

## 155M PIN-TIA Receiver Modules

### HEPTR-31XXX

#### Features:

- ◆ High sensitivity
- ◆ Differential ended output
- ◆ Single +3V、+5V、3.3/5V operation
- ◆ Trans-impedance amplifier with AGC
- ◆ RoHS Compliant products available



#### Applications:

- ◆ 100/155M Bit Rate application
- ◆ Fast Ethernet receiver/transceiver application

#### General:

HEPTR-31XXXX Series is a TO-based 155M, 4 pin PIN-TIA. It provides high sensitivity with AGC and 100ohm differential outputs. A photodiode is mounted into a low capacitance coaxial package integrated with a receptacle.

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

Part No.	Wavelength (nm)	Voltage (V)	Package	Pin Type	Insulation
HEPTR-3130AJ	1270~1620	3.3	A	A	Y
HEPTR-3150B	1270~1620	5	B	A	N
HEPTR-3150E	1270~1620	5	E	A	N
HEPTR-3130FJ	1270~1620	3.3	F	A	Y

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 @ 'C' is 3*	3.1	3.3	3.5	V
TIA Supply Voltage @ 'C' is 5 or 0*	4.5	5	5.5	
PD Reverse Voltage	---	---	15	V
Operation Relative Humidity	---	---	85	%
Soldering Temperature / Time	---	---	260/10	°C/s

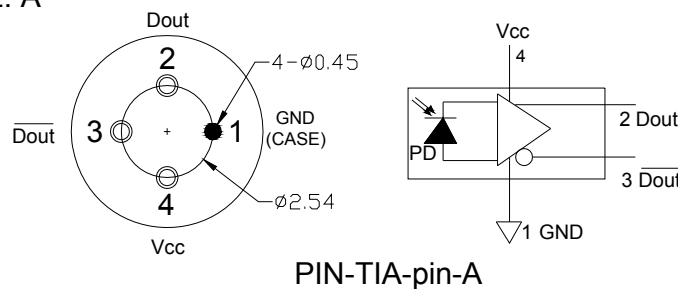
\* 'C' is the third code of nomenclature.

**Electrical and Optical Characteristics:**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Operating Wavelength	$\lambda$	1270	---	1620	nm	
Supply Current	I <sub>cc</sub>		---	35	mA	No Loads
Saturation Power	P <sub>sat</sub>	0	---	---	dBm	$\lambda=1310\text{ nm}$
Small-Signal Bandwidth	BW	115	---	---	MHz	at -3dBm
Sensitivity	---	---	-36	-35	dBm	$=1310\text{nm}, 155\text{M},$ $\text{BER}=10^{-10} @ \text{PRBS}=2^{23}-1$
Output Resistance	R <sub>o</sub>	---	50	---	$\Omega$	
Rise /Fall Time	T	---	---	4.5	---	10~90%

