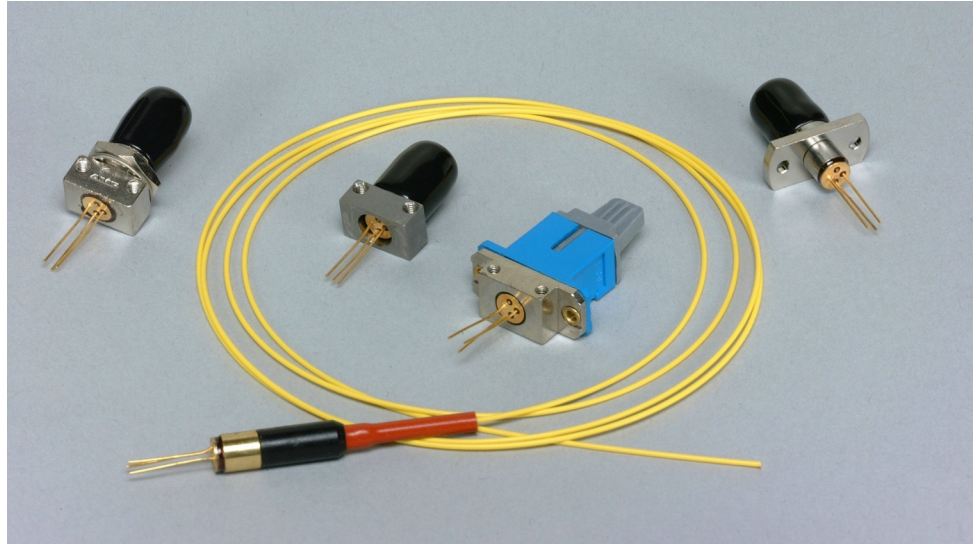


InGaAs PIN TIA Receivers

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 75 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: 150 MHz, 450 MHz, 1.0 GHz and 2.5GHz. Most 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.



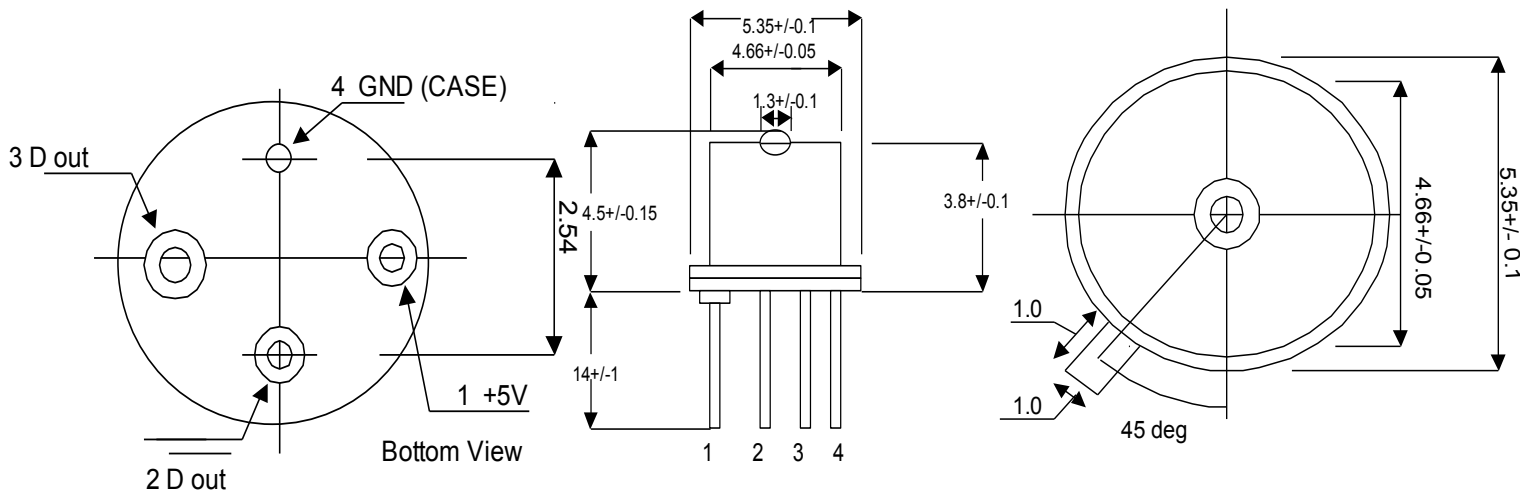
Applications

- **Networking**
10/100/1000 MB Ethernet
FDDI
ATM
- **Telecommunications**
SONET OC-3/OC-12/OC-24/OC-48
SDH: STM1/STM3/STM6/STM12
- **Storage**
Fiber Channel

