

## FEATURES

- ◇ InGaAs/InP PIN Photodiode with AGC transimpedance amplifier
- ◇ Differential ended output
- ◇ 1.55  $\mu\text{m}$  high sensitivity, 1.3  $\mu\text{m}$  high rejection
- ◇ Single +3.3V operation
- ◇ Speed Up to 170 Mbps
- ◇ -40~+85 °C operation temperature

## DESCRIPTION

PT-53130 series are designed as optical signal receivers with AGC transimpedance amplifier. Their wide dynamic ranges, differential outputs are suited for datacom and telecom applications, especially SONET OC-3/SDH STM-1, Fast Ethernet, and Fiber Channel.

AC / ELECTRICAL AND OPTICAL CHARACTERISTICS (T <sub>C</sub> =25°C)						
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
	Detection Range		1480	1550	1600	nm
	Active Area			75		$\mu\text{m}$
G	<a href="#">Gain@10Mbs</a> Differential	$\lambda = 1300\text{nm}$	50	-	70	V/mW
BW	Bandwidth	P <sub>f</sub> =1 $\mu\text{W}$	120	140		MHz
Psat	Saturation Power	$\lambda = 1300\text{nm}$	-3	0	-	dBm
Sens	Sensitivity	BER=10 <sup>-10</sup> @155Mbps	-	-	-33	dBm
Rout	Output Resistance		-	50	65	ohm
	Operation Speed			155		Mbps

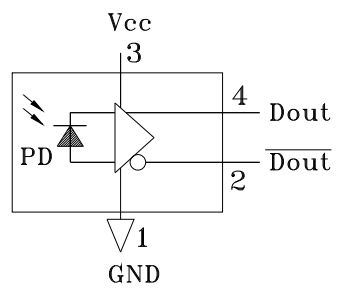
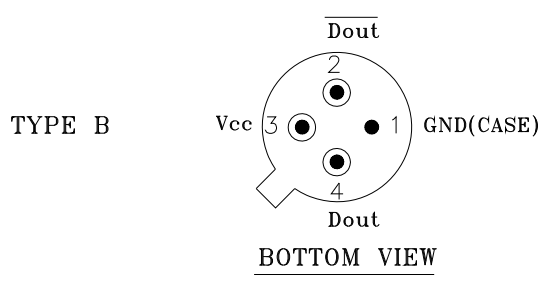
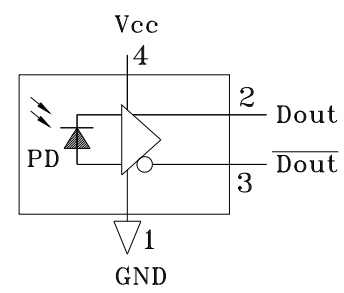
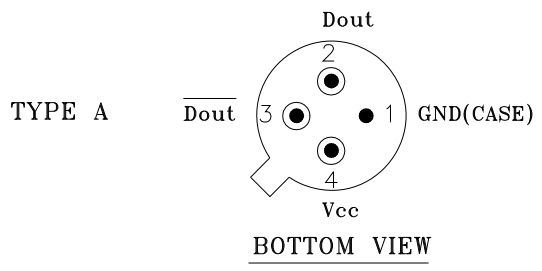
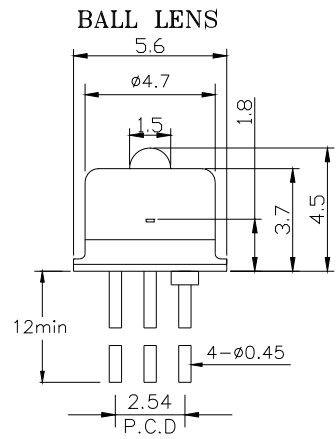
Note: \*: At least 30 dB isolation for wavelength 1260 nm to 1360 nm

DC / ELECTRICAL CHARACTERISTICS (T <sub>C</sub> =25°C)					
Symbol	Parameter	Min.	Typ.	Max.	Unit
V <sub>CC</sub>	Power Supply	3.15	3.3	3.45	V
I <sub>CC</sub>	Supply Current (no load)	-	-	30	mA

ABSOLUTE MAXIMUM RATING (T <sub>C</sub> =25 °C)			
Symbol	Parameter	Value	Unit
V	Voltage	4.5	V
T <sub>opr</sub>	Operating Temperature	-40~+85	°C
T <sub>stg</sub>	Storage Temperature	-40~+85	°C

\*\*\*\*\*

## MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT



**Note:** Specifications subject to change without notice.

## ORDER INFORMATION

Part No.: P T - 5 3 1 □ 0 □

Code	Wavelength
Blank	1310/1550 nm
3	1310 nm
5	1550 nm

Code	Voltage
0	5V
3	3.3V

Code	PIN Assignment
Blank	Type A
B	Type B

\*\*\*\*\*

\*\*\*\*\*

## Revision History

Version	Subject	Release Date
1.0	Initial datasheet	2003/4/1

\*\*\*\*\*