

## 1310 nm DFB LASER DIODE MODULES

## DL-3300 SERIES

UNCOOLED MQW DFB LD WITH PIGTAIL

### FEATURES

- 2 1310 nm Uncooled Laser Diode with MQW Structure
- 2 High Reliability, Long Operation Life
- 2 0 to 70°C operation without active cooling
- 2 Build-in InGaAs monitor

### APPLICATION

Trunk Line, FitL

### DESCRIPTION

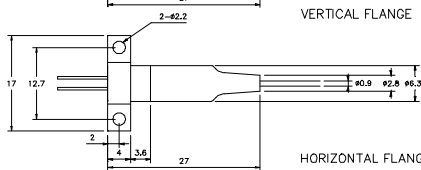
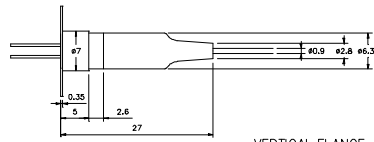
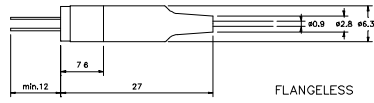
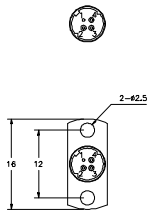
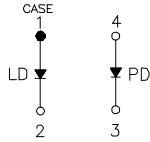
DL-3300 series are designed for coupling a single mode optical fiber with 1310 nm MQW DFB uncooled laser diode. DL-3300 series are the best kits as light sources for telecom and datacom applications.

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-330X DL-331X DL-332X DL-333X	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	1290	1310	1330	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%			0.226	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

ABSOLUTE MAXIMUM RATINGS (T <sub>C</sub> =25 °C)			
Symbol	Parameter	Ratings	Unit
P <sub>o</sub>	Optical Output Power (330X/331X/332X/333X)	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

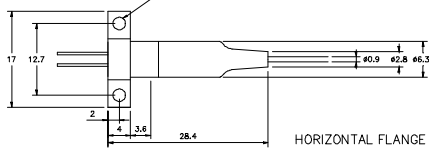
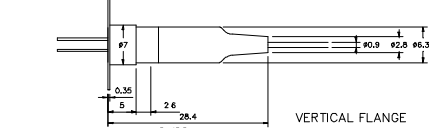
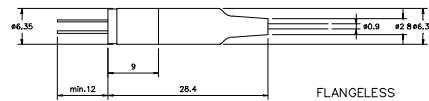
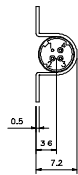
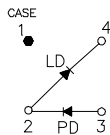
MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT

### Type A



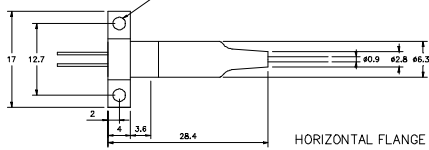
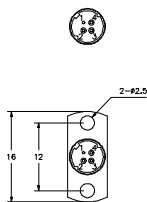
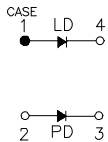
DL-330X  
DL-331X

### Type B



DL-332X  
DL-333X

### Type C



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

## ORDER INFORMATION

Part No.: D L - 3 3 □ □ □ - □ □ □ □

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	Flange
V	Vertical
H	Horizontal
X	No Flange

Code	Speed
Blank	1.25 Gbps
S	2.5 Gbps

Code	Isolator
Blank	No
S	Single-Stage

Code	Connector
S	SC/PC
F	FC/PC
T	ST/PC
X	No connector
SA	SC/APC
FA	FC/APC
TA	ST/APC