

## GPTP-T13Exx

### 10Gbps PIN-TIA Receiver With Pigtail Modules

#### Features

- ◆ Differential Output
- ◆ Coaxial Package
- ◆ Single Power Supply Voltage +3.3V
- ◆ Laser Welding, High reliability and Long Operation life
- ◆ Wavelength from 1260nm to 1620nm
- ◆ Data Rate Up to 10Gbps
- ◆ Low Noise
- ◆ RoHS Compliant Products Available



#### Applications

- ◆ 10G SONET/SDH System
- ◆ 10G Fiber Channel System

#### General

GPTP-T13Exx Series is designed for high-speed, high-performance SONET/SDH/Fiber channel applications. This device integrates high-speed 1310nm PIN detector with a 10G trans-impedance amplifier (TIA) and capacitors into a TO-46 header with cap window. GPTP-T13Exx Series is 5 pin PIN/TIA with Receptacle package to receive light through the PIN detector with high coupling efficiency.

#### Nomenclature

G P T P — □ □ □ □ □ □ □  
A B C D E F G

<b>A</b>	<b>Date rate</b>	T=10Gbps					
<b>B</b>	<b>Wavelength</b>	1=1100~1650nm					
<b>C</b>	<b>Voltage</b>	3=3.3V					
<b>D</b>	<b>Pin Type</b>	E= pin-E					
<b>E</b>	<b>Package series</b>	A	B	C	D	E	
<b>F</b>	<b>Connector</b>	F=FC/PC		S=SC/PC		T=ST/PC	SA=SC/APC
		FA=FC/APC		L=LC/PC		Blank=None	
<b>G</b>	<b>Fiber Type</b>	Blank=SM			M=MM		

## Absolute maximum ratings

Parameter	Symbol	Min	Max	Unit
Operating Temperature	Top	0	85	°C
Storage Temperature	Tstg	-40	85	°C
Lead Solder Temperature	Tlead	—	260	°C
PIN Reverse Voltage	Vpin	—	20	V
Power Supply Voltage	Vp	—	4	V
Optical Power	Pin	—	5	dBm

## RECOMMENDED OPERATING CONDITIONS

Test conditions	Symbol	Limits			Unit
		Min.	Typ.	Max.	
TIA supply voltage	Vcc	2.97	3.3	3.63	V
Case temperature	Tc	0		85	°C

## ELECTRICAL / OPTICAL CHARACTERISTICS

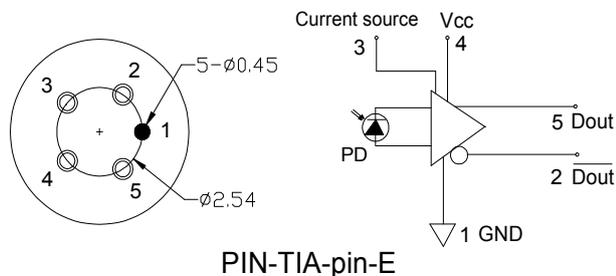
(Tc=+25°C, Vcc=3.3V, I=1550nm)

Parameter	Symbol	Test conditions	Min	Typ.	Max	Unit
Supply Voltage	Vcc	—	2.97	3.3	3.63	V
Supply Current	Icc	Vcc=3.3V	34	45	62	mA
Differential Output Voltage	Vout	—	—	250	—	mV
Responsivity	R	$\lambda=1310\text{nm}$	0.85	—	—	A/W
Wavelength	$\lambda$	—	1260	—	1620	nm
RSSI slope	—	—	0.9	1.0	1.1	mA/mA
Optical Return Loss	ORL	dB	-14	—	—	—

