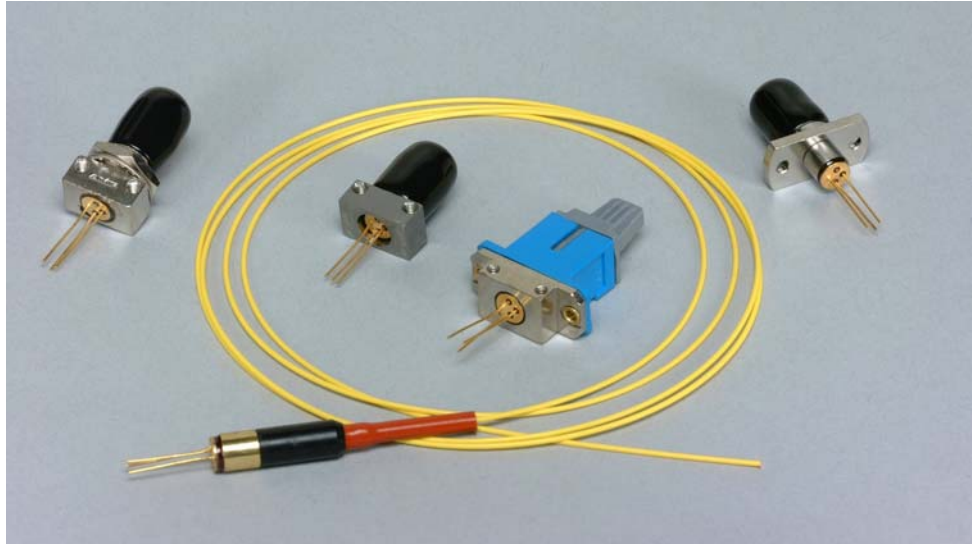


InGaAs PIN TIA Receivers

PD-LD Inc. offers low noise, high responsivity InGaAs photo detectors paired with a transimpedance amplifiers (TIA) in convenient fiber coupled packages. These assemblies incorporate a 70 micron diameter active area detector that responds optimally to both 1310 and 1550 nm light sources. This PIN/Preamp combination delivers superior characteristics making them ideal for both digital and analog systems. Each module contains a TIA whose bandwidth is ideally suited to industry standard transmission speeds of 1.2 GHz . All devices include automatic gain control (AGC), a feature that allows the circuit to operate with high optical input power without becoming saturated. AGC makes possible full dynamic range receivers, lessening the need to use attenuators within the cable plant. These modules are available with either bare or connectorized fiber pigtails or in receptacle style housings suitable for board or panel mounting. These high reliability units are operational over industrial environmental conditions.



Applications

- **Networking**
1000 MB Ethernet
- **Telecommunications**
SONET OC-48
SDH: STM12
- **Storage**
Fiber Channel

Features

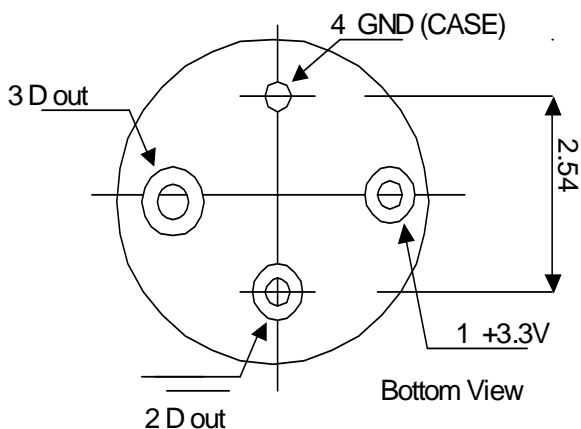
- TZA 3046 TIA Die
- Belcore TA983 Compliant
- ITU G.957 Compliant
- -40 to 85°C Operating Range
- Differential Output
- Operates with 3.3V Supply
- FC, ST ,SC Receptacle Housing
- Pigtailed w/9/125 μm Fiber

