GFLM-3xxxxxx

1.31um MQW-FP Laser Diode pigtail Module: for 1GHz to 2GHz application

Features

- Coaxial Package
- InGaAsP/InP MQW-FP laser Diode
- Low threshold, high slope efficiency and high output power LD
- Operating case temperature: -40℃ to +85℃
- Single-mode fiber pigtailed with SC, LC, FC or ST connector
- Optional with Isolator
- RoHS Compliant

Applications

- CATV Analog Return Path Optical Transmitter
- GSM/CDMA Optical Repeater
- W-CDMA/CDMA2000/TD-SCDMA Optical Repeater
- Microwave Transmission System
- Test Equipments

General

GFLM-3xxxxxx Series are 1.31um InGaAsP/InP MQW-FP laser diode modules designed for fiber optic communication systems. These modules are transmitter optical sub-assembly integrated with a single-stage optical isolator, and are ideally suitable for 1GHz or 2GHz transmission applications.

Ordering information (Standard version *Note1)

Part No.	Package series	RF Bandwidth	Isolator	Connector
GFLM-3120ASA1G	A	<1GHz	Single Stage	SC/APC
GFLM-3120BFA1G2	B	<2GHz	Dual Stage	FC/APC
GFLM-3120EFA1G2	E	<2GHz	Dual Stage	FC/APC
GFLM-3010DF1	D	<1GHz	N=None	FC/PC

*Note1: For more ordering information, please refer the nomenclature and contact EPOTOLINK sales.

Absolute maximum ratings *Note2

Parameter	Symbol	Ratings	Unit
Storage temperature	Tstg	-40~+100	℃
Operating case temperature	Top	-40~+85	℃
Forward current (LD)	IFD	150	mA
Reverse voltage (LD)	VrL	2	V
Reverse voltage (PD)	VrP	15	V
Reverse current (PD)	IrP	2	mA
Soldering temperature (<10s)	Stemp	260	℃

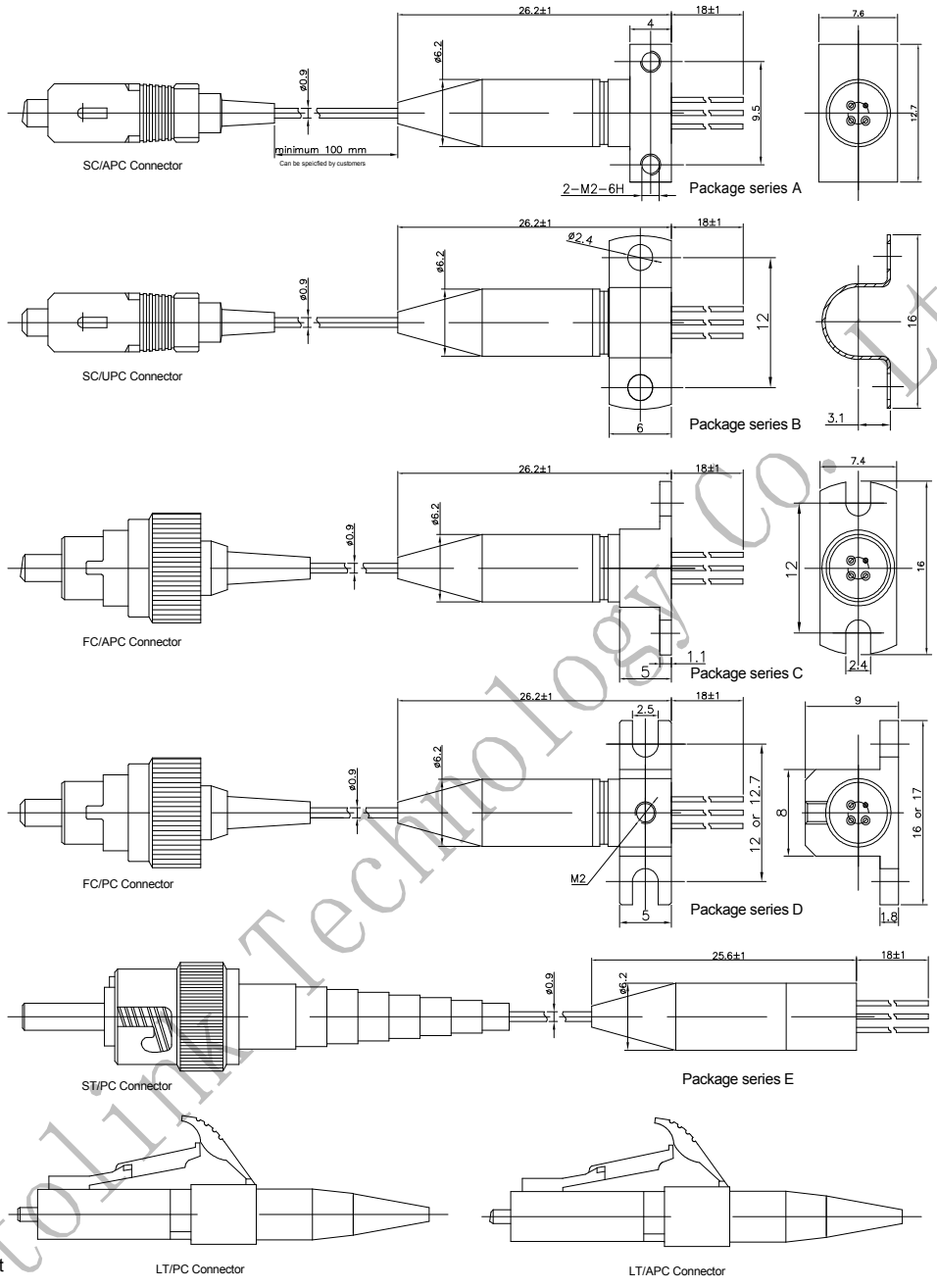
*Note2: Exceeding any one of these values may destroy the device immediately.

