

1310nm MQW-FP Laser Diode Receptacle Module

HEFLR-3XXXXX

**Features:**

- ◆ Coaxial Package
- ◆ InGaAsP/InP MQW-FP Laser Diode
- ◆ Low threshold, high slope efficiency and high output power LD
- ◆ Maximum Soldering Temperature/Time: 260°C/10s
- ◆ Operating Case Temperature: -40°C to +85°C
- ◆ RoHS Compliant Products Available

Applications:

- ◆ Optical Transmitter of Data Signal
- ◆ Optical Transmitter of Analog Signal
- ◆ Test Equipments

General:

HEFLR-XXXXXX Series are 1310nm InGaAsP/InP MQW-FP laser diode modules designed for fiber communication systems. These modules are transmitter optical sub-assembly with low threshold current and high performance at high temperature, which are ideally suitable for short reach applications, data rates from 155M to 2.5G.

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

Ordering Information: (Standard version ^{*Note1})

Part No.	Package Series	Pin Type	Isolator	Connector	Data Rate
HEFLR-3110A2	A	LD-Pin-2	N=None	FC-A	1.25G
HEFLR-3110B2G	B	LD-Pin-2	Single Stage	FC-B	1.25G
HEFLR-3210C1G	C	LD-Pin-1	Single Stage	FC-C	2.5G
HEFLR-3105D2	D	LD-Pin-2	N=None	FC-D	1.25G
HEFLR-3110E2	E	LD-Pin-2	N=None	ST	1.25G
HEFLR-3110F2G	F	LD-Pin-2	Single Stage	SC	1.25G
HEFLR-3210F2G2	F	LD-Pin-2	Dual Stage	SC	2.5G

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

Absolute Maximum Ratings: *Note2

Parameter	Symbol	Ratings	Unit
Storage Temperature	Tstg	-40~+100	°C
Operating Case Temperature	Top	-40~+85	°C
Forward Current (LD)	IFD	150	mA
Reverse Voltage (LD)	VrL	2	V
Reverse Voltage (PD)	VrP	20	V
Reverse Current (PD)	IrP	2	mA
Soldering Temperature (<10s)	Stemp	260	°C

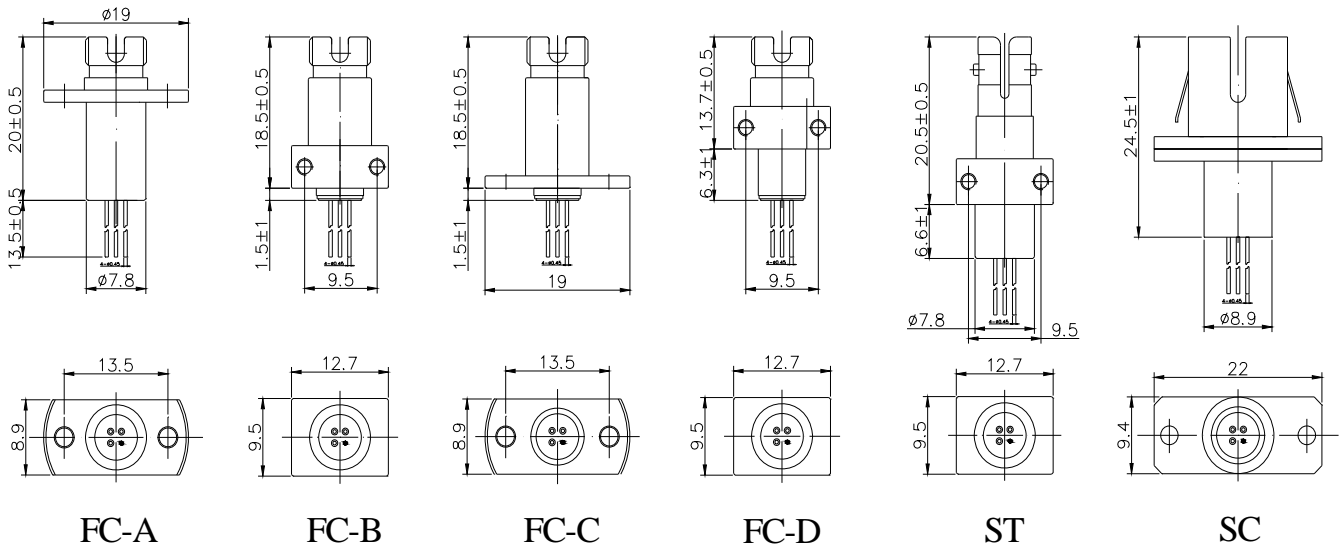
*Note2: Exceeding any one of these values may destroy the device immediately.

