

CWDM TX DFB 1550nmRX PD Pigtail BOSA (Analog Transmission)

Features:

- ◆ Coaxial Package
- ◆ InGaAsP/InP MQW-DFB Laser Diode
- ◆ Low threshold, high slope efficiency and high output power
- ◆ Operating Case Temperature: 0°C to +85°C
- ◆ Single-mode fiber pigtailed with SC/FC/ST or LC connector
- ◆ High channel isolation
- ◆ Low return loss
- ◆ Optional with Isolator



Applications:

- ◆ Long distance digital transmission system
- ◆ Private optical networks
- ◆ Subscriber loops
- ◆ Fiber-optic transceiver
- ◆ Cable television system

Absolute Maximum Ratings:

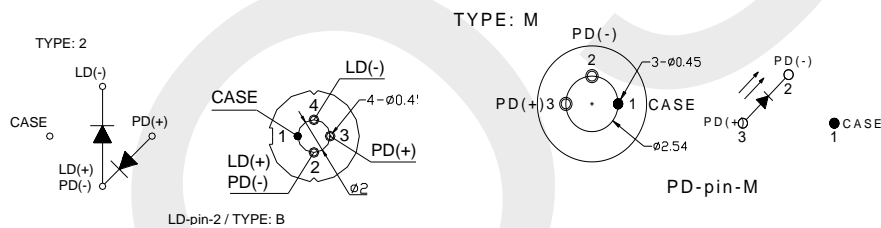
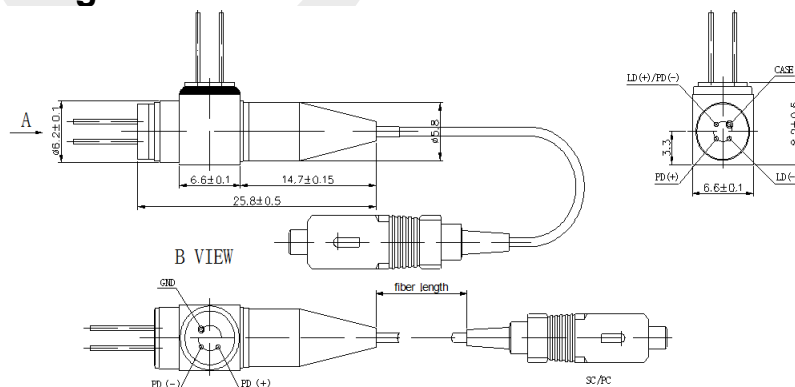
| Parameter | Symbol | Ratings | Unit |
|--------------------------------|-----------------|---------|------|
| Storage Temperature | Tstg | -40~+85 | °C |
| Operating Case Temperature | Top | 0~+85 | °C |
| Reverse Voltage (LD) | V _{RL} | 2 | V |
| Reverse Voltage (PD) | V _{RD} | 20 | V |
| Photodiode Forward Current(PD) | I _{FD} | 2 | mA |
| Soldering Temperature (<10s) | Stemp | 260 | °C |

Electrical and Optical Characteristics – Transmitter:

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|-----------------------------|------------------|---|------|------|------|------|
| Threshold Current | I _{th} | at T _c =25±3°C | — | 8 | 15 | mA |
| Output Optical Power | P _f | CW, I _{op} =I _{th} +20mA, | 1 | — | 1.59 | mW |
| Center Wavelength | λ _c | CW, I _{op} =I _{th} +20mA, | -3 | — | +3 | nm |
| Operating Voltage | V _{op} | CW, I _{op} =I _{th} +20mA, | — | 1.1 | 1.5 | V |
| Side-mode suppression ratio | SMSR | CW, I _{op} =I _{th} +20mA, | 35 | 40 | — | dB |
| Tracking Error | TE | APC, 0°C/+25°C, +25°C/+85°C | -1.5 | — | 1.5 | dB |
| Monitor Current | I _{mon} | CW, I _{op} =I _{th} +20mA, | 0.1 | — | 1.0 | mA |
| Monitor Dark Current | I _d | VRD=5V | — | — | 0.1 | μA |
| Optical Isolation | I _{so} | Single Stage | — | 20 | — | dB |
| | | Dual Stage | — | 30 | — | |