Electrical and optical characteristics

(Pf=2mW, SMF (9/125μm), Tc=+25°C, unless otherwise noted.)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Threshold current	Ith	CW	—	8	15	mA
Fiber Coupling Power	Pf	CW, If=Ith+20mA	1	2.5	3	mW
Operating voltage	Vf	CW, Tc=-40~+85℃	—	1.2	1.6	V
Slope efficiency	Se	CW, Average(Ith to Ith+20mA)	0.05	0.125	0.15	mW/mA
Peak wavelength	λp	CW	1280	1310	1340	nm
Spectral width	Δλ	CW, 20dB down, Tc=-40~+85°C	—	2	5	nm
Rise time	tr	Ib=Ith, 20-80%, Tc=-40~+85°C	—	0.1	0.2	ns
Fall time	tf	Ib=Ith, 80-20%, Tc=-40~+85°C	—	0.15	0.25	ns
Monitor current	Im	CW, VrP=5V, Tc=-40~+85°C	200			uA
Monitor dark current	Id	VrP=5V	—	—	10	nA
Monitor capacitance	C	VrP=5V, f=1MHz	—	—	10	pF
Connector repeatability	—		-1	—	1	dB
Optical Isolation		Single Stage	30			dB
		Dual Stage	40			

Pigtail Package dimension and pin assignment *Note3、4、5



*Note3: PIN direction and laser mark can be customized. Pigtail is standard SM fiber; the length also can be customized.

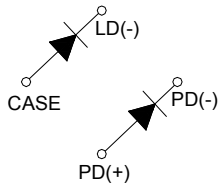
*Note4: For the package series D, the clamping rings dimensions (A) and drill size (B) are can be selected. The following types can be available. Please designate the detailed type while ordering the package series D.

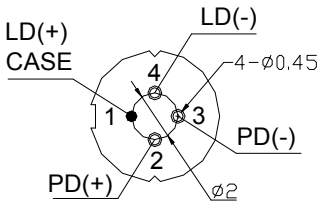
Fixed card type	A(mm)	B(mm)
D	16	12
D-S	17	12.7

*Note5: For the package series B, the fix card is fixed by customer self. For the detailed information of fix card of A, C, D package series, please refers the following graphs.