Features

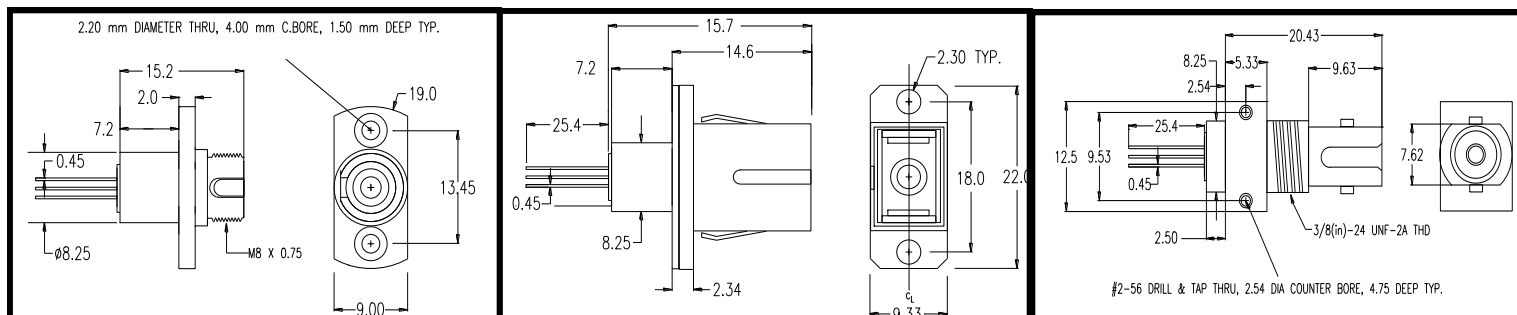
- IEEE 802.3 Performance
- Belcore TA983 Compliant
- ITU G.957 Compliant
- -40 to 85°C Operating Range
- Differential or Single Ended Output
- Operates with 3.3V or 5V Supply
- FC, ST, SC Receptacle Housing
- Pigtailed w/9/125 μm Fiber

Parameter	Units	Symbol	155 MHz		450 MHz		1100 MHz		2500 MHz					
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Typ.	Max.			
Operating Wavelength	nm	λ	1100	1650	1100	1600	1100	1600	1100	1600				
Differential Gain	V/mW	G	.17	220	0.2	24	0.2	24	26					
Analog Bandwidth (-3dB)	MHz	BW _e	120	175	450	—	800	1100	1600	2000				
Rise and Fall Times	nsec	t _{r,f}	—	3.3	5.0	8.0	—	0.26	—	0.15				
PowerSupply (3.3V available)	V	V _{cc}	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Output offset Voltage	V	V _{os}	V _{cc} -3.5	V _{cc} -1.5	V _{cc} -3.5	V _{cc} -1.5	V _{cc} -3.5	V _{cc} -1.5	V _{cc} -3.5	V _{cc} -1.5				
Differential Output Voltage	V	V _d	—	1	—	1.3	—	0.5	0.6					
Optical Sensitivity	dBm	S	—	-38	-36	—	-31.5	-29	—	-24	-22	—	-21	-18
Optical Saturation Power	dBm	P _{sat}	—	-3	—	-3	—	-3	—			-3		
Output Resistance	ohm	R _{out}	30	65	50	65	30	65	48	60	72			
Operating Current	mA	I _{cc}	—	35	—	50	—	50	—			47	57	
Operating Temperature	degree	C	-40 to 85°C											
Storage Temperature	degree	C	-50 to 85°C											



InGaAs PIN Photodiode with TIA

Pinout & Mechanical Dimensions (mm)



Ordering Information

PIN TIA Pigtails

PTINDXXXFCCB-O-V-MM

PIN TIA Receptacles

PTINDXXXRRRF-O-V

T = PIN TIA

IN = InGaAs Photodiode

D = Device Identification

CC = Connector Type

XXX = Bandwidth

RRR = Receptacle

F = Fiber Type

ST = ST

SC = SC

155 Mhz

FC1 = FC Panel Mount

1 = 9/125/900 SMF

SA = SC/APC

450 MHz

FC2 = FC Board Mount

2 = 50/125 MMF

FC = FC PC

1.2 GHz

ST7 = ST Low Profile

3 = 62.5/125 MMF

FA = FC/APC

2.5 GHz

ST8 = ST High Profile

9 = Supplied by cust

OO = No Connector

SC2 = SC Board/Panel Mount

Bracket Type (pigtail only)

M = Length in meters (pigtail only)

