

1310nm &1550nm MQW-FP Pigtail Analog LD for 2.5GHz

HEFLN-3(5)XXXXXX

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/LC/FC or ST connector
- ◆ Optional with Isolator



Applications:

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

General:

HEFLN-3(5)XXXXXX Series are 1310nm & 1550nm 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 2.5GHz transmission applications.

Absolute Maximum Ratings: ^{*Note1}

Parameter	Symbol	Min.	Max.	Unit	Test Condition
Storage Temperature	Tstg	-40	100	°C	-
Operating Temperature	Top	-40	85	°C	-
Forward Current(LD)	If(LD)		120	mA	
Reverse Voltage(LD)	Vr(PD)		2	V	CW
Forward Current(PD)	If(LD)		2	mA	
Reverse Voltage(PD)	Vr(PD)		15	V	CW
Soldering Temp	-	-	260	°C	-
Soldering Time	-	-	10	S	S

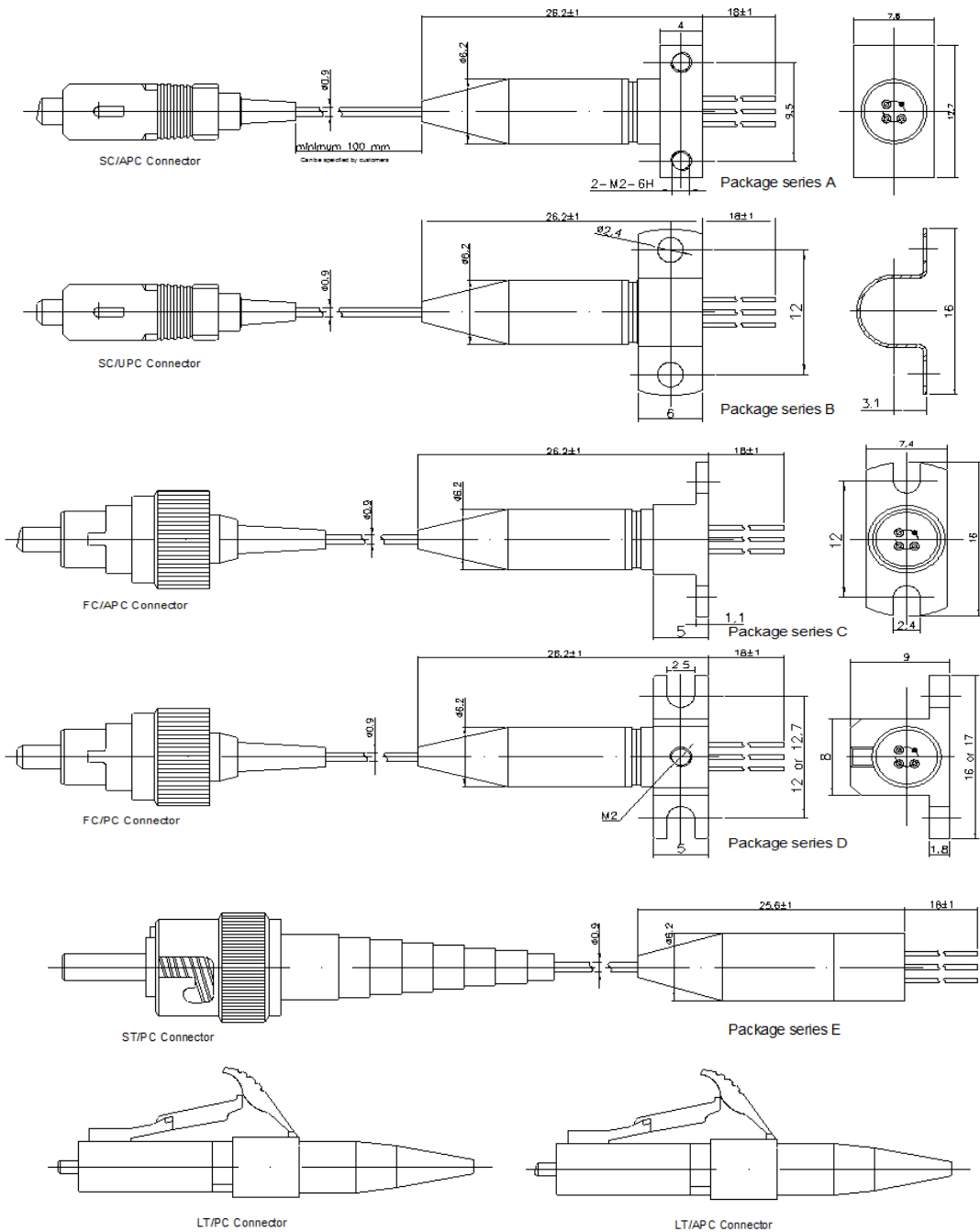
*Note1: Exceeding any one of these values may destroy the device immediately.

