

1310/1550 Bi-Di Device

Features:

- InGaAsP/InP MQW laser diode
- 1310nm/1550nm double wavelength
- Low Threshold
- Monitor-PD diode
- SM/MM package with pigtail and receptacle
- Rohs Compliant

Application:

- Fiber optical communication
- Measuring Meters and Gauges
- FTTX



Transmitter Parameters:

| Parameters | Test Conditions | Unit | MIN | TYP | MAX |
|------------------------------------|--------------------------|------|------|------|------|
| Wavelength λ_p | If=Ith+20mA | nm | 1290 | 1310 | 1330 |
| | | | 1530 | 1550 | 1570 |
| Spectral Linewidth $\Delta\lambda$ | FP | nm | | 2 | 4 |
| | DFB | | | 0.1 | 1 |
| Threshold Current Ith | 1310nm | mA | | 7 | 15 |
| | 1550nm | | | 9 | 15 |
| | 1550nm (DFB) | | | 10 | 15 |
| Forward voltage Vf | If=Ith+20mA | V | | 1.1 | 1.5 |
| Fiber output power Pf | If=Ith+25mA、1310nm | dBm | -10 | | |
| | If=Ith+25mA、1550nm | | -10 | | |
| | If=Ith+25mA、1550nm (DFB) | | -5 | | |
| PD dark current Id | Vr=-5V | uA | | | 0.1 |
| Rise and Fall Time (tr,tf) | Ib=Ith,Po=5mW 10-90% | ns | | 0.3 | 0.7 |
| Monitor current Im | If=Ith+20mA(1310nm) | uA | 100 | | |
| | If=Ith+20mA(1550nm) | | 200 | | |

Receiver Parameters:

| Parameters | Test Conditions | Unit | MIN | TYP | MAX |
|----------------------------|---------------------------------|------|------|------|------|
| Wavelength λ_p | If=Ith+20mA | nm | 1530 | 1550 | 1570 |
| | | | 1290 | 1310 | 1330 |
| Sensitivity | 155Mb/s | dBm | | -36 | -34 |
| | 622Mb/s | | | -31 | -29 |
| | 1.25Gb/s | | | -26 | -23 |
| 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:

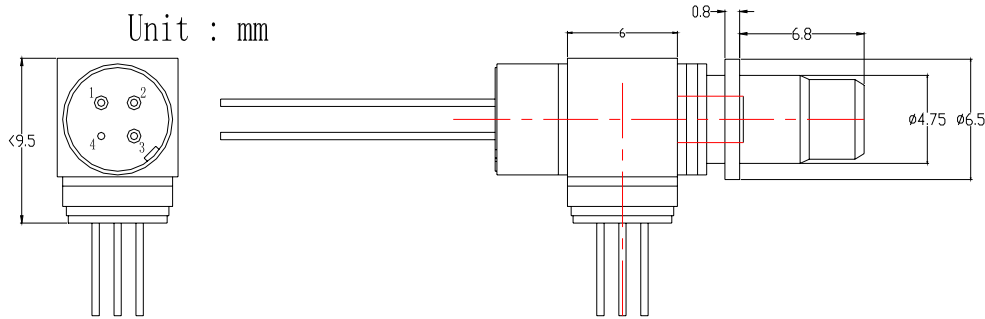
| parameters | conditions | Values |
|---------------------------|------------|----------|
| Operating Temperature(°C) | | -40~+85 |
| Storage Temperature(°C) | | -40~+125 |
| Opposite Voltage Vr(v) | CW | 2.0 |

Pin Assignment

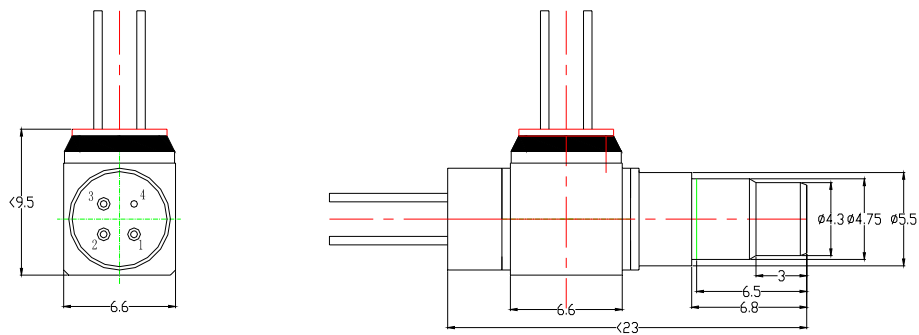
| PN | Laser Diode | Pin-Tia type |
|----|---------------------|--------------|
| 1 | LD cathode | Vcc |
| 2 | PD anode | Data out bar |
| 3 | LD anode/PD cathode | Data out |
| 4 | Gnd & Case | GND |

