

**1550 nm DFB LASER DIODE MODULES**  
UNCOOLED MQW DFB LD WITH RECEPTACLE

**DL-5500 SERIES**

**FEATURES**

- 2 Uncooled Laser Diode with MQW Structure
- 2 High Reliability, Long Operation Life
- 2 Single Frequency Operation with High SMSR
- 2 0 to 70°C operation without active cooling
- 2 Build-in InGaAs monitor

**APPLICATION**

Trunk Line, FitL

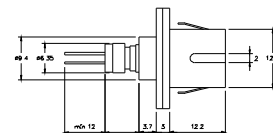
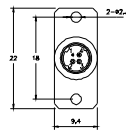
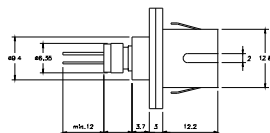
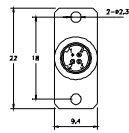
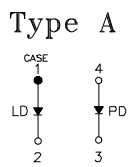
**DESCRIPTION**

DL-5500 series are designed for coupling a single mode optical fiber with 1550 nm MQW DFB uncooled laser diode. DL-5500 series are the best kits as light sources for telecom and datacom applications.

<b>ELECTRICAL AND OPTICAL CHARACTERISTICS (T<sub>C</sub>=25 °C)</b>						
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I <sub>th</sub>	Threshold Current	CW		10	15	mA
V <sub>OP</sub>	Operating Voltage	CW, I <sub>F</sub> =I <sub>th</sub> +20mA		1.2	1.5	V
P <sub>f</sub>	Optical Output Power Part No:DL-550X DL-551X DL-552X DL-553X	CW, I <sub>F</sub> =I <sub>th</sub> +20mA	0.2 0.5 1.0 2.0	- - - -	- - - -	mW
λ <sub>c</sub>	Center Wavelength	CW, I <sub>th</sub> +20mA	1530	1550	1570	nm
SMSR	Side Mode Suppression Ratio	CW, I <sub>th</sub> +20mA	30	35		dB
t <sub>r</sub> , t <sub>f</sub>	Rise And Fall Times	I <sub>F</sub> =I <sub>th</sub> , I <sub>th</sub> +20mA, 10~90%			0.3	ns
ΔP <sub>f</sub> /P <sub>f</sub>	Tracking Error	APC, 0~+70 °C	-	-	±1.5	dB
I <sub>m</sub>	PD Monitor Current	CW, I <sub>th</sub> +20mA, V <sub>RD</sub> =1V	100			μA
I <sub>D</sub>	PD Dark Current	V <sub>RD</sub> =5V			0.1	μA
C <sub>t</sub>	PD Capacitance	V <sub>RD</sub> =5V, f=1MHz		10	15	pF

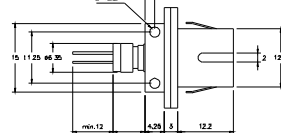
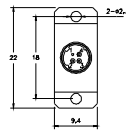
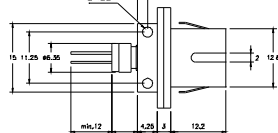
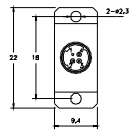
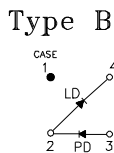
<b>ABSOLUTE MAXIMUM RATINGS (T<sub>C</sub>=25 °C)</b>			
Symbol	Parameter	Ratings	Unit
P <sub>o</sub>	Optical Output Power (550X/551X/552X/553X)	0.5/1.0/1.5/3	mW
V <sub>RL</sub>	LD Reverse Voltage	2	V
V <sub>RD</sub>	PD Reverse Voltage	10	V
I <sub>FD</sub>	PD Forward Current	1.0	mA
T <sub>opr</sub>	Operating Temperature	0 to 70	°C
T <sub>stg</sub>	Storage Temperature	-40~+85	°C

## MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT



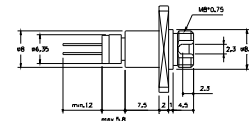
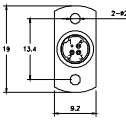
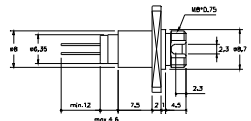
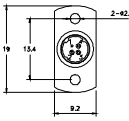
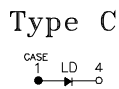
SC RECEPTACLE

SC RECEPTACLE



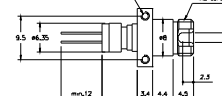
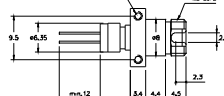
SC RECEPTACLE (BOARD MOUNT)

SC RECEPTACLE (BOARD MOUNT)



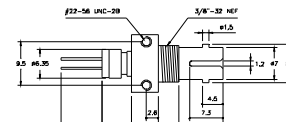
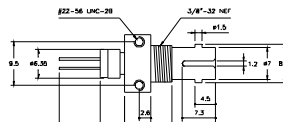
FC RECEPTACLE

FC RECEPTACLE



FC RECEPTACLE (BOARD MOUNT)

FC RECEPTACLE (BOARD MOUNT)



ST RECEPTACLE

ST RECEPTACLE

DL-550X  
DL-551X

DL-552X  
DL-553X

**Note:** Specifications subject to change without notice.

## ORDER INFORMATION

Part No.: D L - 5 5    -

Code	Pout (mw)
0	0.2
1	0.5
2	1
3	2

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

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

Code	Isolator
Blank	No
S	Single-Stage

Code	Speed
Blank	1.25 Gbps
S	2.5 Gbps