Note2: This data is test by stub ROSA

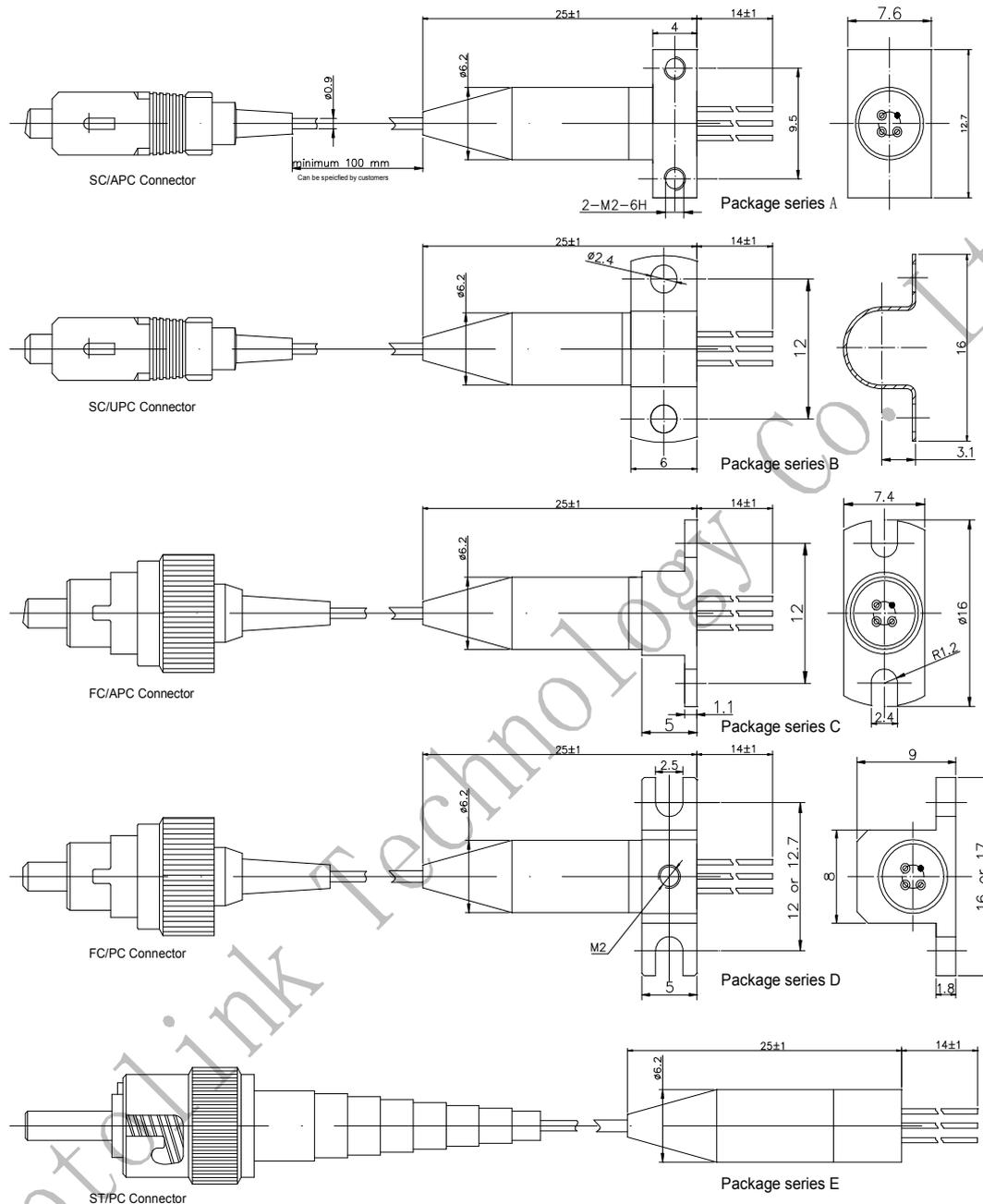
## Pin Assignment <sup>Note3</sup>

TYPE: E



Note3: Other Pin type can be customized.

## Pigtail Package dimension \*Note4· 5· 6



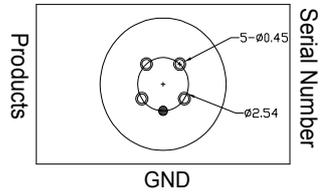
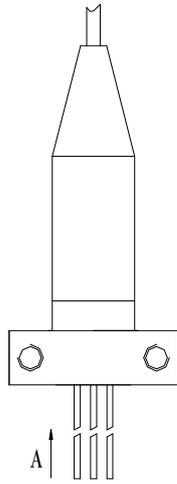
\*Note4: PIN direction and laser mark can be customized. Pigtail is standard SM fiber; the length also can be customized.

\*Note5: For the package series D, the clamping rings dimensions (A) and drill size (B) are can be selected. The following types can be available. Please designate the detailed type while ordering the package series D.

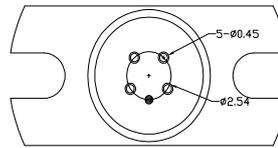
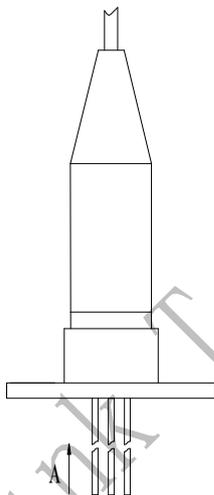
	<b>A(mm)</b>	<b>B(mm)</b>
D	16	12
D-S	17	12.7

\*Note6: For the package series B, the fix card is fixed by customer self. For the detailed information of fix card of A, C, D package series, please refers the following graphs.

