



R13-155-RYZ-VP

155Mbps Receptacle InGaAs PIN-TIA Photodiode Receiver Module

Description

The Lasermate R13-155-RYZ-VP is a 1100-1630nm wavelength range, InGaAs PIN photodiode receiver module integrated with transimpedance amplifier (TIA). The devices are available in connector style receptacle packages (FC or ST). The InGaAs photodiode ROSA is characterized by its high sensitivity and high speed, reaching up to 155Mbps data rate operation.



Features

- High speed
- High Sensitivity
- Hermetically sealed
- Single power supply +3.3V

Packaging

- FC/ST receptacle package

Applications

- SONET OC3 / SDH STM-1
- LAN

Ordering Information

| Read Model No. | R13-155-RYZ-VP |
|-----------------------|---|
| R13 = Receiver | InGaAs/InP PIN-TIA photodiode |
| 155 = Data Rate | 155 Mbps |
| R = Package | Receptacle |
| Y = Connector | FC (FC), ST (ST) |
| Z = Sensitivity | -32dBm (1); -34dBm (2); -36dBm (3) |
| V = Supply voltage | 3.3V (3) |
| P = Pin configuration | 4-pin (4); 5-pin (5) |



Specifications

| Absolute Maximum Ratings | | | |
|----------------------------|--------|---------|------|
| Parameters | Symbol | Value | Unit |
| Storage temperature | Tstg | -40~+85 | °C |
| Operating case temperature | Top | -40~+85 | °C |
| Peak optical power | Po | 0 | dBm |
| Power supply Voltage | Vp | 3.6 | V |
| Soldering temperature | Stemp | 260 | °C |
| Soldering time | Stime | 10 | sec |

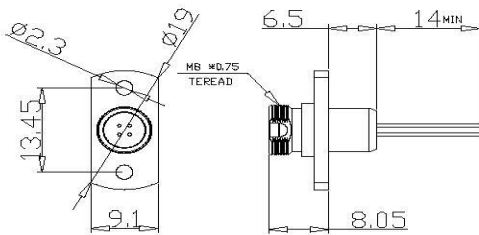
| Electro-Optical Characteristics (CW @ T _c = 25°C unless otherwise noted) | | | | | | |
|---|--------------------------------|------|------|------|-------|---|
| Parameters | Symbol | Min. | Typ. | Max. | Unit | Conditions |
| Wavelength | λ | 1100 | | 1630 | nm | |
| Bandwidth | BW | 115 | | | MHz | V _{cc} |
| Low Frequency Cut-off | LF | | | 30 | kHz | V _{cc} |
| Supply Current | I _{cc} | | 25 | 35 | mA | V _{cc} , no load |
| Sensitivity | S | -32 | | | dBm | λ=1310nm, @155.52Mbps, PRBS23, ER=10dB, BER=1E ⁻¹⁰ |
| | | -34 | | | | |
| | | -36 | | | | |
| Saturation power | P _{sat} | 0 | | | dBm | λ=1310nm, @155.52Mbps, PRBS23, ER=10dB, BER=1E ⁻¹⁰ |
| Differential Responsivity | R _d | 0.1 | | 120 | mV/μW | R _{load} = 100ohm, P = -22Bm, λ=1310nm |
| Rise/Fall Time | τ _r /τ _f | | | 4.5 | ns | V _{cc} =3.3V, 20%~80% |
| Single Ended Impedance | R _o | | 50 | | ohm | |

Pin Configuration

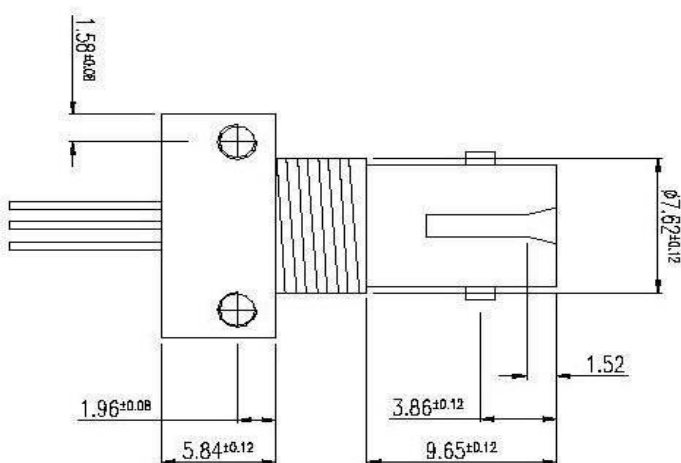
| 4-pin: | | 5-pin: | | | | | | | | | | | | | | | | | | | | | | | |
|--------|--|--------|----------|---|-----|---|-------|---|-------|---|-----|--|---|--------|----------|---|--------|---|-----|---|---------|---|--------|---|-----|
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| 1 | VCC | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Dout- | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Dout+ | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | GND | | | | | | | | | | | | | | | | | | | | | | | | |
| Number | Function | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Dout + | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Vcc | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Isource | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Dout - | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | GND | | | | | | | | | | | | | | | | | | | | | | | | |

Outline Dimensions (unit: mm)

FC Receptacle



ST Receptacle



Note: Specifications are subject to change without notice.