Electrical and Optical Characteristics:

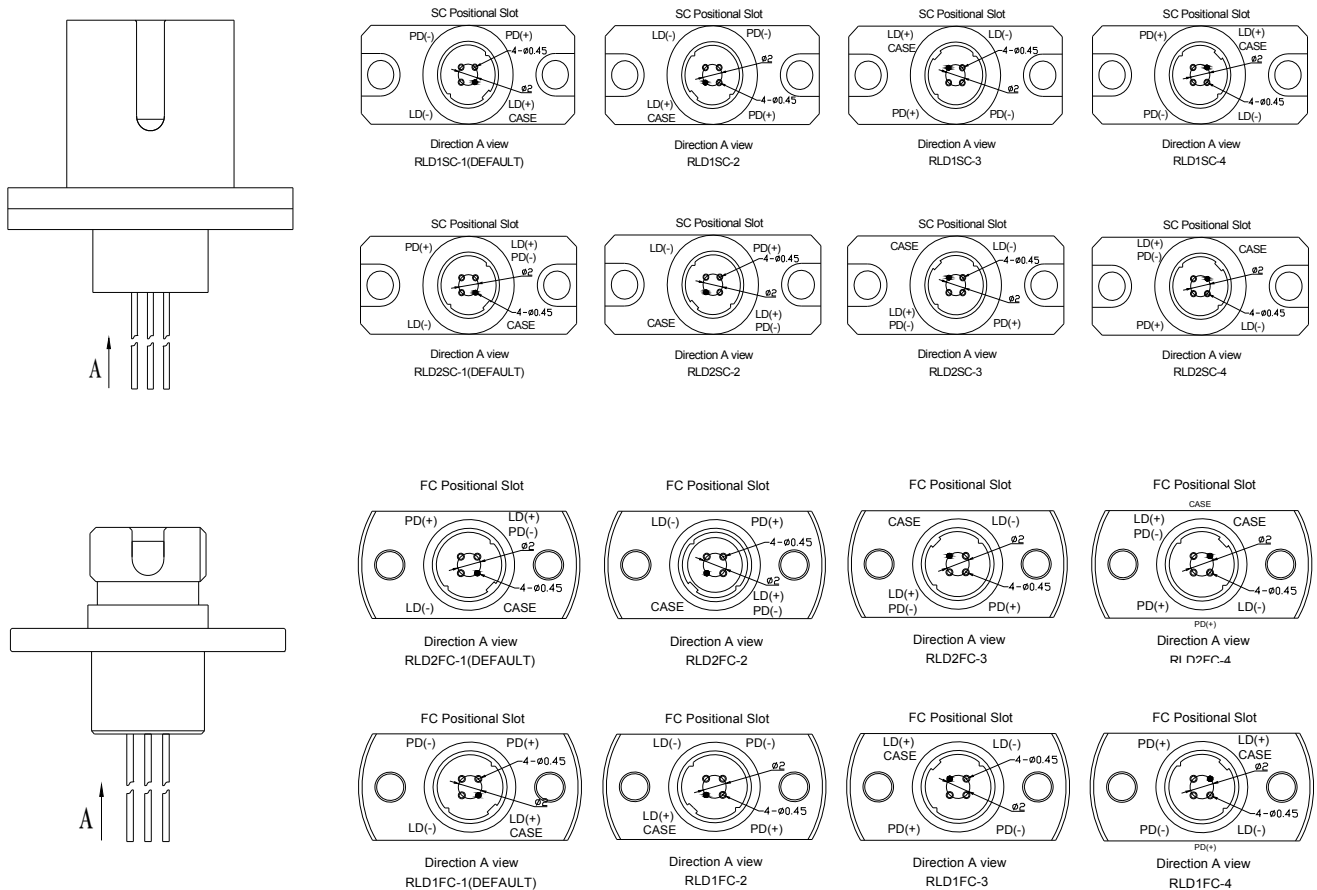
(Po=1mW, SMF, Tc=+25°C, unless otherwise noted.)

