

1490/1550 DFB Bi-Di Device

Features:

- InGaAsP/InP MQWDFB laser diode
- 1490nm/1550nm double wavelength
- Low Threshold
- Monitor-PD diode
- SM package with pigtail and receptacle
- Rohs Compliant

Application:

- Fiber optical communication
- Measuring Meters and Gauges
- FTTX PON



Transmitter Parameters:

Parameters	Test Conditions	Unit	MIN	TYP	MAX
Wavelength λ_p	If=Ith+20mA	nm	1470	1490	1510
			1530	1550	1570
Spectral Linewidth $\Delta\lambda$	DFB	nm		0.1	1
Threshold Current Ith	T=25°C	mA		10	30
	T=85°C			35	50
Forward voltage Vf	If=Ith+20mA	V		1.1	1.8
Fiber output power Pf	If=Ith+25mA、1490nm	dBm	-5	0	
	If=Ith+25mA、1550nm		-5	0	
PD dark current Id	Vr=-5V	uA			0.1
Rise and Fall Time (tr,tf)	Ib=Ith,Po=5mW 10-90%	ns		0.2	0.4
Monitor current Im	If=Ith+20mA	uA	50	200	
SMSR	If=Ith+25mA	dB	30	40	

Receiver Parameters:

Parameters	Test Conditions	Unit	MIN	TYP	MAX
Wavelength λ_p	If=Ith+20mA	nm	1530	1550	1570
			1470	1490	1510
Sensitivity	155Mb/s	dBm		-36	-34
	622Mb/s			-31	-29
	1.25Gb/s			-27	-24
Supply Voltage	(Vcc)	V	2.97		3.63
	155Mb/s (Vcc)		2.97		5.5
Supply Current	155Mb/s (Icc)	mA			35
	622Mb/s (Icc)			20	26
	1.25Gb/s (Icc)			30	50
Rise and Fall Time (tr,tf)	Ib=Ith,Po=5mW 10-90% (155Mb/s)	ns		3	4.5
	Ib=Ith,Po=5mW 20-80% (1.25Gb/s)			0.3	0.4
Crosstalk	Vr=5V, CW	dB	45		

Absolute Ratings:

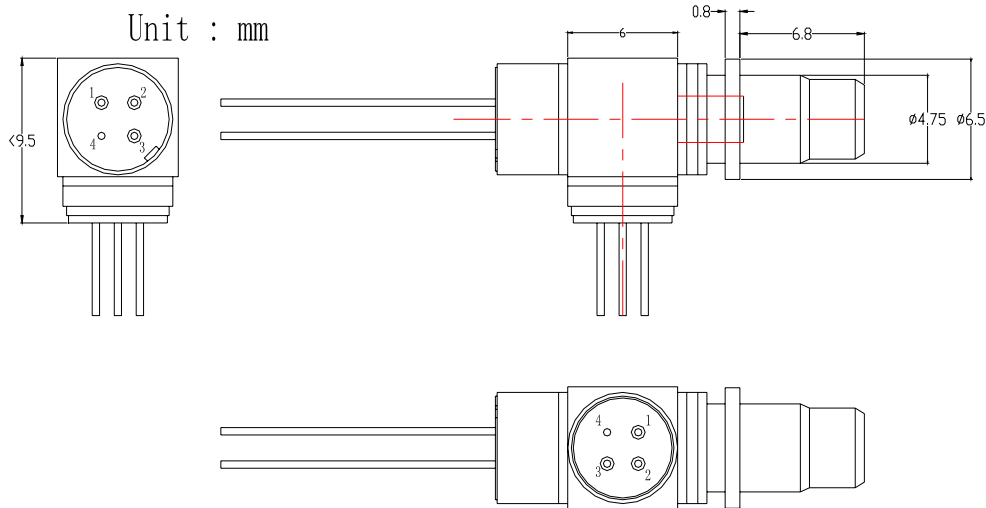
parameters	conditions	Values
Operating Temperature(°C)		-40~+85
Storage Temperature(°C)		-40~+125
Opposite Voltage Vr(v)	CW	2.0

