

## 2.5G PIN-TIA Receiver with Receptacle Modules

### HESC-ROSAXX913XX

#### Features:

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



#### Applications:

- ◆ 2.5G application
- ◆ SDH/SONET application

#### General:

HESC-ROSAXX913XX Series is a 4 pin or 5 pin PIN-TIA with receptacle operating on 2.5G. It provides high sensitivity with AGC, 100ohm differential outputs PIN-TIA provides a monitor pin. A split sleeve for the optical connector is jointed with  $\varnothing 2.5\text{mm}$  ferrule.

#### Ordering Information: (Standard version <sup>\*Note1</sup>)

Part No.	Insulation	Voltage (V)	Pin Type	Ferrule sets of type
HESC-ROSA59130B	NO	3.3	A	Ceramic sleeve
HESC-ROSA6J9130	YES	3.3	A	No ceramic sleeve
HESC-ROSA5913D	NO	3.3	D	No ceramic sleeve
HESC-ROSA6J913DB	YES	3.3	D	Ceramic sleeve

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

### Absolute Maximum Ratings:

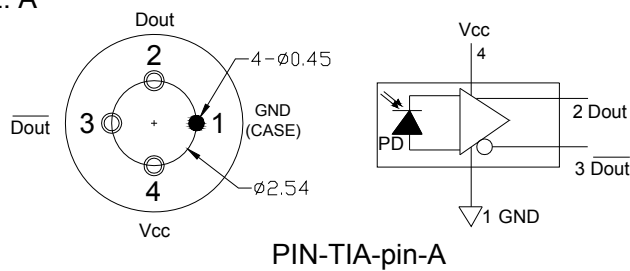
Parameter	Min.	Typ.	Max.	Unit
Storage Temperature	-40	25	85	°C
Operating Temperature	-40	25	85	°C
TIA Supply Voltage	3.1	3.3	3.5	V
Operation Relative Humidity	-		85	%
Soldering Temperature / Time	-		260/10	°C/S

### Electrical and Optical Characteristics:

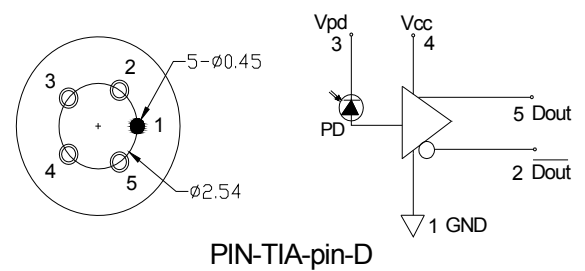
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Operating Wavelength	$\lambda$	1270		1620	nm	
Supply Current	I <sub>cc</sub>		30	40	mA	No Loads
Saturation Power	P <sub>sat</sub>	-3	0	-	dBm	@ 1310nm
Small-Signal Bandwidth	BW	1.65			GHz	
Low-Frequency Cut off	LF			5	kHz	
Sensitivity			-23	-21	dBm	$\lambda=1310\text{ nm,}$ @2.5G, PRBS7, ER=10dB, BER=1E-10
Single Ended Output Impedance	R		50		$\Omega$	
Rise /Fall Time	T			4.5	ns	10~90%

### Pin Assignment: <sup>\*Note2</sup>

TYPE: A

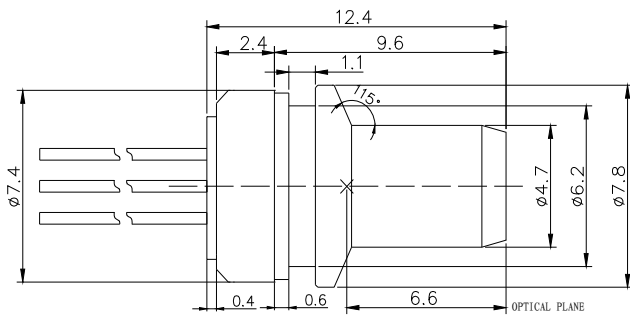


TYPE: D

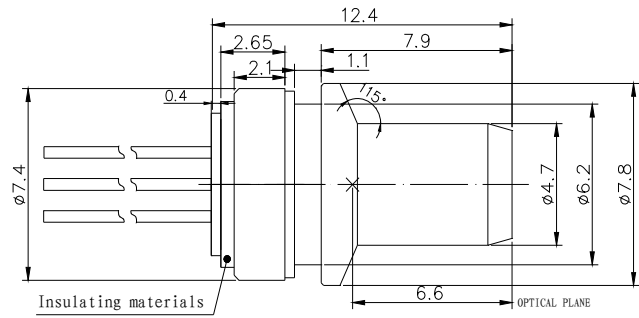


Note2: Other Pin type can be customized.

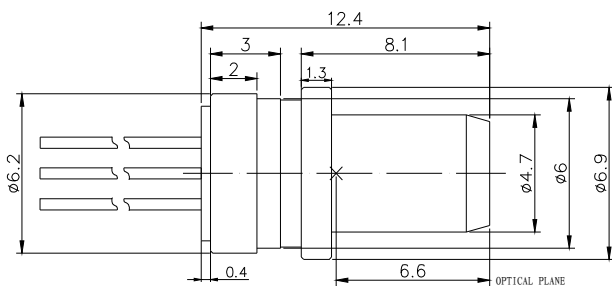
Package Dimension: \*Note3



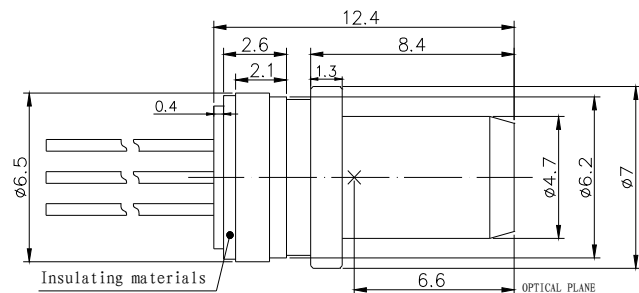
SC-ROSA5



Insulation SC-ROSA5



SC-ROSA6



Insulation SC-ROSA6

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

Nomenclature:

HESC -ROSA         
 A B C D E F G

A	Split Sleeve Type	5=ROSA5	6=ROSA6
B	Insulation	J= Insulation	BLANK=Non-insulated structure
C	Data Rate	9=2.5G	
D	Wavelength	1=1270~1620nm	
E	Voltage	3=3.3V	
F	Pin Type	0= pin-A	D= pin-D
G	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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