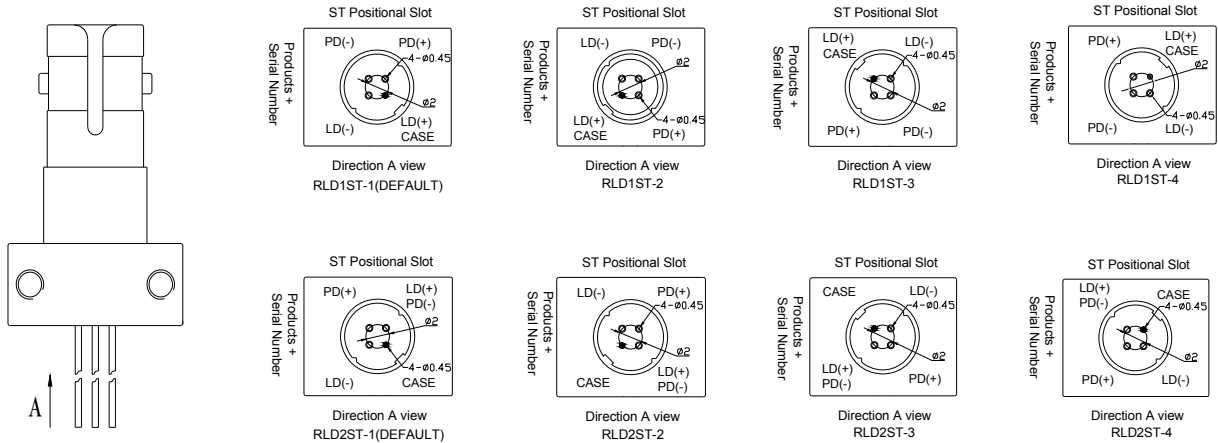
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	Ith	CW	—	8	15	mA
Output Power (After coupling)	Po	CW, If=Ith+20mA	0.2	1	2.5	mW
Operating Voltage	Vf	CW, Tc=-40~+85°C	—	1.2	1.6	V
Slope Efficiency	Se	CW, Average(Ith to Ith+20mA)	0.005	—	—	mW/mA
Peak Wavelength	λc	CW	1290	1310	1330	nm
		CW, Tc=-40~+85°C	1265		1355	
Spectral width	Δλ	CW, RMS	—	1	3	nm
Rise Time	tr	Ibias=Ith, 10-90%, Tc=-40~+85°C	—	—	0.7	ns
Fall Time	tf	Ibias=Ith, 80-90%, Tc=-40~+85°C	—	—	0.9	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	100	500	900	uA
Monitor Dark Current	Id	VrP=5V	—	—	0.1	uA
Monitor Capacitance	C	VrP=5V, f=1MHz	—	10	20	pF
Connector Repeatability	—		-1	—	1	dB
Optical Isolation	—	Single Stage	—	20	—	dB
		Dual Stage	—	30	—	

Package Dimension:



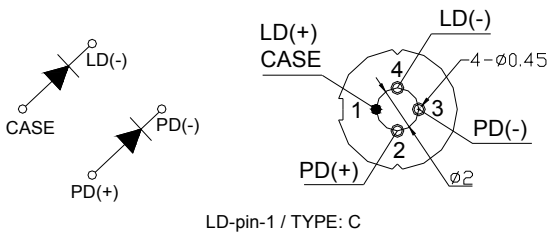
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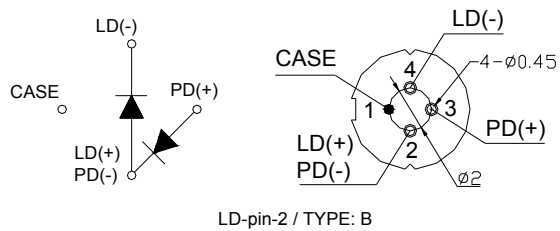


Pin Assignment:

TYPE: 1



TYPE: 2



Nomenclature:

HEFLR-3

A B C D E F G

Order	Parameter	Detailed Description					
A	Center Wavelength	3=1310					
B	Data Rate	1=1.25G			2=2.5G		
C	Power	05=0.2-0.99mW			10=1-1.99 mW		
D	Package Series	A=FC-A	B=FC-B	C=FC-C	D=FC-D	E=ST	F=SC
E	Pin Type	1=LD-pin-1			2=LD-pin-2		
F	Isolator	Blank=None		G= Single Stage		G2=Dual Stage	
G	Fiber Type	Blank=SM			M=MM		

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.

Notice:

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