Pin Assignment

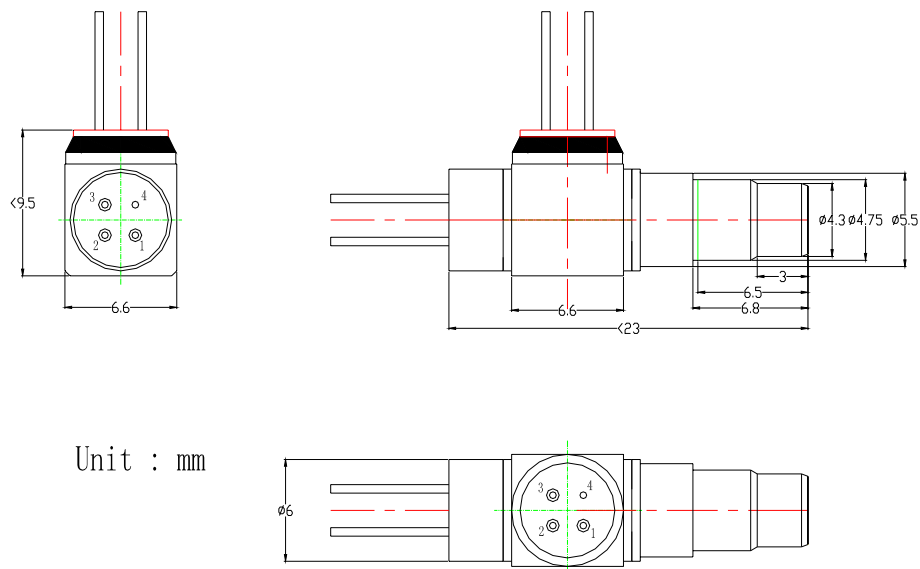
PN	Laser Diode	Pin-Tia type
1	LD cathode	Vcc
2	PD anode	Data out bar
3	LD anode/PD cathode	Data out
4	Gnd & Case	GND

Assembly Drawing:

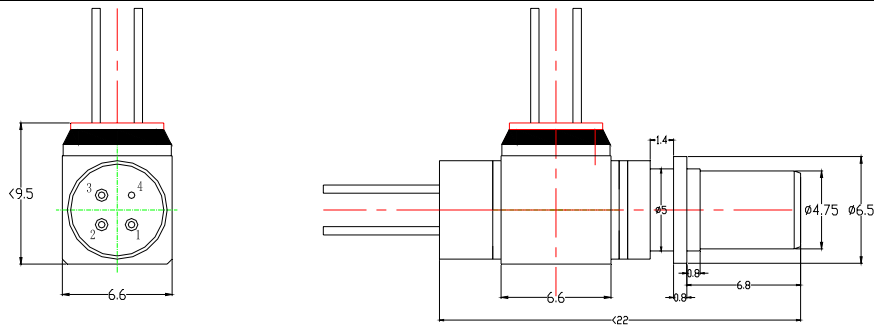
Type 1: (FC & SC)



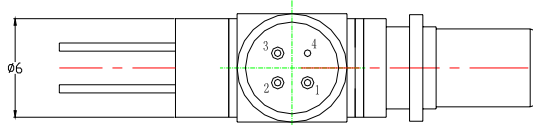
Type 2: (FC)



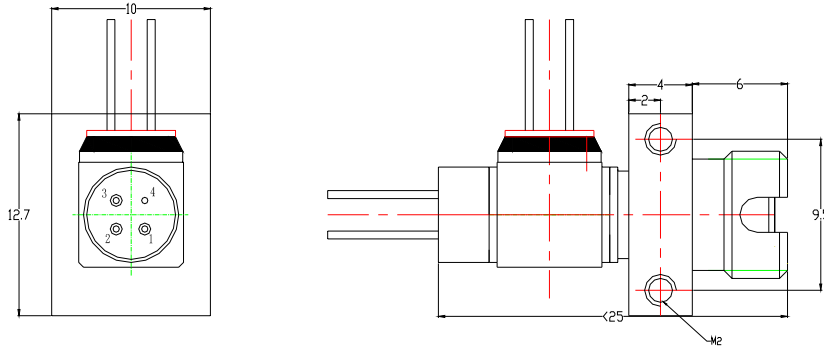
Type 3: (SC)



