

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

DL-5500 SERIES

FEATURES

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

APPLICATION

Trunk Line, FitL

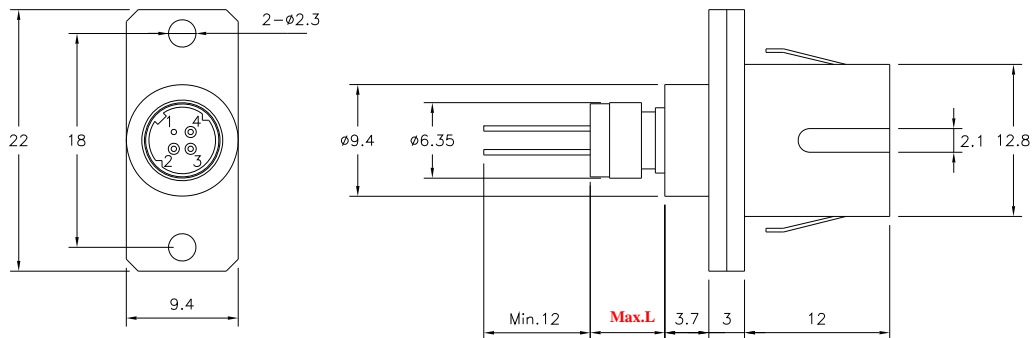
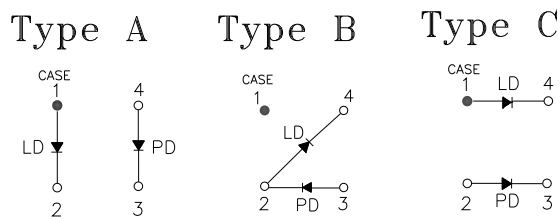
DESCRIPTION

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.

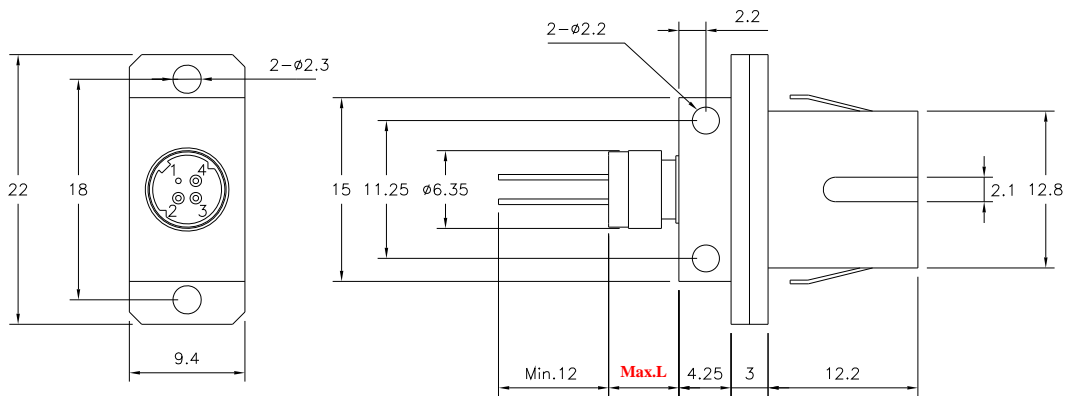
ELECTRICAL AND OPTICAL CHARACTERISTICS (T_C=25 °C)						
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{th}	Threshold Current	CW		10	15	mA
V _{OP}	Operating Voltage	CW, I _F =I _{th} +20mA		1.2	1.5	V
P _f	Optical Output Power Part No:DL-550XX DL-551XX DL-552XX DL-553XX DL-554XX	CW, I _F =I _{th} +20mA	0.2 0.5 1.0 2.0 3.0		0.5 1.0 2.0 3.0 -	mW
λ _c	Center Wavelength	CW, I _{th} +20mA	1530	1550	1570	nm
SMSR	Side Mode Suppression Ratio	CW, I _{th} +20mA	30	35		dB
t _r , t _f	Rise And Fall Times Part No:DL-55XX DL-55XXS	I _F =I _{th} , I _{th} +20mA, 20~80%			226 150	ps
ΔP _f /P _f	Tracking Error	APC, 0~+70 °C	-1.5		1.5	dB
I _m	PD Monitor Current	CW, I _{th} +20mA, V _{RD} =1V	100			μA
I _D	PD Dark Current	V _{RD} =5V			0.1	μA
C _t	PD Capacitance	V _{RD} =5V, f=1MHz		10	15	pF

ABSOLUTE MAXIMUM RATINGS (T _C =25 °C)			
Symbol	Parameter	Ratings	Unit
P _o	Optical Output Power (550XX/551XX/552XX/553XX/554XX)	0.5/1.0/1.5/3/4	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 to 70	°C
T _{stg}	Storage Temperature	-40~+85	°C