Electrical and Optical Characteristics:

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Rated Power	Po	0.2	-	4	mW	Ith+20mA
Threshold Current	Ith	5	-	12	mA	CW
Forward Voltage Drop	Vop	-	1.0	1.5	V	CW, Ith+20mA
Cent Wavelength	λ_c	1300	1310	1320	nm	-20dB
		1540	1550	1560		
Spectrum Width (-3dB)	$\Delta\lambda$	-	2	3	nm	Ith+20mA
Bandwidth	Bw	2.5		-	GHz	-
Monitor Current	Im	100		900	uA	CW, Ith+20mA
Dark Current of Monitor	Id	-	-	100	nA	5V
Relative Intensity Noise	RIN	-	-150	-	dB/Hz	CW, 25°C
RF Bandpass Flatness	BF		±1.5		dB	If=Iop,45MHz-1200MHz
Third-order Distortion	IMD3	-	53		dBc	2 tone test,
Optical Isolation	ISO	30	40	-	dB	25°C

Pigtail Package Dimension: *Note2, 3, 4



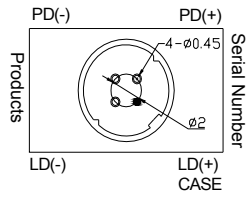
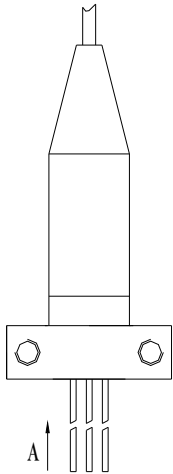
*Note2: PIN direction and laser mark can be customized. Pigtail is standard SM fiber, the length also can be customized.

*Note3: 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.

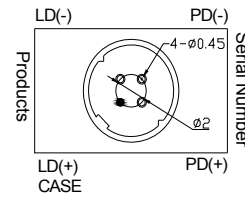
Fixed card type	A(mm)	B(mm)
D	16	12
D-S	17	12.7

*Note4: 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.

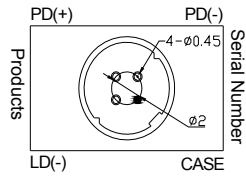
The Direction of Fix Card:



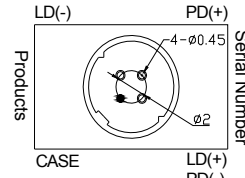
Direction A view
PLD1A-1(DEFAULT)



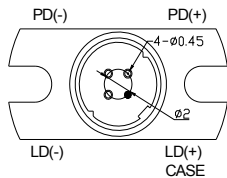
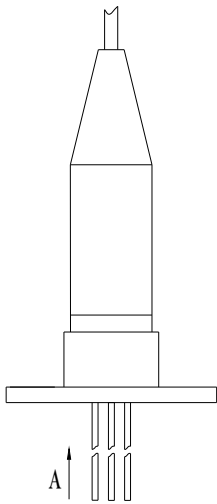
Direction A view
PLD1A-2



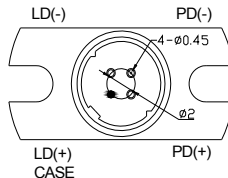
Direction A view
PLD2A-1(DEFAULT)



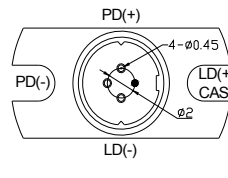
Direction A view
PLD2A-2



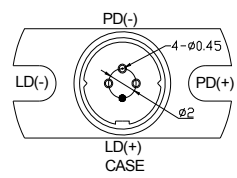
Direction A view
PLD1C-1(DEFAULT)