Pin Assignment

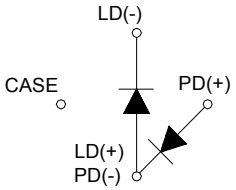
TYPE: 1

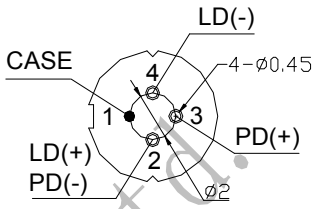




LD-pin-1 / TYPE: C

TYPE: 2





LD-pin-2 / TYPE: B

Model Nomenclature

G F L M — ☐ ☐ ☐ ☐ ☐ ☐

A B C D E F

NO	Parameter	Detailed Description				
A	Wavelength	3=1310				
B	RF Bandwidth	0=<1GHz			1=<2GHz	
C	Power	05=0.2-0.99mW		10=1-1.99mW		20=2-2.99mW
D	Package series	A	B	C	D	E
E	Connector	F=FC/PC	S=SC/PC	T=ST/PC	L=LC/PC	
		FA=FC/APC	SA=SC/APC	LA=LC/APC	Blank=None	
F	Pin Type	1=LD-pin-1			2=LD-pin-2	
G	Isolator	Blank=None		G= Single Stage		G2=Dual Stage

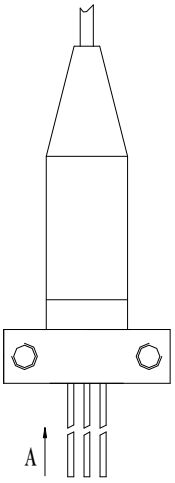
Nomenclature of assembly direction *Note7

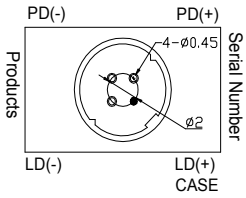
Code: P LD X X - X

- P: Pigtail
- LD: Laser Diode
- X: 1=Type-1, 2=Type-2
- X: A=A Type Fixed Cards, C=C Type Fixed Cards, D=D Type Fixed Cards
- X: Assembly Direction

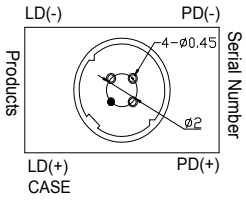
*Note7: Please designate the code of assembly direction.

The direction of fix card

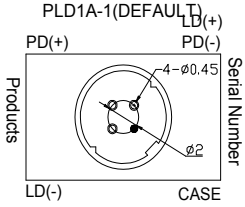




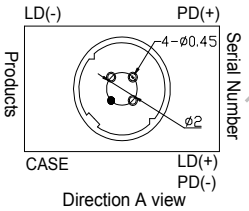
Direction A view
PLD1A-1(DEFAULT)



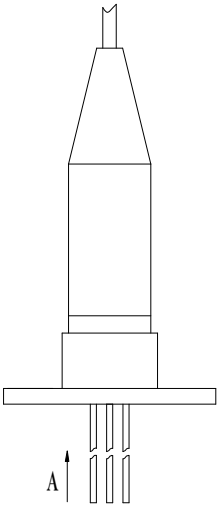
Direction A view
PLD1A-2

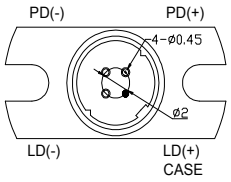


Direction A view
PLD2A-1(DEFAULT)

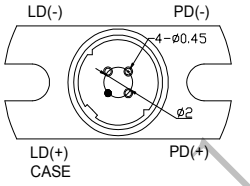


Direction A view
PLD2A-2

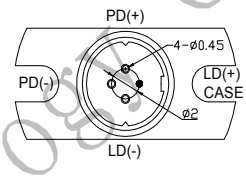




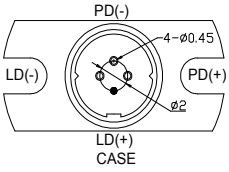
Direction A view
PLD1C-1(DEFAULT)