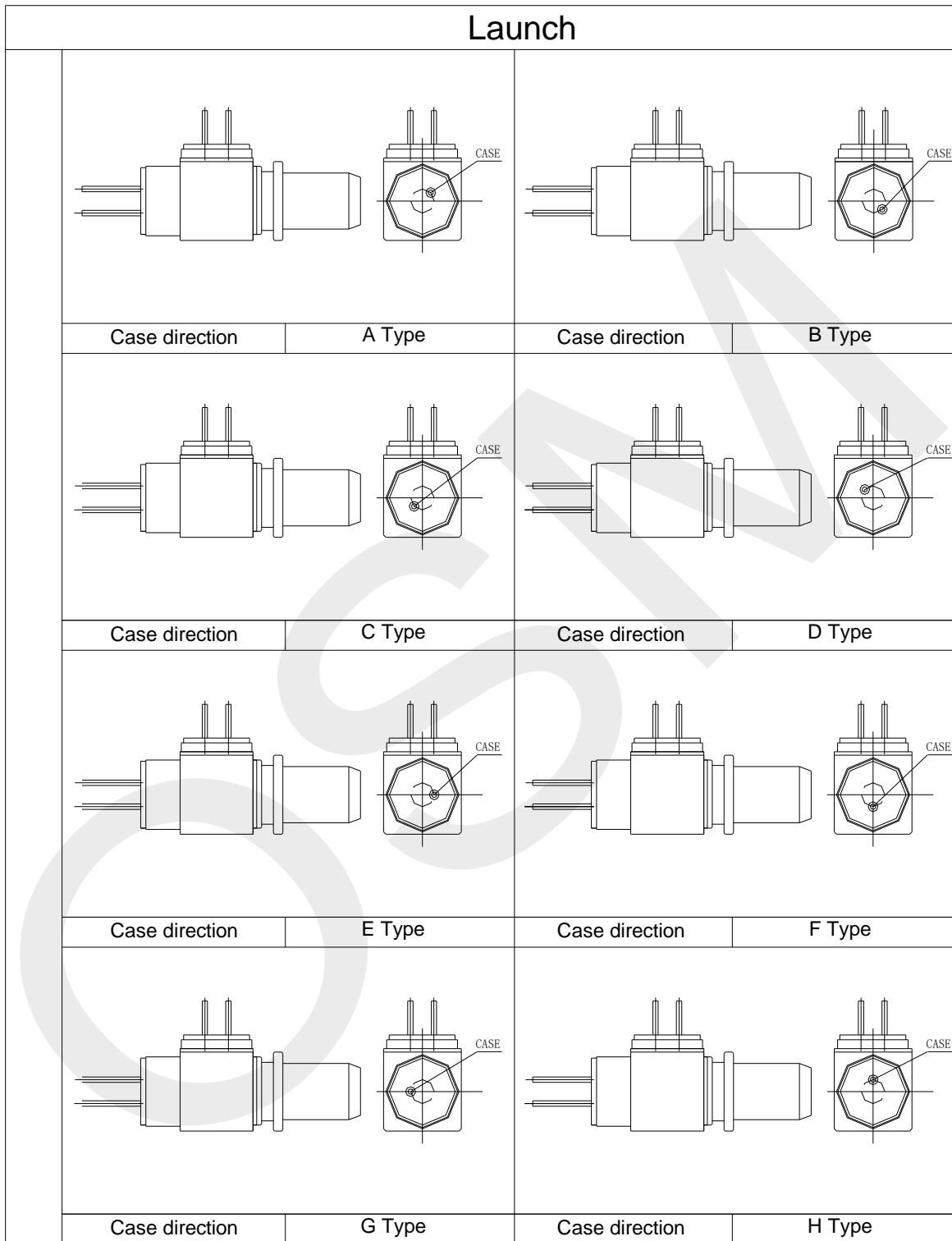
Electrical / Optical Specifications – Receiver:

| Parameter | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|----------------------------|----------------|----------------|------|------|------|------|
| Detection Wavelength Range | λ | — | 1540 | 1550 | 1560 | nm |
| Active Diameter | Φ | — | — | 75 | — | μm |
| Responsivity | R | λ=1550nm | 0.8 | — | — | A/W |
| Dark Current | I _d | VR = 5V | — | — | 1 | nA |
| -3dBm Bandwidth | BW | — | 1.5 | — | 3.2 | GHz |

Pin Assignment:

Pigtail Package Series: *Note1


Note1: PIN direction and laser mark can be customized. Pigtail is standard SM fiber; the length also can be customized.

