

1270 nm ~ 1610 nm DFB LD MODULES 1.25 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 1.25 Gbps Operation
- 2 Single frequency operation with high SMSR
- 2 Build-in InGaAs monitor

APPLICATION

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

DESCRIPTION

DL-5500-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.

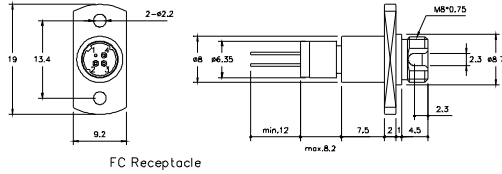
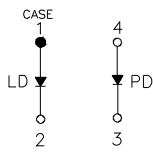
| ELECTRICAL AND OPTICAL CHARACTERISTICS (T _C =25 °C) | | | | | | |
|--|-----------------------------|--|------|------|------|------|
| Symbol | Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
| I _{th} | Threshold Current | CW | | 10 | 20 | mA |
| I _{OP} | Operating Current | CW, I _{th} +20mA | | 35 | 50 | mA |
| V _{OP} | Operating Voltage | CW, I _{th} +20mA | | 1.2 | 1.5 | V |
| P _f | Optical Output Power | CW, I _{th} +20mA | 3.0 | - | | mW |
| λ _c | Center Wavelength | CW, I _{th} +20mA | λ -3 | λ | λ +2 | nm |
| SMSR | Side Mode Suppression Ratio | CW, I _{th} +20mA | 30 | 35 | | dB |
| t _r , t _f | Rise And Fall Times | I _F =I _{th} , I _{th} +20mA, 20~ 80% | | | 200 | ps |
| ΔP _f / P _f | Tracking Error | APC, 0~+70 °C | - | - | ±1.5 | dB |
| I _m | PD Monitor Current | CW, I _{th} +20mA, V _{RD} =1V | 50 | | | μA |
| I _D | PD Dark Current | V _{RD} =5V | | | 10 | nA |
| C _t | PD Capacitance | V _{RD} =5V, f=1MHz | | 10 | 15 | pF |

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

| ABSOLUTE MAXIMUM RATINGS (T _C =25 °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~+70 | °C |
| T _{stg} | Storage Temperature | -40~+85 | °C |

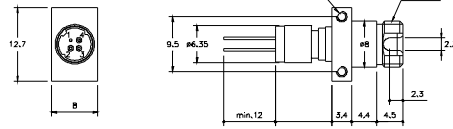
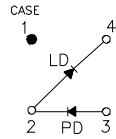
MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT

Type A



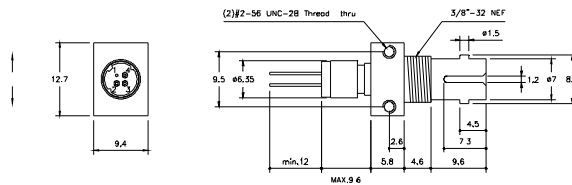
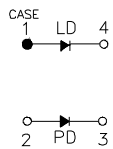
FC Receptacle

Type B

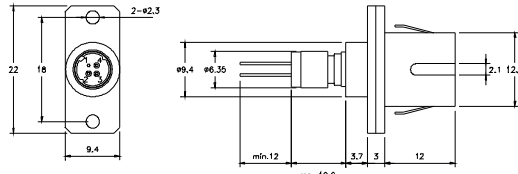


FC Receptacle (Board Mount)

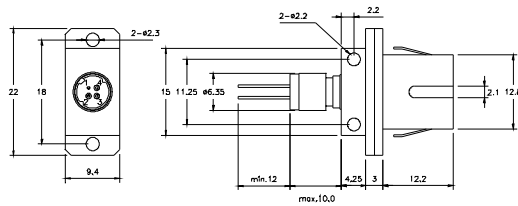
Type C



ST Receptacle



SC Receptacle



SC Receptacle (Board Mount)

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) |