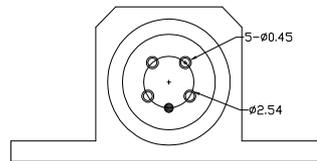
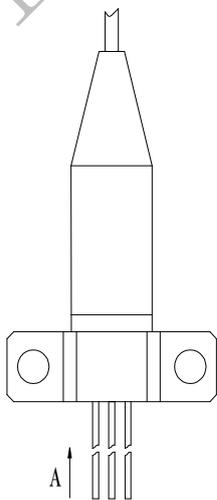
The direction of fix card



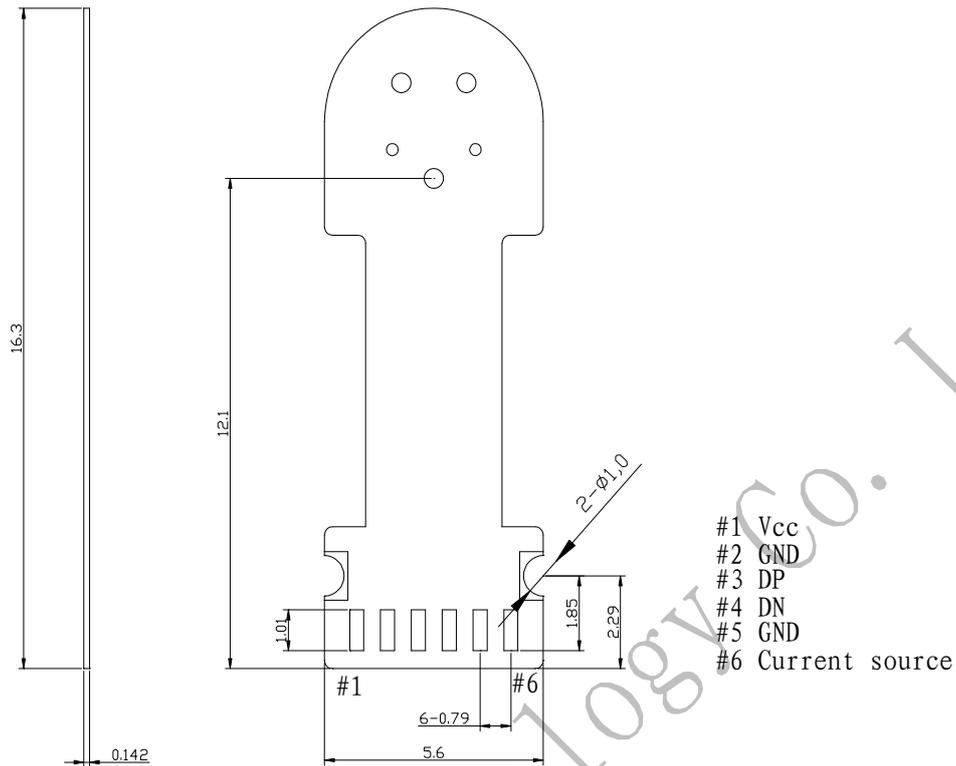
Direction A view  
PPT5A-1(DEFAULT)



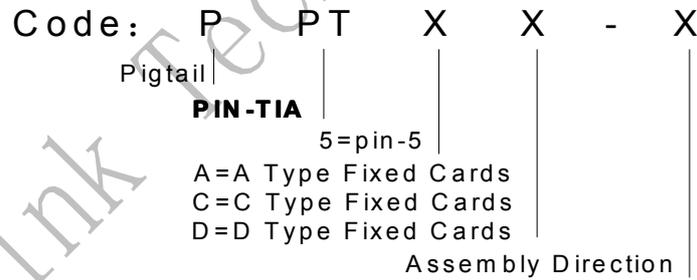
Direction A view  
PPT5C-1(DEFAULT)



Direction A view  
PPT5D-1(DEFAULT)



**Nomenclature of assembly direction** \*Note7



\*Note7: Please designate the code of assembly direction.

**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

guarant.

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## Revision History

Verision	Initiated	Reviewed	Approved	Release Date
Va-1	Zore.Zhao	Kelly.Cao		2011-2-21
Vb-1	Yinchun.Zhao	Kelly.Cao	LOGO	2011-6-10
Vb-2	Jack.Jiang	Zore.Zhao	Transform VPD in the chart of soft board into current source	2012-3-30

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