Parameter	Units	Symbol	1250 MHz	
			Min.	Typ. Max.
Operating Wavelength	nm	Lambda	1100	1600
Analog Bandwidth (-3 dB)	MHz	BW _e	0.7	920 1000
Rise and Fall Times	nsec	t _{r,f}	—	0.15
Power Supply	V	V _{cc}	3.0	3.6
Output offset Voltage	V	V _{os}	V _{cc} -3.5	V _{cc} -1.5
Optical Sensitivity	dBm	S	--	-27 -24
Optical Saturation Power	dBm	P _{sat}	-3	0 —
Output Resistance	ohm	R _{out}	48	50 62
Supply Current (no load)	mA	I _{cc}	—	21 23

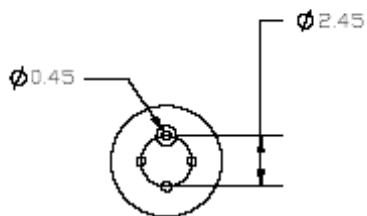
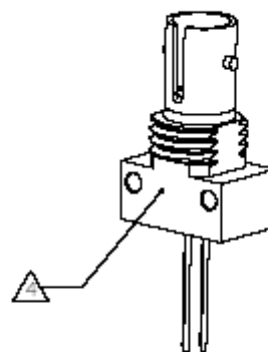
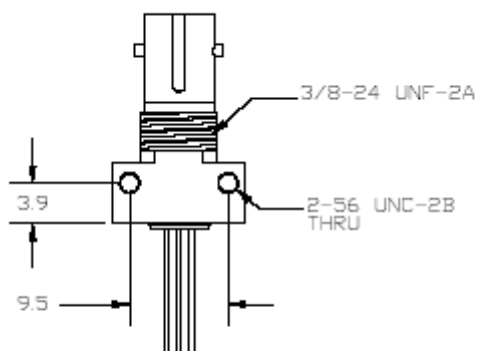
PTINBC1.2ST73-N-0 1250 MBs Fiber Optic InGaAs PIN w/TIA

Absolute Maximum Ratings				
Parameter	Symbol	Min	Max	Unit
Supply Voltage	Vcc	–	3.6	V
Operating Temperature	Top	-20	+70	°C
Storage Temperature	Tstg	-40	+85	°C
Lead Soldering			260/10	°C/sec

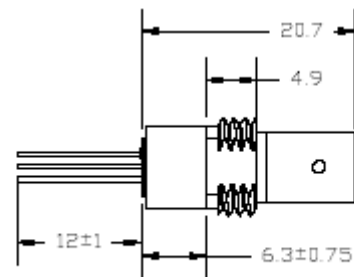
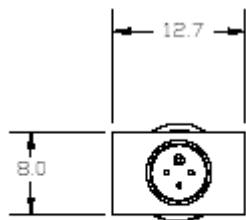
PTINBC1.2ST73-N-0 1250 MBs Fiber Optic InGaAs PIN w/TIA



Mechanical Drawing for ST Receptacle PIN-TIA Assemblies



DETAIL



STReceptacle PIN-TIA

PTINBC1.2ST73-N-0

Board Mount ST low profile receptacle package
 Aligned for coupling to 62.5/125um MMF
 Tested with 1310nm optical Laser input

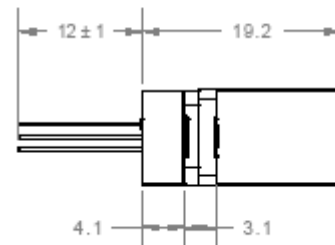
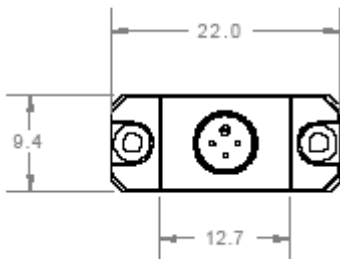
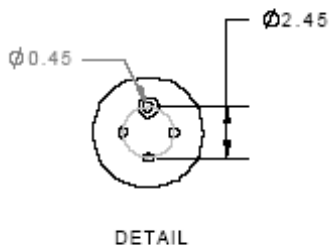
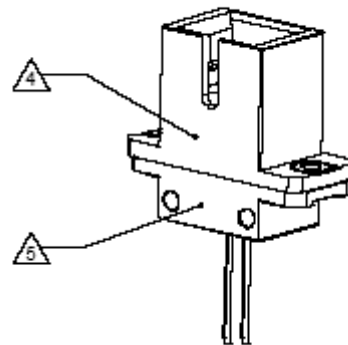
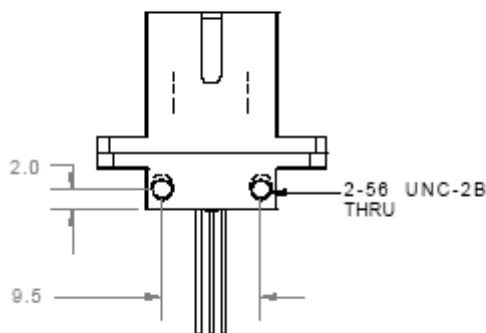
PTINBC1.2ST73-N-0 1250 MBs Fiber Optic InGaAs PIN w/TIA

