

3.3V / 2.5 Gbps InGaAs PIN-TIA Receiver

PT-9330 Series

InGaAs PIN-TIA WITH PIGTAIL

FEATURES

- ✧ InGaAs/InP PIN Photodiode with AGC transimpedance amplifier
- ✧ Differential ended output
- ✧ Single +3.3 V operation
- ✧ Speed up to 2.5 Gbps
- ✧ - 40 ~ +85 °C operation temperature

DESCRIPTION

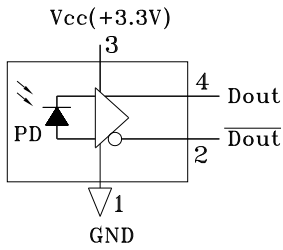
PT-9330 series are designed as optical signal receivers with AGC transimpedance amplifier. Their wide dynamic ranges, differential outputs are suited for telecommunications, especially Gigabit Ethernet, Fiber Channel and SONET OC-48.

| AC / ELECTRICAL AND OPTICAL CHARACTERISTICS (Tc=25°C) | | | | | | |
|---|-------------------|---------------------------------|------|------|------|------|
| Symbol | Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
| | Detection Range | | 1100 | 1310 | 1650 | nm |
| G | Differential Gain | AC coupled, Load=50 Ω | 2 | 2.5 | 3 | V/mW |
| BW | Bandwidth | -3 dB point | 1.5 | 2 | | GHz |
| Psat | Saturation Power | λ =1300nm | -3 | | | dBm |
| Sens | Sensitivity | BER=10 ⁻¹⁰ @2.5 Gb/s | | -22 | -19 | dBm |
| Rout | Output Resistance | | - | 50 | 65 | ohm |
| | Operation Speed | | | 2500 | | Mbps |

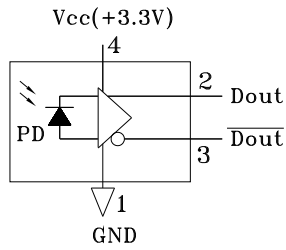
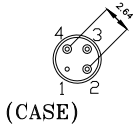
| DC / ELECTRICAL CHARACTERISTICS (Tc=25°C) | | | | | |
|---|--------------------------|------|------|------|------|
| Symbol | Parameter | Min. | Typ. | Max. | Unit |
| Vcc | Power Supply | 3.15 | 3.3 | 3.45 | V |
| Icc | Supply Current (no load) | - | 30 | 50 | mA |

| ABSOLUTE MAXIMUM RATING (Tc=25 °C) | | | |
|------------------------------------|-----------------------|---------|------|
| Symbol | Parameter | Value | Unit |
| V | Voltage | 4.5 | V |
| Topr | Operating Temperature | -40~+85 | °C |
| Tstg | Storage Temperature | -40~+85 | °C |

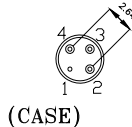
MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT



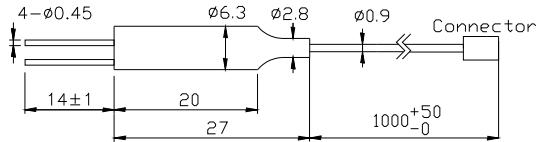
TYPE B



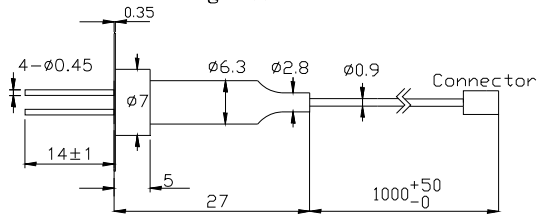
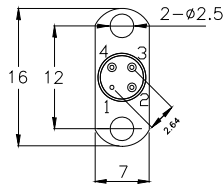
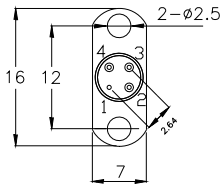
TYPE A



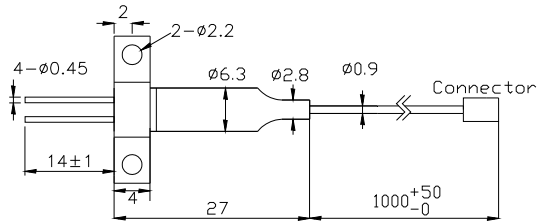
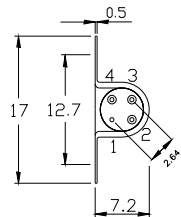
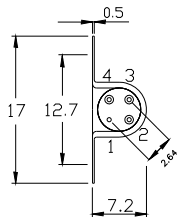
| PIN | PIN Assignment | |
|-----|--------------------------|--------------------------|
| | TYPE B | TYPE A |
| 1 | GND | GND |
| 2 | $\overline{\text{Dout}}$ | Dout |
| 3 | Vcc(3.3V) | $\overline{\text{Dout}}$ |
| 4 | Dout | Vcc(3.3V) |



Flangeless



Vertical Flange



Horizontal Flange

Note: Specifications subject to change without notice.

ORDER INFORMATION

Part No.: P T - 9 3 3 -

| Code | Voltage | Code | Fiber | Code | PIN Assignment | Code | Flange | Code | Connector |
|------|---------|------|-----------------------------|-------|----------------|------|------------|------|--------------|
| 0 | 5V | 0 | SMF, 9/125 μm | Blank | Type A | V | Vertical | S | SC/PC |
| 3 | 3.3V | 1 | MMF, 50/125 μm | B | Type B | H | Horizontal | F | FC/PC |
| | | 2 | MMF, 62.5/125 μm | | | X | No Flange | T | ST/PC |
| | | | | | | | | X | No Connector |
| | | | | | | | | SA | SC/APC |
| | | | | | | | | FA | FC/APC |
| | | | | | | | | TA | ST/APC |

Revision History

| Version | Subject | Release Date |
|---------|--|--------------|
| 1.0 | Initial datasheet | 2002/12/1 |
| 2.0 | Modify the mechanical dimension and PIN assignment | 2009/4/9 |
| | | |