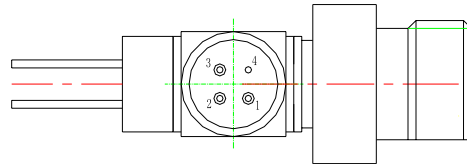
Unit : mm



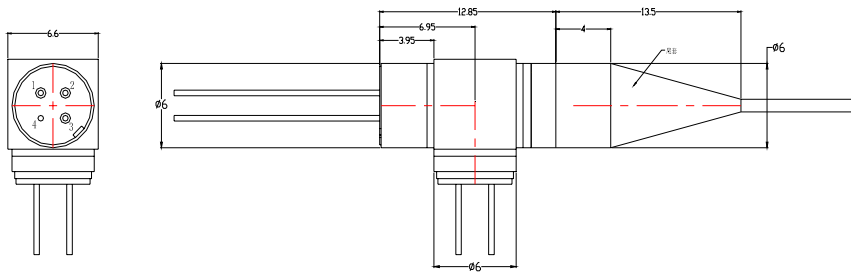
Type 4 : (FC With connector)



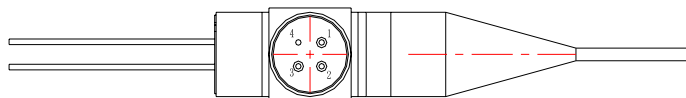
Unit : mm



Type 5 : (Pigtail)



Unit : mm



Order Information:

BIDI pigtail

BP-ABCDEFGHEI

A-LD type	B-LD wave	C-Power (dBm)	D-Data rate	E-P type	F-Rx	G-sen	H-Data rate	E-Volt	F-Package	I-fiber
F-FP	1-650nm	1\ -10-15	1\ 1.25Gb/S	A	1-Si-Pin	1\ <-36dBm	1\ 2Mb/S	3-3.3v	1-FC/PC	S single
D-DFB	2-850nm	2\ -8~-10	2\ 2.5Gb/s	C	2-APDpin	2\ <-31dBm	2\ 155Mb/s	5-5v	2-SC/PC	M5-50um
E-LED	3-1310nm	3\ -3~-8	3\ 10Gb/s	E	3-G-pin	3\ <-26dBm	3\ 622Mb/s		3-ST/PC	M6-62.5um
	4-1490nm	4\ 0~-3	0\ other		4-PinTia	4\ <-20dBm	4\ 1.25Gb/s		4-LC/PC	MT-400um
	5-1550nm	5\ +3~0			5-5Pintia	5\ <-18dBm	5\ 2.5Gb/s		5-FC/APC	
	6-1625nm	6\ +6-+3			6-APD	0\ Other	6\ 10Gb/s		6-SC/APC	
	7-CWDM	7\ >+6							7-LC/APC	

BIDI Receptacle

BC-ABCDEFGHEI

A-LD type	B-LD wave	C-Power (dBm)	D-Data rate	E-P type	F-Rx	G-sen	H-Data rate	E-Volt	F-Package	I-fiber
F-FP	1-650nm	1\ -10-15	1\ 1.25Gb/S	A	1-Si-Pin	1\ <-36dBm	1\ 2Mb/S	3-3.3v	1-SC	S single
D-DFB	2-850nm	2\ -8~-10	2\ 2.5Gb/s	C	2-APDpin	2\ <-31dBm	2\ 155Mb/s	5-5v	2-FC	M5-50um
E-LED	3-1310nm	3\ -3~-8	3\ 10Gb/s	E	3-G-pin	3\ <-26dBm	3\ 622Mb/s		3-LC	M6-62.5um
	4-1490nm	4\ 0~-3	0\ other		4-PinTia	4\ <-20dBm	4\ 1.25Gb/s			MT-400um
	5-1550nm	5\ +3~0			5-5Pintia	5\ <-18dBm	5\ 2.5Gb/s			
	6-1625nm	6\ +6-+3			6-APD	0\ Other	6\ 10Gb/s			
	7-CWDM	7\ >+6								