

1.25G PIN-TIA Receiver with LC Receptacle Modules

HELC-ROSAX713XX

Features:

- ◆ High sensitivity
- ◆ Differential ended output
- ◆ Single +3.3V operation
- ◆ Trans-impedance amplifier with AGC
- ◆ RoHS Compliant products available



Applications:

- ◆ 1.25G application
- ◆ SDH/SONET application

General:

HELC-ROSAX713XX Series is a 4 pin or 5 pin PIN-TIA with receptacle operating on 1.25G. It provides high sensitivity with AGC, 100ohm differential outputs and the 4 pin or 5 pin PIN-TIA provides a monitor pin. A split sleeve for the optical connector is jointed with $\phi 1.25\text{mm}$ ferrule.

Ordering Information: (Standard version ^{*Note1})

| Part No. | Insulation | Wavelength (nm) | Voltage (V) | Pin Type |
|-----------------|------------|-----------------|-------------|----------|
| HELC-ROSA7130B | NO | 1270~1620 | 3.3 | A |
| HELC-ROSAJ713EB | YES | 1270~1620 | 3.3 | E |
| HELC-ROSA713DB | NO | 1270~1620 | 3.3 | D |
| HELC-ROSAJ713DB | YES | 1270~1620 | 3.3 | D |

*Note1: For more ordering information, please refer the nomenclature and contact HighEasy sales.

Absolute Maximum Ratings:

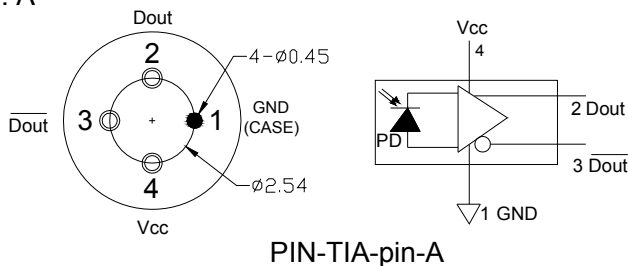
| Parameter | Min. | Typ. | Max. | Unit |
|------------------------------|------|------|--------|------|
| Storage Temperature | -40 | 25 | 85 | °C |
| Operating Temperature | -40 | 25 | 85 | °C |
| TIA Supply Voltage | 3.1 | 3.3 | 3.5 | V |
| Operation Relative Humidity | - | | 85 | % |
| Soldering Temperature / Time | - | | 260/10 | °C/S |

Electrical and Optical Characteristics:

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Condition |
|-------------------------------|------------------|------|------|------|----------|--|
| Operating Wavelength | λ | 1270 | | 1620 | nm | |
| Supply Current | I _{cc} | | 30 | 40 | mA | No Loads |
| Saturation Power | P _{sat} | 0 | 0 | - | dBm | @ 1310nm |
| Small-Signal Bandwidth | BW | 700 | | | MHz | |
| Low-Frequency Cut off | LF | | | 5 | kHz | |
| Sensitivity | | | -28 | -25 | dBm | $\lambda=1310$ nm, @1.25G, PRBS7, ER=10dB, BER=1E-10 |
| Single Ended Output Impedance | R | 35 | 50 | 60 | Ω | |
| Rise /Fall Time | T | | 300 | 400 | ps | 20~80% |

