

## 1490 nm DFB LASER DIODE MODULES

## DL-5500S-1490 Series

2.5 Gbps UNCOOLED MQW DFB LD WITH RECEPTACLE

### FEATURES

- 2 1490 nm Uncooled Laser Diode with MQW Structure
- 2 High Reliability, Long Operation Life
- 2 Single Frequency Operation with High SMSR
- 2 Operation up to 2.5 Gb/s
- 2 0 to 70°C operation without active cooling
- 2 Build-in InGaAs monitor

### APPLICATION

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

### DESCRIPTION

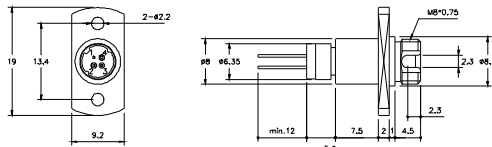
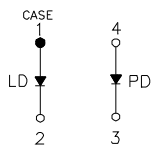
DL-5500S-1490 series are designed for coupling a single mode optical fiber with 1490 nm MQW DFB uncooled laser diode. DL-5500S-1490 series are the best kits as light sources for telecom and datacom applications.

ELECTRICAL AND OPTICAL CHARACTERISTICS (T <sub>C</sub> =25 °C)						
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-552XS-1490 DL-553XS-1490	CW, I <sub>F</sub> =I <sub>th</sub> +20mA	1.0 2.0	- -	- -	mW
λ <sub>c</sub>	Center Wavelength	CW, I <sub>th</sub> +20mA	1483	1490	1495	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, 20~80%			150	ps
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

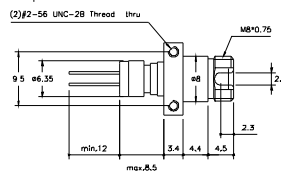
ABSOLUTE MAXIMUM RATINGS (T <sub>C</sub> =25 °C)			
Symbol	Parameter	Ratings	Unit
P <sub>o</sub>	Optical Output Power (552XS/553XS)	1.5 / 3	mW
V <sub>RL</sub>	LD Reverse Voltage	2	V
V <sub>RD</sub>	PD Reverse Voltage	10	V
I <sub>FD</sub>	PD Forward Current	1.0	mA
T <sub>opr</sub>	Operating Temperature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

MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT

### Type A

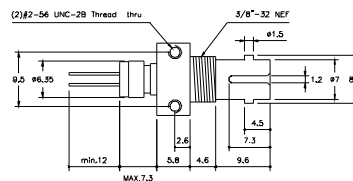
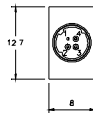
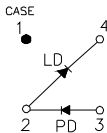


FC Receptacle



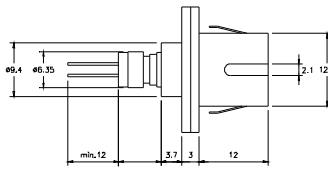
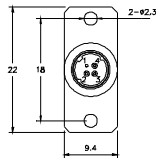
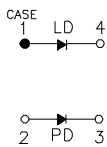
FC Receptacle (Board Mount)

### Type B

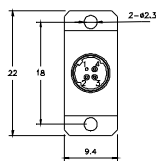


ST Receptacle

### Type C



SC Receptacle



SC Receptacle (Board Mount)

Note: Specifications subject to change without notice.

## ORDER INFORMATION

