# 2.5G PIN-TIA ROSA

## RA-12 series LC Receptacle

## Description

This 2.5Gbps InGaAs PIN-TIA LC ROSA is designed for SONET/SDH transceiver application. This high sensitivity coaxial module is optically aligned to optimize performance with epoxy curing finishing. Its features make it very suitable to be used in the receiving end for datacom or telecom application.

This LC ROSA integrates a stainless steel LC receptacle and a TO-can with built-in PIN and trans-impedance amplifier chip which guarantees high receiving sensitivity and connecting repeatability.

## Features

- LC receptacle
- Bit rate up to 2.5Gbps
- Operating wavelength 1270nm~1620nm
- High sensitivity InGaAs PIN with trans-impedance amplifier
- Operating ambient temperature -40 to 85°C
- Excellent temperature dependent stabilization

## Applications

- SONET/SDH OC-48 SFF/SFP transceiver

## Standard

- ITU-T SONET/ SDH OC-48/ STM-16 SR, IR communication protocol
- Compliant with Telcordia GR-468 reliability test criterion
- Compliant with RoHS6 standard

地址: 深圳市光明新区甲子塘九洲工业园 1 栋 6 楼 邮编: 518107
Add: 6F, Building No.1, Jiuzhou Industrial Park, Jiazitang Village, Guangming New District, Shenzhen, Guangdong Province, China Zip: 518107
电话(Tel): +86-755-21385386
传真(Fax): +86-755-21389590
网址(Url): http://www.jiuzhouoesz.com/

## 1. Absolute Maximum Ratings

| Item | Unit | Min | Max | Note |
|---|---|---|---|---|
| TIA Supply Voltage | V | -- | 5 | -- |
| PIN Forward Current | mA | -- | 10 | -- |
| PIN Reverse Current | mA | -- | 5 | -- |
| PIN Reverse Voltage | V | -- | 10 | -- |
| Operating Temp | °C | -40 | 85 | -- |
| Storage Temperature | °C | -40 | 85 | -- |
| Storage Relative Humidity | % | -- | 85 | -- |
| Solder Reflow Temperature | °C | -- | 260 | (*1) |

(*1): For soldering by iron and 10 seconds on leads

## 2. Electro-Optical Characteristics ($T_C$=25°C, CW)

| Item | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Optical Wavelength | λ | | 1270 | -- | 1620 | nm |
| Supply Voltage | Vcc | No loads | 3.0 | 3.3 | 3.6 | V |
| Supply Current | Icc | No loads | -- | -- | 62 | mA |
| Responsivity (*2) | R | λ=1310nm | 0.8 | -- | -- | A/W |
| Dark Current | Id | Vr=5V | 5 | -- | -- | nA |
| Bandwidth | BW | -3dB down, $R_L$ =50Ω | -- | 2 | -- | GHz |
| Optical Sensitivity (*3) | Sen | λ=1310nm, Tc=-40~85°C | -- | -- | -24 | dBm |
| Overload Power | Ps | | 0 | -- | -- | dBm |
| Optical Return Loss | ORL | λ=1310nm | 12 | -- | -- | dB |
| | | λ=1550nm | 13 | -- | -- | dB |
| Electrical Isolation | | ROSA barrel to TO-can | Fully isolated | | | |

(*2): Launched from 9/125μm SMF

(*3): BER=1E-10, ER=9dB, 2.5Gbps, PRBS $2^{23}$-1, NRZ

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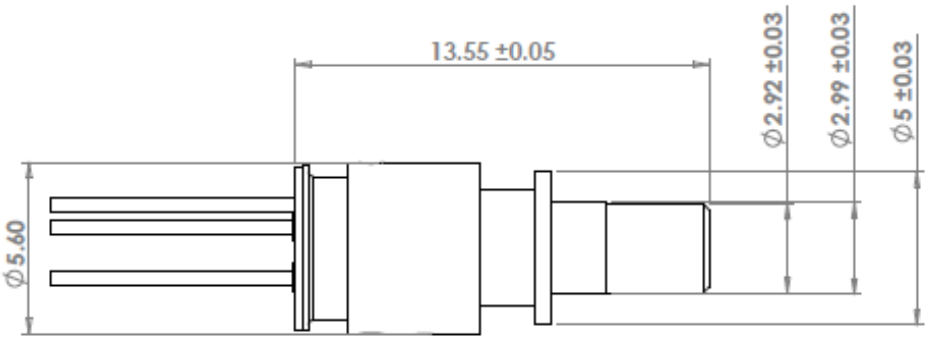
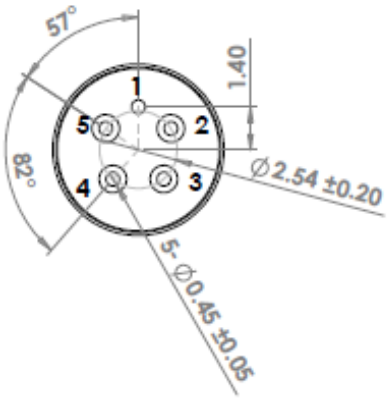
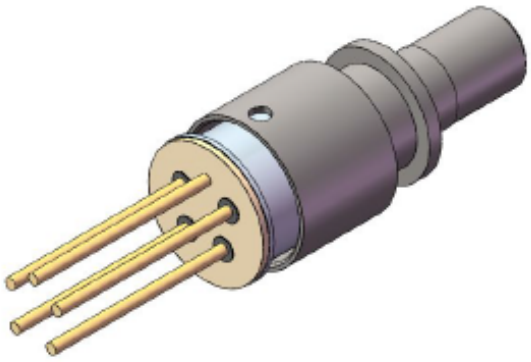
## 3. Dimension Outline (Unit: mm)




| Rx Pinout | |
|---|---|
| 1 | GND |
| 2 | D+ |
| 3 | Vcc |
| 4 | Imon |
| 5 | D- |



## 4. Other Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Note |
|---|---|---|---|---|---|---|
| Optical Connector Insertion loss | | -- | -- | 0.2 | dB | LC |
| Insertion and extraction force | | 1 | -- | 3 | N | |

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