TX Pin Order Code *Note2、3、4

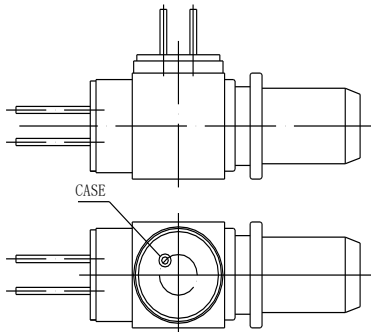
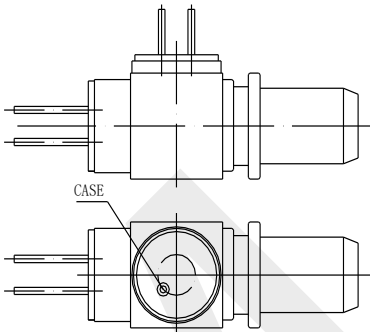
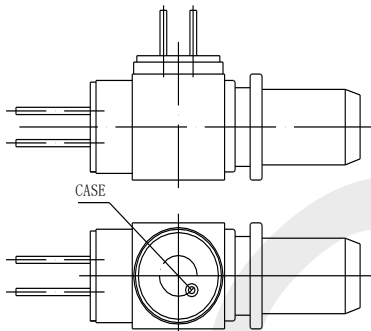
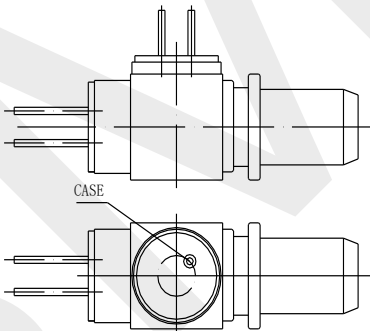
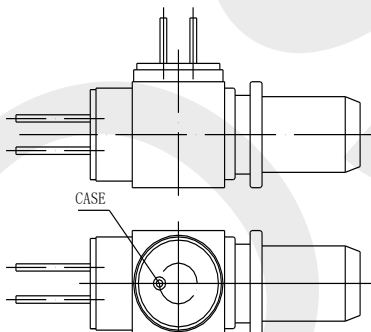
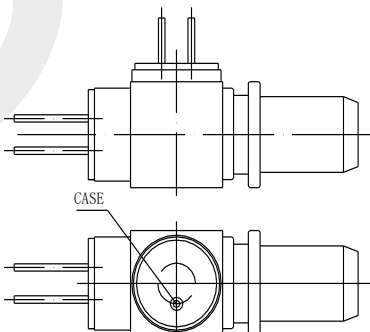
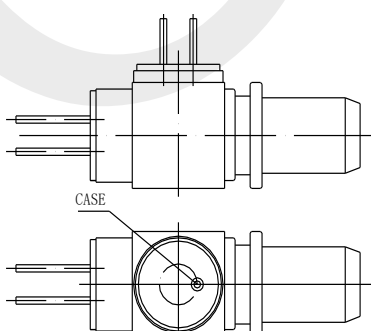
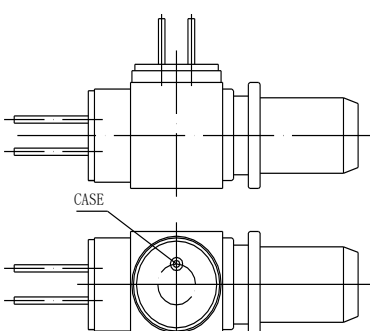


2、 This picture is for pluggable, pigtail BIDI chip PIN package direction's reference

3、 This picture is suitable for RX Pin direction comparison .

4、 The package direction is described as "x-x" For example "A-B", "A" is TX chip Pin direction, "B" is RX chip Pin direction

RX Pin Order Code:

| Receive | | | |
|---|--------|--|--------|
|  | |  | |
| Case direction | A Type | Case direction | B Type |
|  | |  | |
| Case direction | C Type | Case direction | D Type |
|  | |  | |
| Case direction | E Type | Case direction | F Type |
|  | |  | |
| Case direction | G Type | Case direction | H Type |

Nomenclature:

OSMBIDI-□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
 A B C D E F G H I J K L M N O

| Code | Parameter | Detailed Description | | | | | | | |
|------|----------------------------|----------------------|--------|-------------|------------|-----------------|--------|----------------|---|
| A | Laser Type | D=DFB LD | | | | | | | |
| B | Launch Wavelength | A=1270 | B=1290 | C=1310 | D=1330 | E=1350 | F=1370 | | |
| | | G=1390 | H=1410 | I=1430 | J=1450 | K=1470 | L=1490 | | |
| | | R=1610 | | | | | | | |
| C | Launch Data Rate | 1=1.25G | | | | 2=2.5G | | | |
| D | Output Power | 04=0.3~0.49 | | 08=0.5~0.99 | | 15=1~1.59mW | | | |
| E | TX Pin Type | 2=LD-pin-2 | | | | | | | |
| F | Receiver Wavelength | 5=1550 | | | | | | | |
| G | Receiver Bandwidth | 0≤1.5GHz | | 1≤2.7GHz | | 2≤3.2GHz | | | |
| H | RX Pin Type | C= pin-C | | | | | | | |
| J | Connector | F=FC/PC | | S= SC/PC | | T=ST/PC | | L=LC/PC | |
| | | FA=FC/APC | | | SA= SC/APC | | | N= None | |
| K | TX Pin Package irection | A | B | C | D | E | F | G | H |
| L | RX Pin Package Direction | A | B | C | D | E | F | G | H |
| M | RX TO Insulated With Shell | Blank=Insulation | | | | N=NO Insulation | | | |
| N | Isolator | Blank=None | | | | G=with I | | | |
| O | Fiber Length | Blank=55cm | | 035=35cm | | 100=100cm | | XXX=Customized | |

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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