C}$)						
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{th}	Threshold Current	CW		10	20	mA
I_{OP}	Operating Current	CW, $I_{th}+20\text{mA}$		35	50	mA
V_{OP}	Operating Voltage	CW, $I_{th}+20\text{mA}$		1.2	1.5	V
P_f	Optical Output Power	CW, $I_{th}+20\text{mA}$	3.0	-		mW
λ_c	Center Wavelength	CW, $I_{th}+20\text{mA}$	$\lambda -3$	λ	$\lambda +2$	nm
SMSR	Side Mode Suppression Ratio	CW, $I_{th}+20\text{mA}$	30	35		dB
t_r, t_f	Rise And Fall Times	$I_F=I_{th}, I_{th}+20\text{mA}, 20\sim 80\%$			150	ps
$\Delta P_f / P_f$	Tracking Error	APC, $0\sim +70\text{ }^{\circ}\text{C}$	-	-	± 1.5	dB
I_m	PD Monitor Current	CW, $I_{th}+20\text{mA}, V_{RD}=1\text{V}$	50			μA
I_D	PD Dark Current	$V_{RD}=5\text{V}$			10	nA
C_t	PD Capacitance	$V_{RD}=5\text{V}, f=1\text{MHz}$		10	15	pF

Note: Central CWDM wavelength is from 1270 nm to 1610 nm, each step 20 nm.

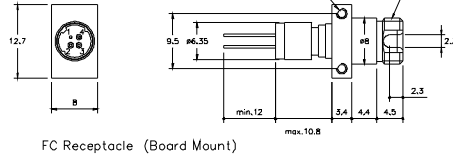
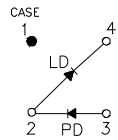
ABSOLUTE MAXIMUM RATINGS ($T_C=25\text{ }^{\circ}\text{C}$)			
Symbol	Parameter	Ratings	Unit
P_o	Optical Output Power	4	mW
V_{RL}	LD Reverse Voltage	2	V
V_{RD}	PD Reverse Voltage	10	V
I_{FD}	PD Forward Current	1.0	mA
T_{opr}	Operating Temperature	$0\sim +70$	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	$-40\sim +85$	$^{\circ}\text{C}$

MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT

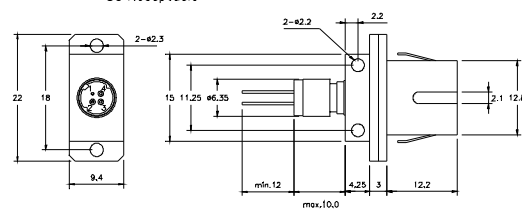
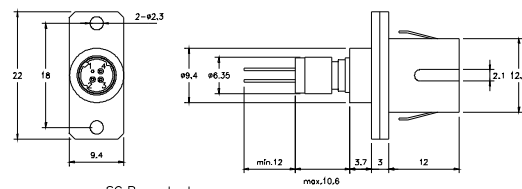
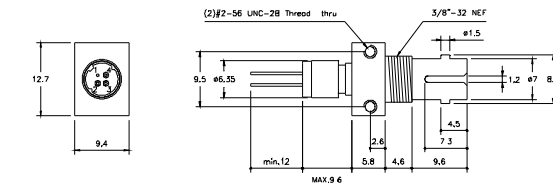
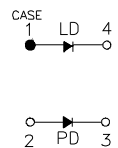
Type A



Type B



Type C



ORDER INFORMATION

Part No.: D L - 5 5 4 ☐ ☐ - C ☐ ☐ 0 - ☐ ☐ ☐

Code	PIN Assignment
0	Type A
5	Type B
8	Type C

Code	Speed
Blank	1.25 Gbps
S	2.5 Gbps

Code	Wavelength
27	1270 nm
29	1290 nm
31	1310 nm
33	1330 nm
35	1350 nm
37	1370 nm
39	1390 nm
41	1410 nm
43	1430 nm
45	1450 nm
47	1470 nm
49	1490 nm
51	1510 nm
53	1530 nm
55	1550 nm
57	1570 nm
59	1590 nm
61	1610 nm

Code	Isolator
Blank	No
S	Single-Stage

Code	Connector Type
F	FC/PC
FB	FC/PC (Board Mount)
T	ST/PC
S	SC/PC
SB	SC/PC (Board Mount)