

GFLP-5XXXXXX

1550nm MQW-FP Laser Diode with pigtail For 1.25Gbps and 2.5Gbps application



Features

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

Applications

- ◆ High Speed Optical Transmission System
- ◆ Test Equipments

General

GFLP-XXXXXXX Series are 1.55μm InGaAsP/InP MQW-FP laser diode modules designed for fiber optic communication systems. These modules have low threshold current and high performance at high temperature.

A laser diode is mounted into a coaxial package integrated with an InGaAs monitor PD and a single-mode pigtail.

Ordering information (Standard version ^{*Note1})

Part No.	λ(nm)	Package series	Pin Type	Isolator	Connector	Data Rate
GFLP-5110AFA1G	1550	A	LD-Pin-1	Single Stage	FC/APC	1.25Gbps
GFLP-5205BSA2	1550	B	LD-Pin-2	N=None	SC/APC	2.5Gbps
GFLP-5105CT1	1550	C	LD-Pin-1	N=None	ST/PC	1.25Gbps
GFLP-5205DFA1G	1550	D	LD-Pin-1	N=None	FC/APC	2.5Gbps
GFLP-5110ESA2	1550	E	LD-Pin-2	N=None	SC/APC	1.25Gbps

*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)	IfL	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.

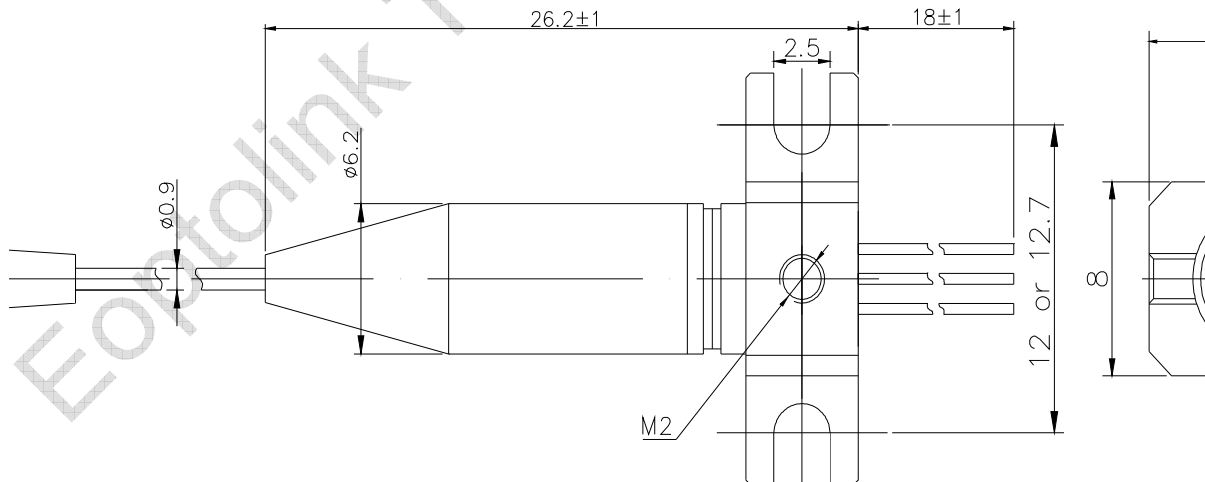
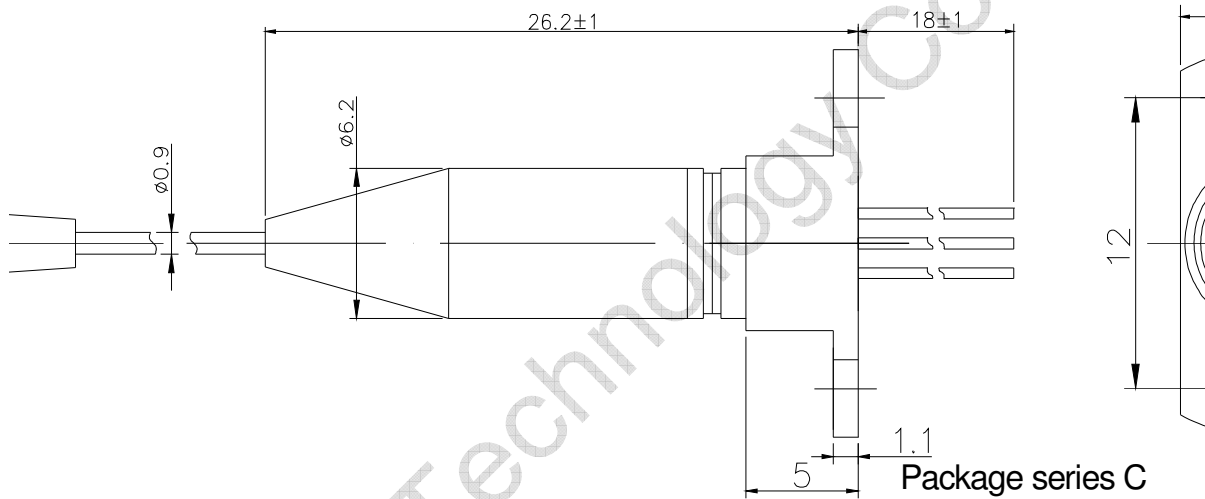
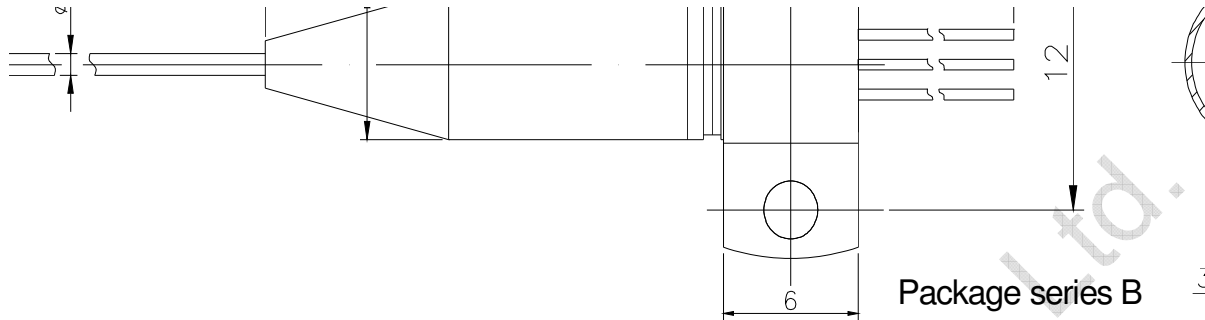
Electrical and optical characteristics