A = None

10 = 10meter

B = Panel Mount

03 = 3 meters

D = Board Mount

01 = 1 meter

W = Shipped Separately with PIN TIA

.1 = .1 meters

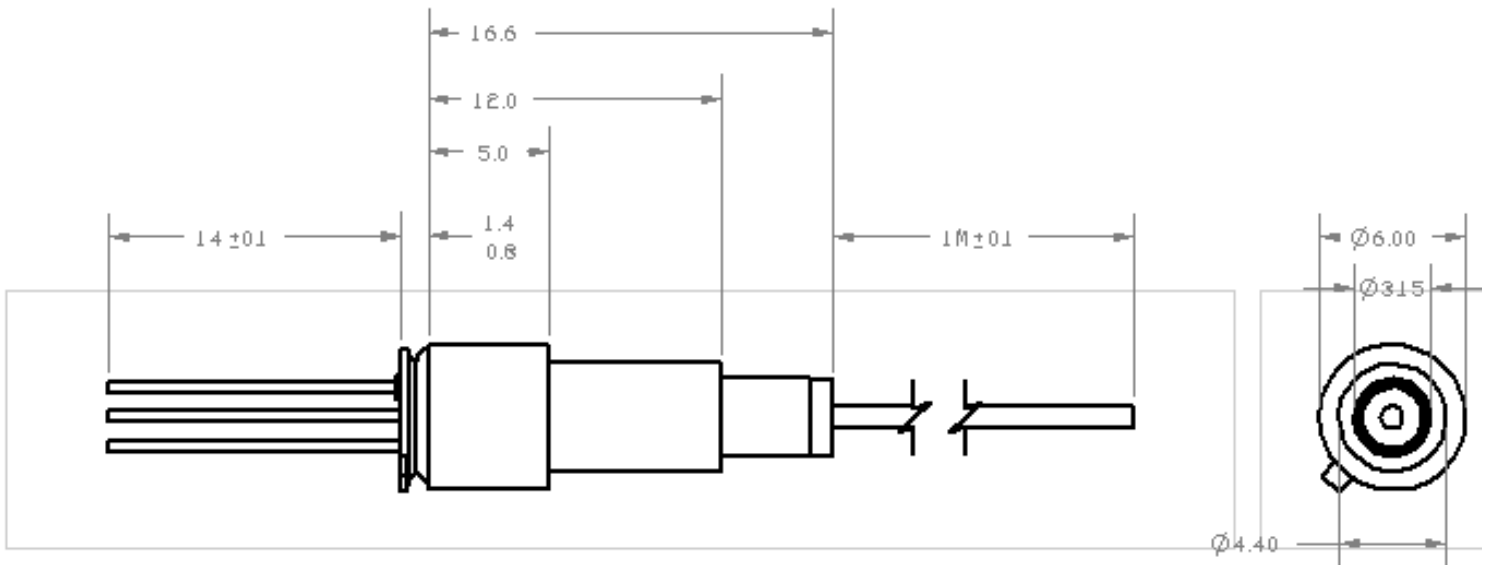
X = Customer Supplied

.5 = 0.5 meters

PIN-TIA Devices

Device Code	Bandwidth	Features
PTINA	155 MBs	3.3V Power Supply, AGC
PTINQ	155 MBs	5V Power Supply, AGC
PTINS	155 MBs	5V Power Supply, No AGC
PTINB	622 MBs	3.3V or 5V Power Supply, AGC
PTINZ	1250 MBs	3.3V Power Supply, AGC
PTINAF	2500 MBs	3.3V Power Supply, AGC


Mechanical Drawing for Fiber Pigtailed PIN-TIA Assemblies

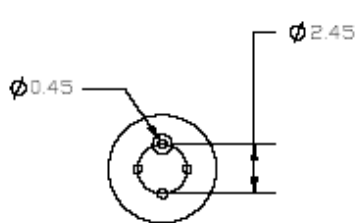
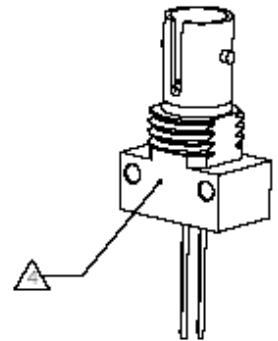
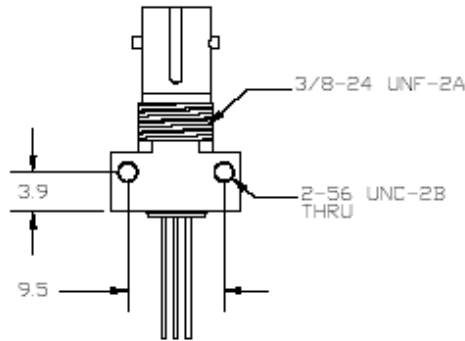


ST Low Profile Receptacle Housing

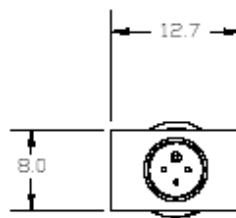
NOTES:

- 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.

 ZINC, DIE CAST
NICKEL PLATED



DETAIL



Note:
High Profile ST
Receptacle available
With 10.4 mm
height.