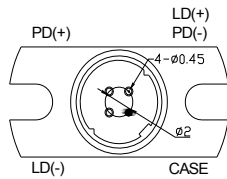
Direction A view
PLD1C-2



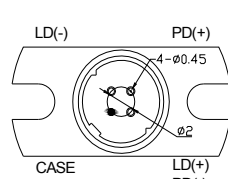
Direction A view
PLD1C-3



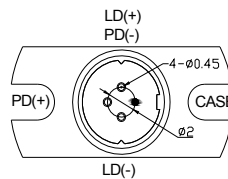
Direction A view
PLD1C-4



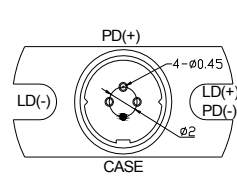
Direction A view
PLD2C-1(DEFAULT)



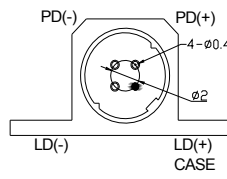
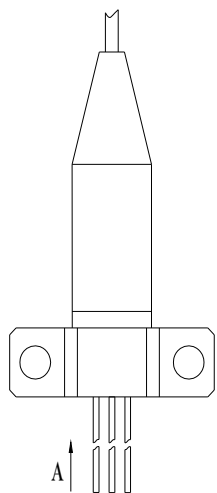
Direction A view
PLD2C-2



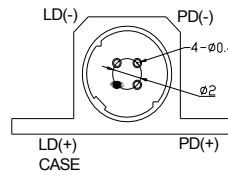
Direction A view
PLD2C-3



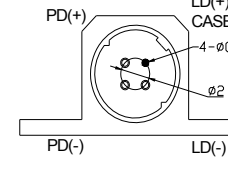
Direction A view
PLD2C-4



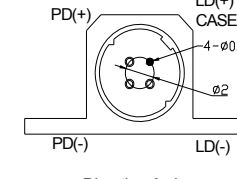
Direction A view
PLD1D-1(DEFAULT)



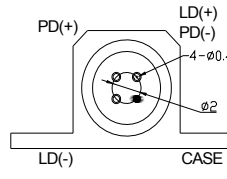
Direction A view
PLD1D-2



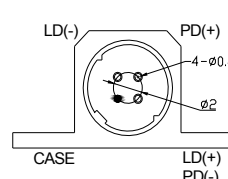
Direction A view
PLD1D-4



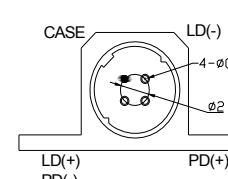
Direction A view
PLD1D-4



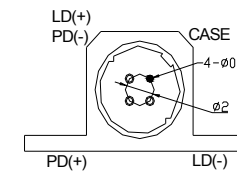
Direction A view
PLD2D-1(DEFAULT)



Direction A view
PLD2D-2



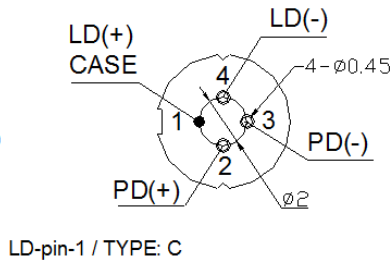
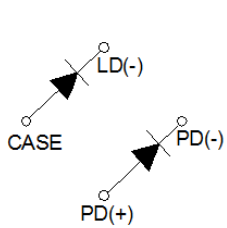
Direction A view
PLD2D-3



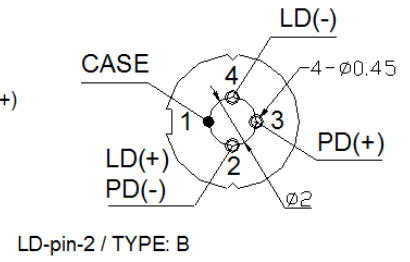
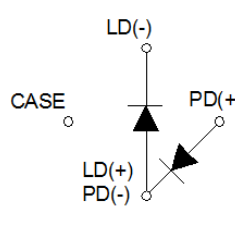
Direction A view
PLD2D-4

Pin Assignment:

TYPE: 1



TYPE: 2



Nomenclature:

HEFLN —

A B C D E F G

No.	Parameter	Detailed Description				
A	Wavelength	3=1310			5=1550	
B	RF Bandwidth	2=2.5GHz				
C	Power	05=0.2-1.5mW	10=1.51-3mW		20=3.1-4mW	
D	Package Series	A	B	C	D	E
E	Connector	F=FC/PC		S=SC/PC	T=ST/PC	
		FA=FC/APC		SA=SC/APC	LA=LC/APC	
F	Pin Type	1=LD-pin-1			2=LD-pin-2	
G	Isolator	Blank=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.

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