

3.3V / 622 Mbps InGaAs PIN-TIA Receiver

PT-5330 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 622 Mbps
- ◇ - 40 ~ +85 °C operation temperature

DESCRIPTION

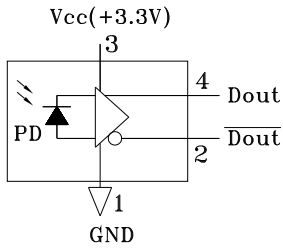
PT-5330 series are designed as optical signal receivers with AGC transimpedance amplifier. Their wide dynamic ranges, differential outputs are suited for telecommunications, especially SONET OC-12 / SDH STM-4, and Fiber Channel.

| 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 | 16 | 20 | 24 | V/mW |
| BW | Bandwidth | -3 dB point | 450 | | | MHz |
| Psat | Saturation Power | λ =1300nm | -3 | | - | dBm |
| Sens | Sensitivity | BER=10 ⁻¹⁰ @622Mbps | - | -31 | -30 | dBm |
| Rout | Output Resistance | | - | 50 | 65 | ohm |
| | Operation Speed | | | 622 | | Mbps |

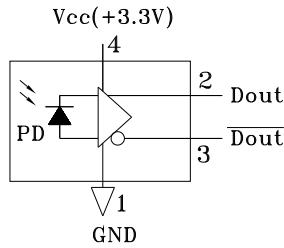
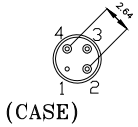
| DC / ELECTRICAL CHARACTERISTICS (Tc=25°C) | | | | | |
|---|--------------------------|------|------|------|------|
| Symbol | Parameter | Min. | Typ. | Max. | Unit |
| Vcc | Power Supply | 3.15 | 3.3 | 3.45 | V |
| Icc | Supply Current (no load) | - | | 40 | mA |

| 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 |

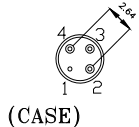
MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT



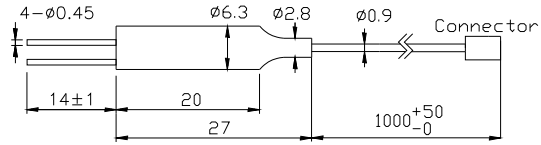
TYPE B



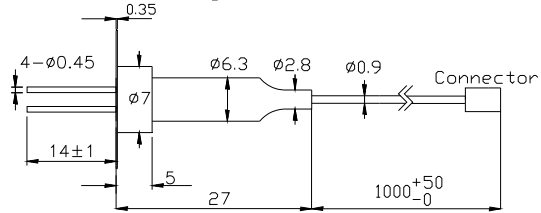
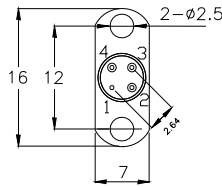
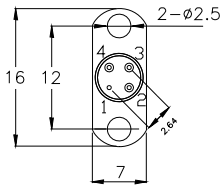
TYPE A



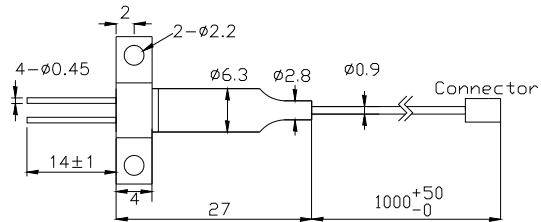
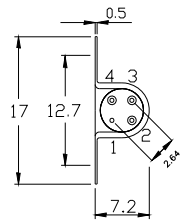
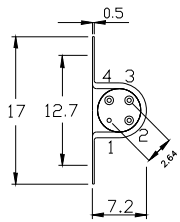
| PIN | PIN Assignment | |
|-----|----------------|-----------|
| | TYPE B | TYPE A |
| 1 | GND | GND |
| 2 | Dout | Dout |
| 3 | Vcc(3.3V) | Dout |
| 4 | Dout | Vcc(3.3V) |



Flangeless



Vertical Flange



Horizontal Flange

Note: Specifications subject to change without notice.

ORDER INFORMATION

Part No.: P T - 5 3 3 -

| Code | Fiber |
|------|-----------------------------|
| 0 | SMF, 9/125 μm |
| 1 | MMF, 50/125 μm |
| 2 | MMF, 62.5/125 μm |

| Code | PIN Assignment |
|-------|----------------|
| Blank | Type A |
| B | Type B |

| Code | Flange |
|------|------------|
| V | Vertical |
| H | Horizontal |
| X | No Flange |

| Code | Connector |
|------|--------------|
| S | SC/PC |
| F | FC/PC |
| 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 | 2002/11/1 |
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