(Po=3mW, SMF, 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 ^{*Note3}	0.05	0.3	1.8	mW
Operating voltage	Vf	CW, Tc=-40~+85□	—	1.2	1.6	V
Slope Efficiency	Se	CW, Average(Ith to Ith+20mA)	—	—	0.9	mW/mA
Peak wavelength	λp	CW	1520	1550	1580	nm
		CW, Tc=-40~+85°C	1490		1585	
Spectral width	Δλ	CW, 20dB down,	—	1.5	3	nm
Rise time	tr	Ib=Ith, 20-80%, Tc=-40~+85°C	—		0.05	ns
Fall time	tf	Ib=Ith, 80-20%, Tc=-40~+85°C	—	0.15	0.05	ns
Tracking error	ΔPf	Im hold(@Pf=0.16mW(25°C)) CW, Tc=-40~+85°C	-1.5	—	1.5	dB
Monitor current	Im	CW, VrP=5V, Tc=-40~+85°C	200		1000	uA
Monitor dark current	Id	VrP=5V	—	—	10	nA
Monitor capacitance	C	VrP=5V, f=1MHz	—	—	20	pF
Connector repeatability	—		-1	—	1	dB
Optical Isolation	—	Single Stage	30	—	—	dB
	—	Dual Stage	40	—	—	

*Note3: Please confirm Pin direction with us before purchase LD power above 1mW.

Pigtail Package dimension^{*Note4, 5, 6}



*Note4: PIN direction and laser mark can be customized. Pigtail is standard SM fiber; the length also can be customized.