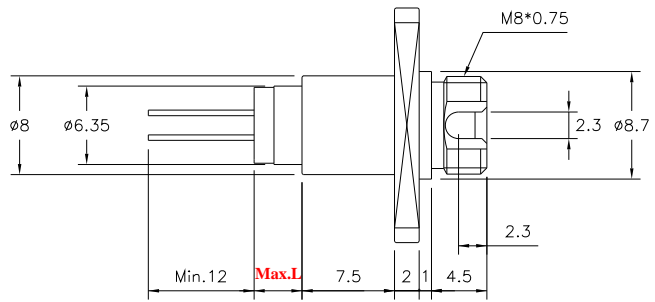
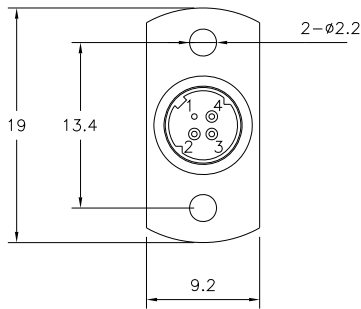
MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT



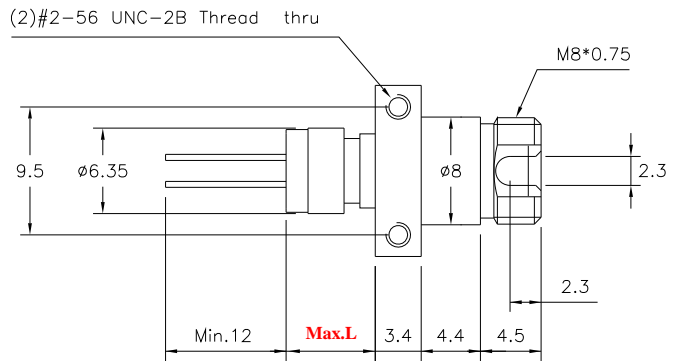
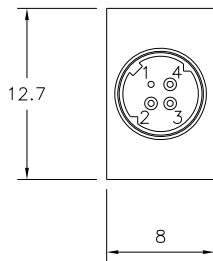
SC RECEPTACLE (DL-55XXX-SX)



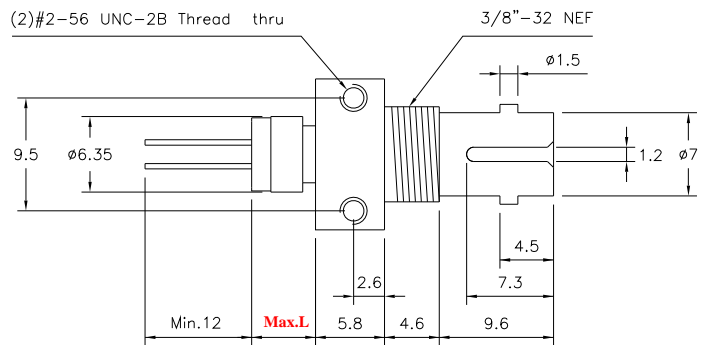
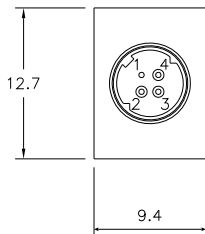
SC RECEPTACLE (BOARD MOUNT) (DL-55XXX-SBX)



**FC RECEPTACLE
(DL-55XXX-FX)**



**FC RECEPTACLE (BOARD MOUNT)
(DL-55XXX-FBX)**



**ST RECEPTACLE
(DL-55XXX-TX)**

P//N	Max. L Dimension				
	S	SB	F	FB	T
550XX-X 551XX-X	3.6	3	1.2	3.9	2.7
550XX-XS 551XX-XS	7	6.4	4.6	7.3	6.1
552XX-XS 553XX-XS	8.6	8.0	6.2	8.9	7.7
554XX-XS	10.6	10.0	8.2	10.9	9.7

Note: Specifications subject to change without notice.

ORDER INFORMATION

Part No.: D L - 5 5 -

Code	Pout (mW)
0	0.2
1	0.5

Code	Speed
Blank	1.25 Gbps
S	2.5 Gbps

Code	Isolator
Blank	No
S	Single-Stage

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

Part No.: D L - 5 5 - **S**

Code	Pout (mW)
2	1
3	2
4	3

Code	Speed
Blank	1.25 Gbps
S	2.5 Gbps

Code	Isolator
S	Single-Stage

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

Revision History

Version	Subject	Release Date
1.0	Initial datasheet	5/1/2003
2.0	1. Combine 1.25G and 2.5G characteristics in one data sheet 2. Add 3mW products 3. Revise FC RECEPTACLE (BOARD MOUNT) thread thru dim.: M2 => UNC-2B 4. Revise drawing	12/1/2007
3.0	Revise order information	4/15/2009