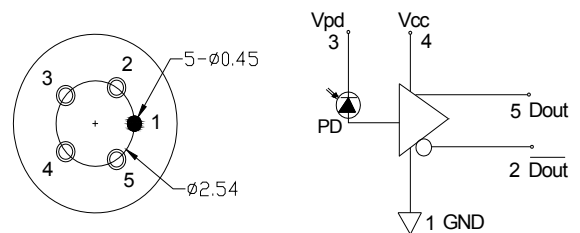
Pin Assignment: *Note2

TYPE: A

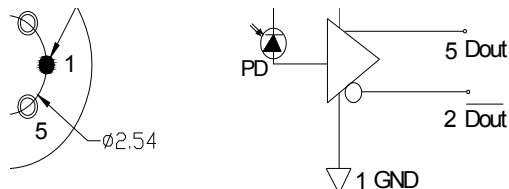


PIN-TIA-pin-A

TYPE: D



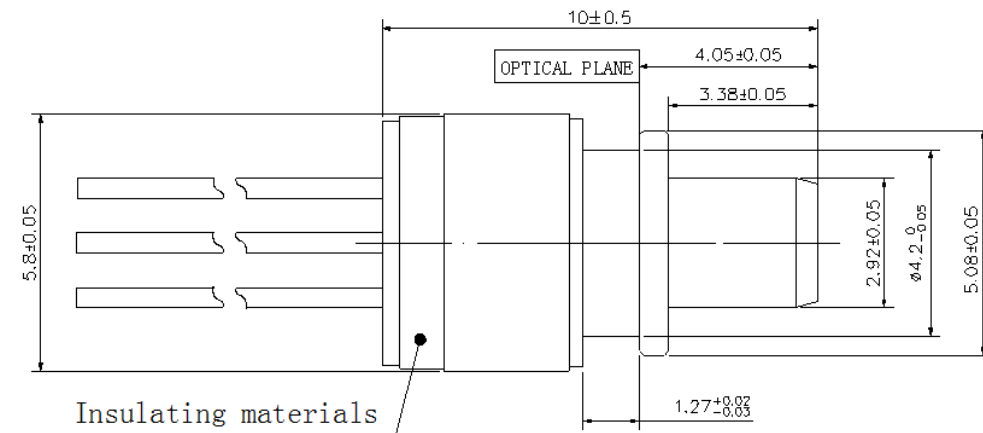
PIN-TIA-pin-D



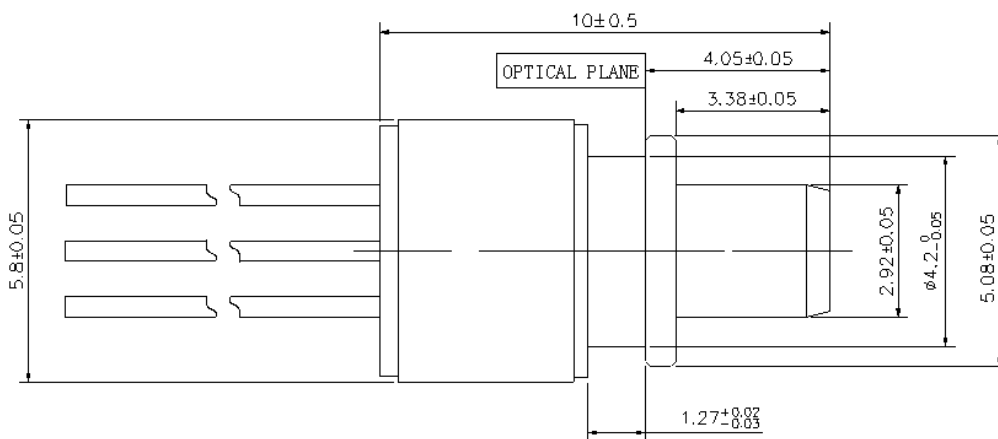
PIN-TIA-pin-D

Note2: Other Pin type can be customized.

Package Dimension: *Note3



Insulation



Not insulated

*Note3: Insulation is the TO-CAN and the metal pipe insulation.

Nomenclature:

HELC- ROSA

A B C D E F

| | | | | |
|---|----------------------|---|-------------------------------|--|
| A | Insulation | J= Insulation | BLANK=Non-insulated structure | |
| B | Data Rate | 7=1.25G | | |
| C | Wavelength | 1=1270~1620nm | | |
| D | Voltage | 3=3.3V | | |
| E | Pin Type | 0= pin-A | D= pin-D | E= pin-E |
| F | Ferrule sets of type | BLANK=Without the ceramic sleeve and Without the fiber-stub | B=With a ceramic sleeve | M= with a split sleeve and the MM fiber-stub |

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.

Notice:

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