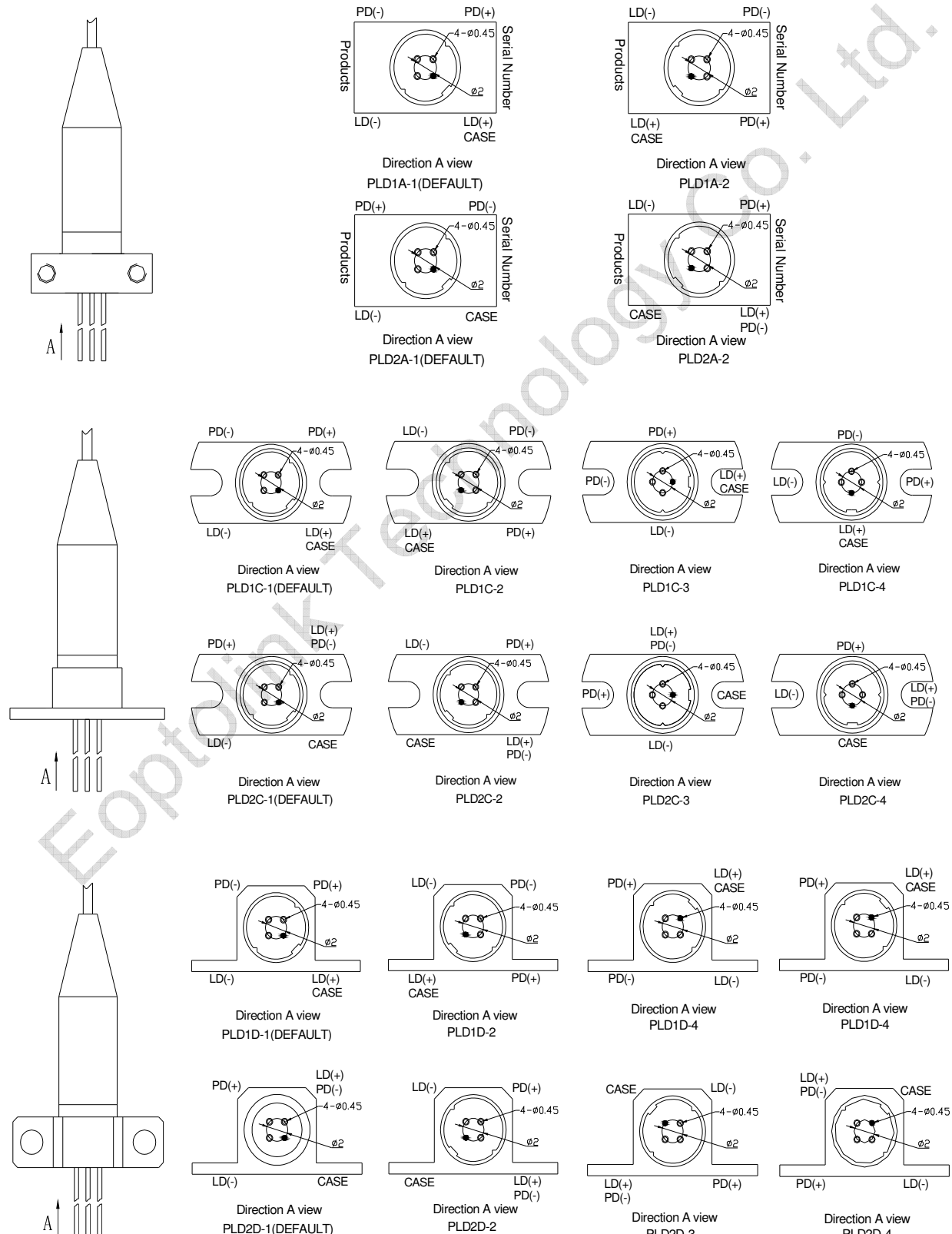
*Note5: For the package series D, the clamping rings dimensions (A) and drill size (B) are can be selected. The following types can be available. Please designate the detailed type while ordering the package series D.

	A(mm)	B(mm)

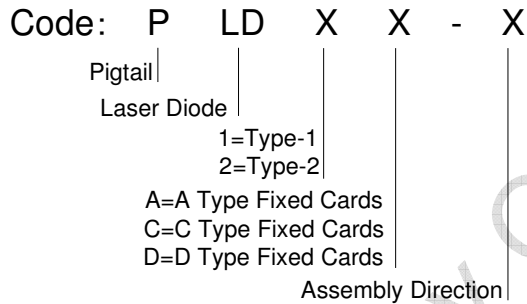
D	16	12
D-S	17	12.7

*Note6: 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.

The direction of fix card



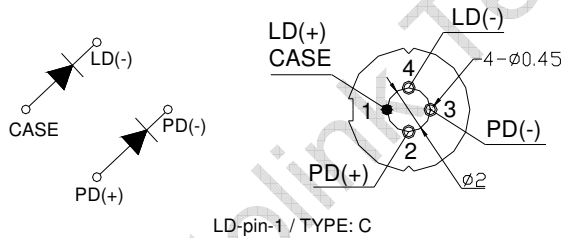
Nomenclature of assembly direction^{*Note7}



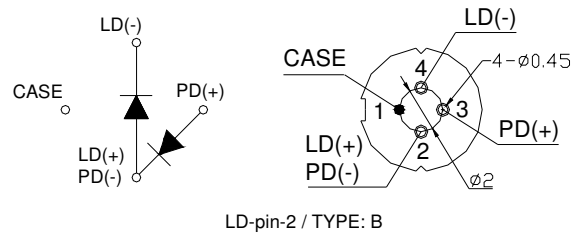
*Note7: Please designate the code of assembly direction.

Pin Assignment

TYPE: 1



TYPE: 2



Nomenclature

G F L P-5 □ □ □ □ □ □

A B C D E F G

NO	Parameter	Detailed Description				
A	Wavelength	5=1550				
B	Data rate	1=1.25Gb/s		2=2.5Gb/s		
C	Power	05=0.2-0.6mW		10=0.8-1.8mW		
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	N=None
F	Pin Type	1=LD-pin-1		2=LD-pin-2
G	Isolator	N=None	G= Single Stage	G2=Dual Stage

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-4	Zore.Zhao	Kelly.Cao		2009-12-26

Notice:

Eoptolink reserves the right to make changes or discontinue any product or service identified in this publication, without notice, in order to improve design and/or performance. Applications that are described herein for any of the products are for illustrative purposes only. Eoptolink makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.

Contact:

Add: Floor 5, Building 2, No. 21 Gaopeng Avenue, High-Tech District, CHENGDU, SICHUAN 610041 P.R.
CHINA

Tel: (+86) 028-85122709 ext 816 & 809



PLD-FP Series

Fax: (+86) 028-85121912

Postal: 610041

E-mail: sales@eoptolink.com

<http://www.eoptolink.com>

Eoptolink Technology Co. Ltd.