Assembly Drawing:

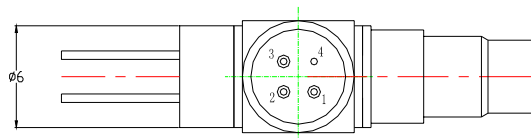
Type 1: (FC & SC)



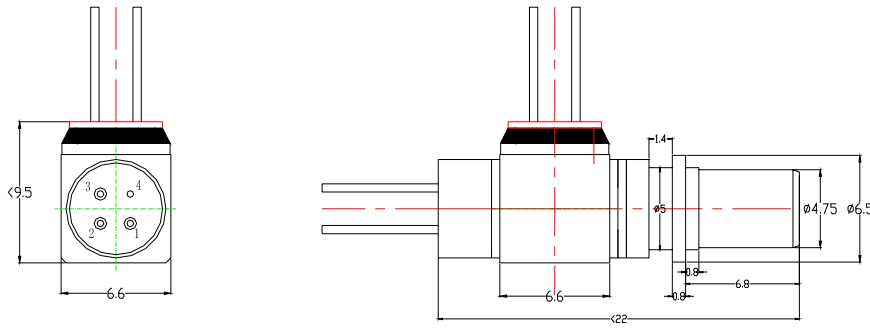
Type 2: (FC)



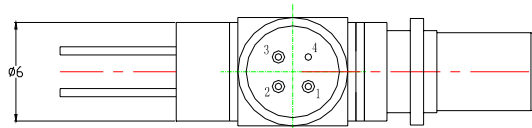
Unit : mm



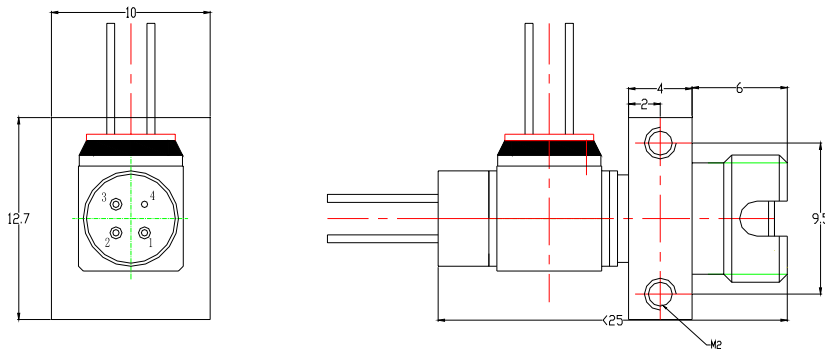
Type 3 : (SC)



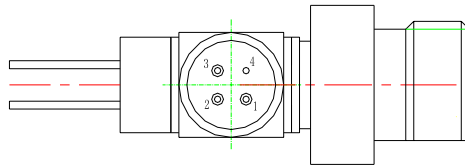
Unit : mm



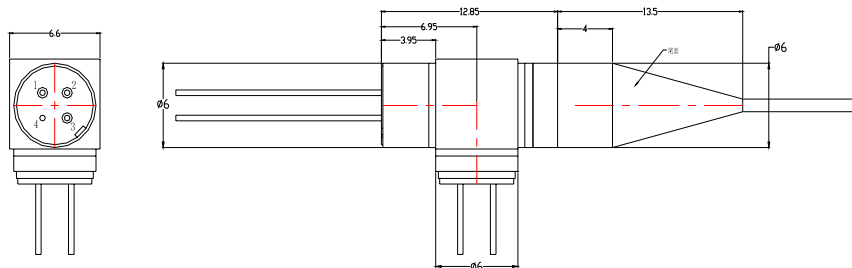
Type 4 : (FC With connector)



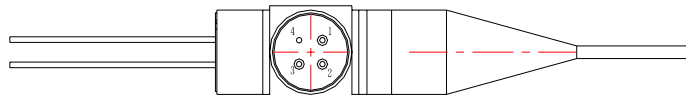
Unit : mm



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 | | | | | | | | |