

**1310 nm LASER DIODE MODULES**  
**UNCOOLED MQW-FP LD WITH PIGTAIL**

**FEATURES**

- 2 1310 nm typical emission wavelength
- 2  $P_f \geq 3\text{mW}$  @  $I_{th}+20\text{ mA}$
- 2 High reliability, long operation life
- 2 High temperature operation without active cooling
- 2 Build-in InGaAs monitor

**APPLICATION**

Trunk Line, FitL

**DESCRIPTION**

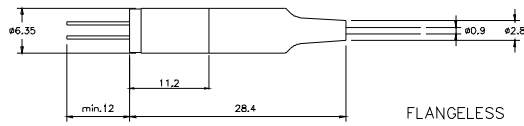
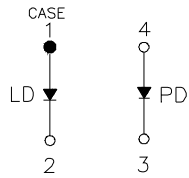
FL-3300 series are designed for coupling a single mode optical fiber with 1310 nm MQW-FP uncooled laser diode. FL-3300 series are the best kits as light sources for telecom and datacom applications.

<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		12	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	CW, I <sub>F</sub> = I <sub>th</sub> +20mA	3.0			mW
λ <sub>c</sub>	Center Wavelength	CW, I <sub>th</sub> +20mA	1290	1310	1330	nm
Δ λ	Spectral Width	CW, I <sub>th</sub> +20mA , RMS (σ)		1	3	nm
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
Δ P <sub>f</sub> / P <sub>f</sub>	Tracking Error	APC, -40~+85 °C	-	-	±1.0	dB
I <sub>m</sub>	PD Monitor Current	CW, I <sub>th</sub> +20mA, V <sub>RD</sub> =1V	100			μ A
I <sub>D</sub>	PD Dark Current	V <sub>RD</sub> =5V			0.1	μ A
C <sub>t</sub>	PD Capacitance	V <sub>RD</sub> =5V, f=1MHz		10	15	pF

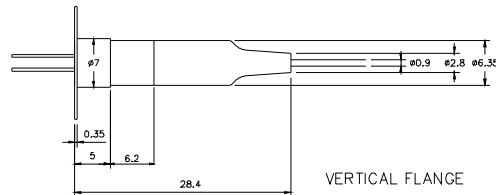
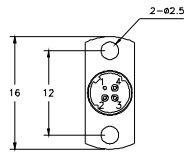
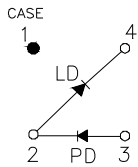
<b>ABSOLUTE MAXIMUM RATINGS (T<sub>C</sub>=25 °C)</b>			
Symbol	Parameter	Ratings	Unit
P <sub>o</sub>	Optical Output Power	4	mW
V <sub>RL</sub>	LD Reverse Voltage	2	V
V <sub>RD</sub>	PD Reverse Voltage	10	V
I <sub>FD</sub>	PD Forward Current	1.0	mA
T <sub>opr</sub>	Operating Temperature	-40~+85	°C
T <sub>stg</sub>	Storage Temperature	-40~+85	°C

MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT

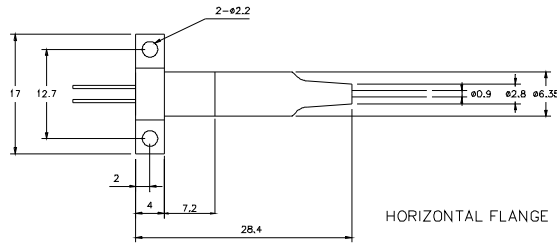
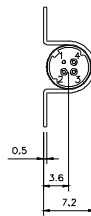
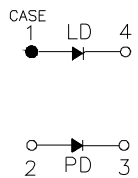
## Type A



## Type B



## Type C



Note: Specifications subject to change without notice.

## ORDER INFORMATION

Part No.: F L - 3 3 4   -

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

Code	Speed
Blank	1.25 Gbps
S	2.5 Gbps

Code	Flange
V	Vertical
H	Horizontal
X	No Flange

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