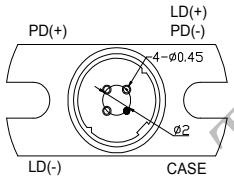
Direction A view
PLD1C-2



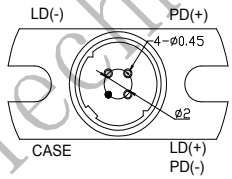
Direction A view
PLD1C-3



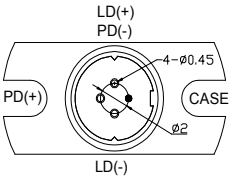
Direction A view
PLD1C-4



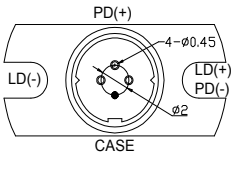
Direction A view
PLD2C-1(DEFAULT)



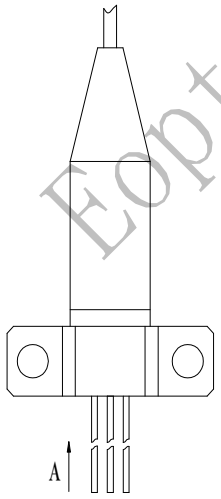
Direction A view
PLD2C-2

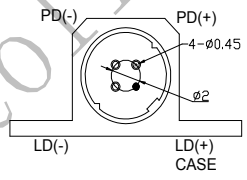


Direction A view
PLD2C-3

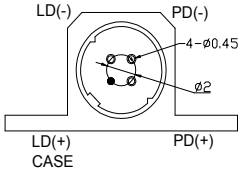


Direction A view
PLD2C-4

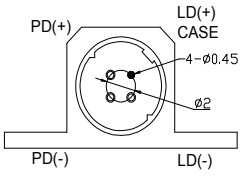




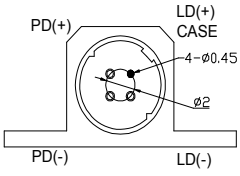
Direction A view
PLD1D-1(DEFAULT)



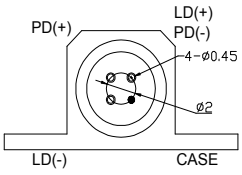
Direction A view
PLD1D-2



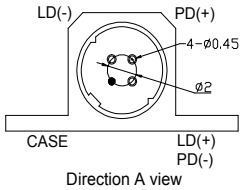
Direction A view
PLD1D-4



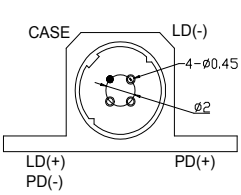
Direction A view
PLD1D-4



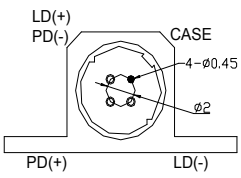
Direction A view
PLD2D-1(DEFAULT)



Direction A view
PLD2D-2



Direction A view
PLD2D-3



Direction A view
PLD2D-4

Precaution

(1) The modules should be handled in the same manner as ordinary semiconductor devices to prevent the electro-static damages. For safe keeping and carrying, the modules should be packaged with ESD proof material. To assemble the modules on PCB, the workbench, the soldering iron and the human body should be grounded.

(2) Please pay special attention to the atmosphere condition because the dew on the module may cause some electrical damages.

(3) Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.

Obtaining Document

You can visit our website:

http://www.eoptolink.com

Or contact Eoptolink Technology Inc., Ltd. listed at the end of the documentation to get the latest documentation.

Revision History

Verision	Initiated	Reviewed	Approved	Release Date
Va-1	Yinchun, Zhao	Kelly.Cao	Add the temp.Logo	2008-5-12
Vb-1	Jack.Jiang	Zore.Zhao Kelly.Cao	Add "RoHS Compliant"	2012-5-15

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