

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

FL-3300 SERIES

FEATURES

- ◇ 1310 nm typical emission wavelength
- ◇ High reliability, long operation life
- ◇ High temperature operation without active cooling
- ◇ Build-in InGaAs monitor

APPLICATION

Trunk Line, FitL

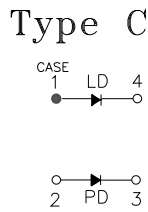
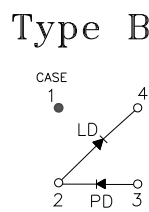
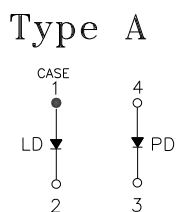
DESCRIPTION

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.

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:FL-330XX FL-331XX FL-332XX FL-333XX FL-334XX	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	1290	1310	1330	nm
Δ λ	Spectral Width	CW, I _{th} +20mA , RMS (σ)		1	3	nm
t _r , t _f	Rise And Fall Times Part No:FL-33XX FL-33XXS	I _F =I _{th} , I _{th} +20mA , 20~ 80%			226 150	ps
Δ P _f / P _f	Tracking Error	APC, -40~+85 °C	-1.0		1.0	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 (330XX/331XX/332XX/333XX/334XX)	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	-40~+85	°C
T _{stg}	Storage Temperature	-40~+85	°C

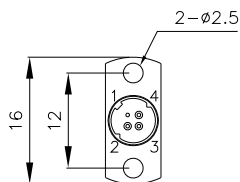
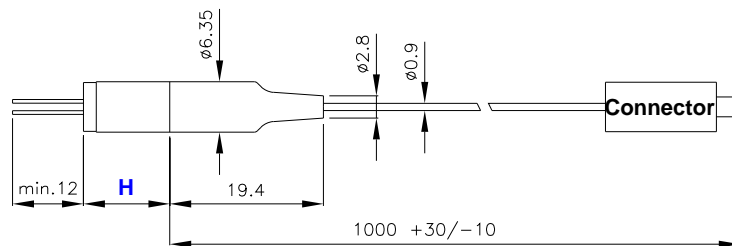
MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT



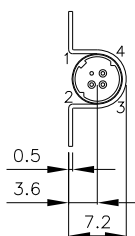
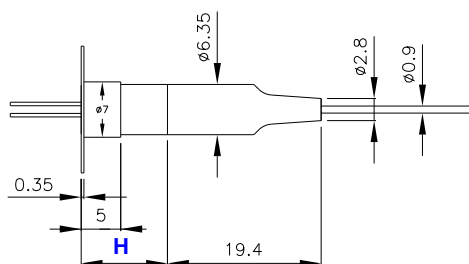
P/N	H
FL-330XX-XXX	7.6
FL-331XX-XXX	
FL-332XX-XXX	
FL-333XX-XXS	9
FL-334XX-XXS	10.9



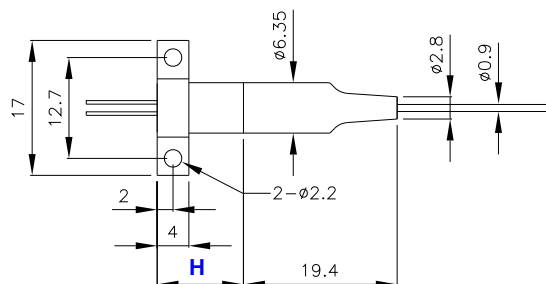
Flangeless



Vertical Flange



Horizontal Flange



Note: Specifications subject to change without notice.

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4/15/2009 V3.0

ORDER INFORMATION

Part No.: F L - 3 3 -

Code	Pout (mW)
0	0.2
1	0.5
2	1

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
L	LC/PC
X	No connector
SA	SC/APC
FA	FC/APC
TA	ST/APC
LA	LC/APC

Part No.: F L - 3 3 - S

Code	Pout (mW)
3	2
4	3

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
S	Single-Stage

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

Revision History

Version	Subject	Release Date
1.0	Initial datasheet	2002/2/18
2.0	1. Combine 1.25G and 2.5G characteristics in one data sheet 2. Add 3mW products	2007/12/1
3.0	Revise mechanical drawing and order information	2009/4/15