SC Receptacle Mounted Version PTINBC1.2SC21-N-0 Aligned to 9/125 um SMF

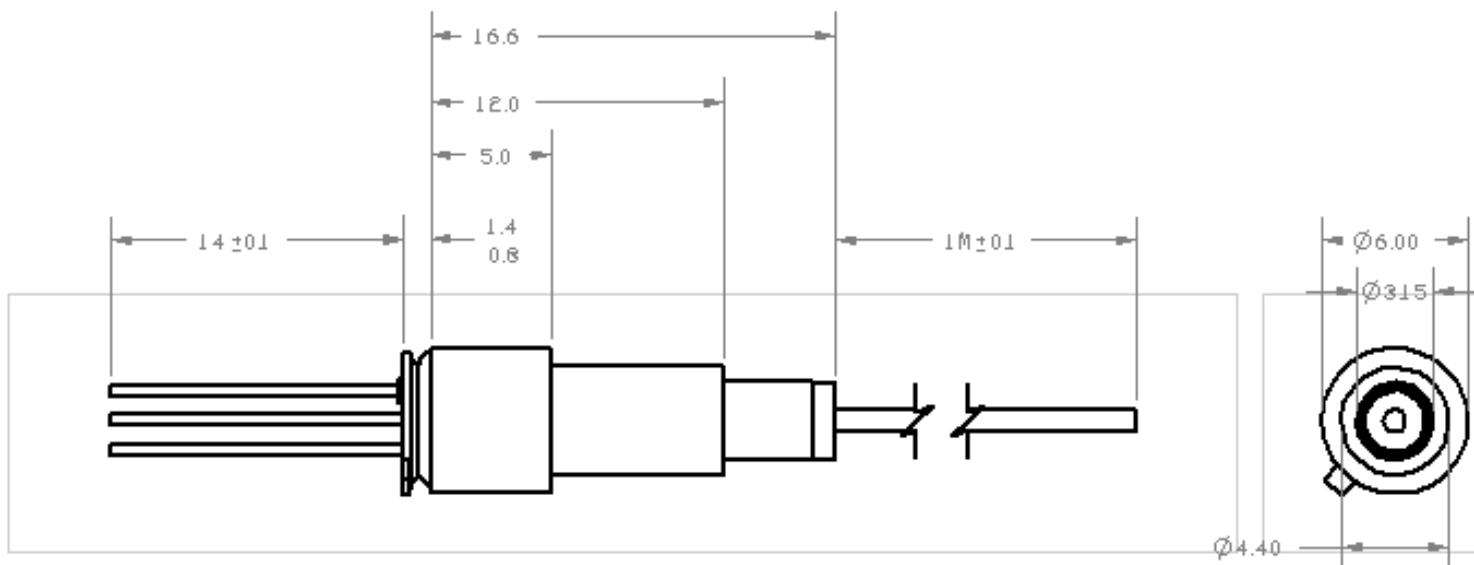
NOTES:

- 1 THESE DEVICES ARE ESD SENSITIVE. ESD PRECAUTIONS ARE ADVISED.
- 2 ALL DEVICES ARE SHIPPED WITH ESD LEAD PROTECTORS AND DUST COVERS.
- 3 ALL DEVICES WILL BE MARKED WITH A PD-LD SERIAL NUMBER.

- PLASTIC, BLUE
- BRASS, NICKEL PLATED



Mechanical Drawing for Fiber Pigtailed PIN-TIA Assemblies With E2000 connector and Board Mount Bracket PTINBC1.21EAD-R-0-01



Specifications are subject to change without notice. Please contact PD-LD Sales .

7-10 1.25 GPINTIA.Rev B