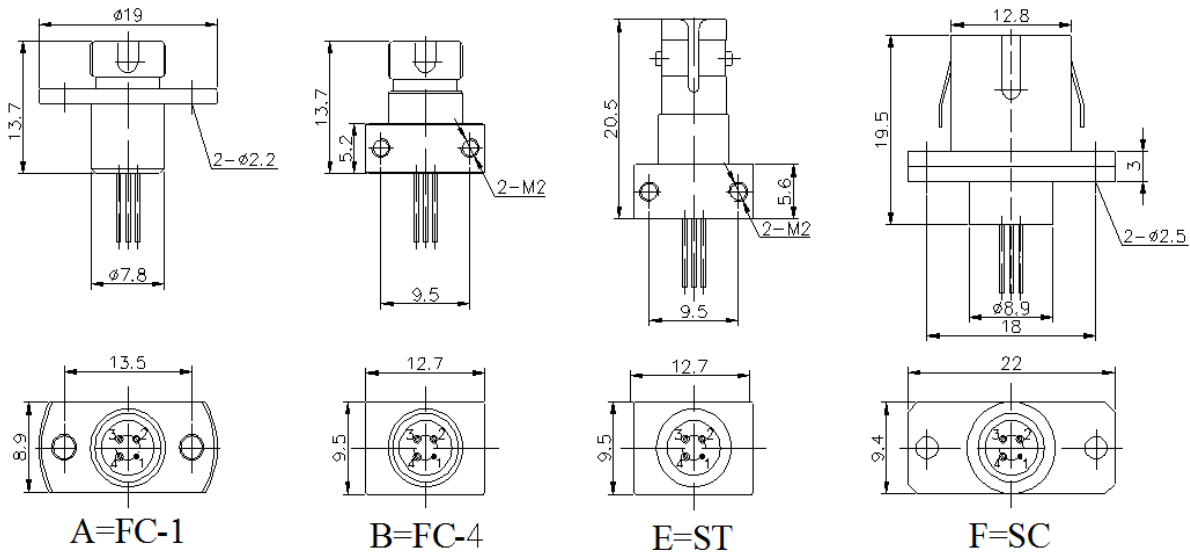
**Pin Assignment:** \*Note2

TYPE: A

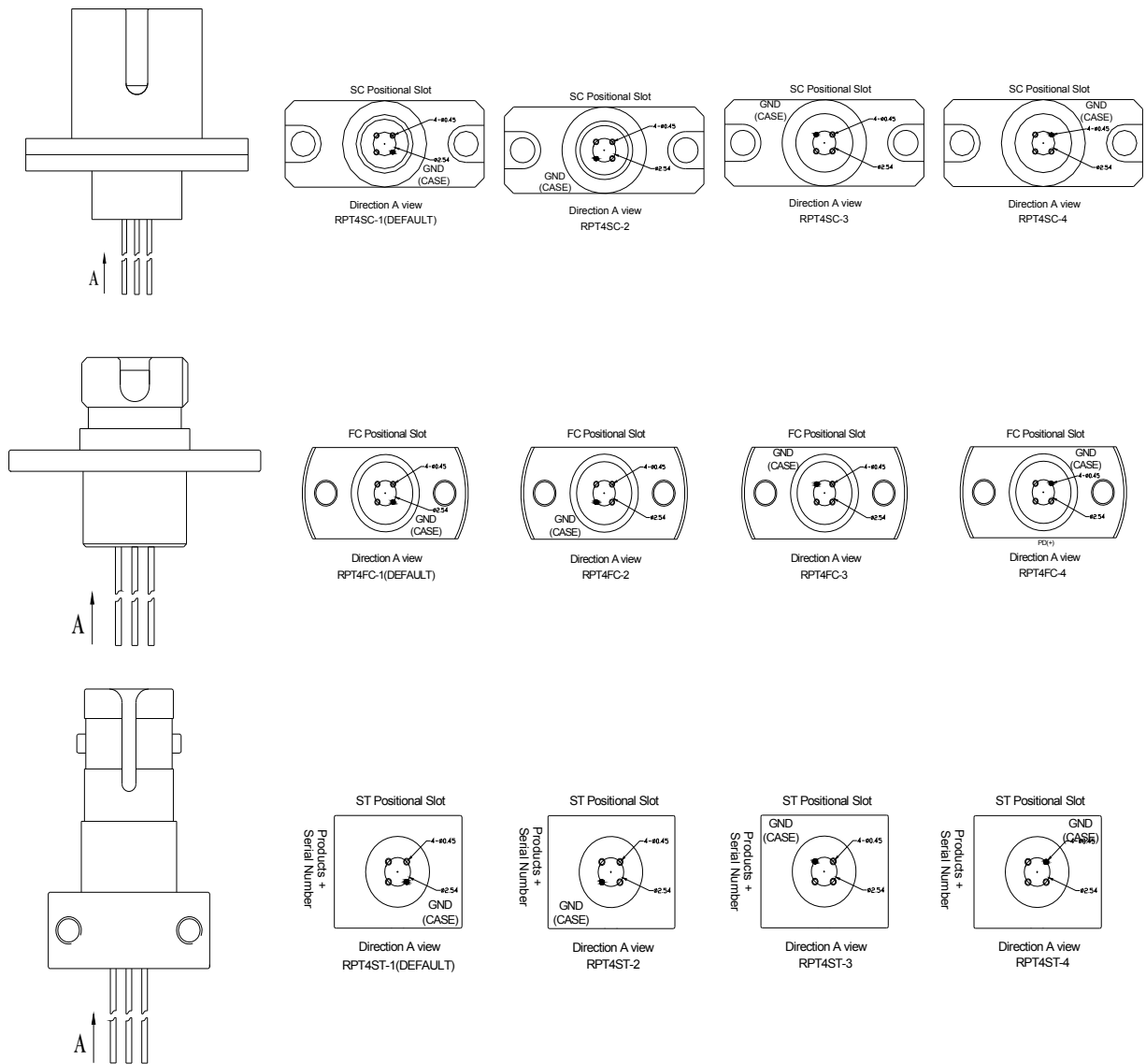


Note2: Other Pin type can be customized.

Receptacle Package Series:



The Direction of Fix Card:



**Nomenclature:**HEPTR— □ □ □ □ □ □  
          A   B   C   D   E   F

<b>A</b>	<b>Data Rate</b>	3=155M			
<b>B</b>	<b>Wavelength</b>	1=1270~1620nm			
<b>C</b>	<b>Voltage</b>	3=3.3V	5=5V	0=3.3/5V	
<b>D</b>	<b>Pin Type</b>	0= pin-A			
<b>E</b>	<b>Package Series</b>	A=FC-1	B=FC-4	E=ST	F=SC
<b>F</b>	<b>Insulation</b>	Blank=NO Insulation		J= Insulation	

**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.

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