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## 3.3V / 1.3 $\mu$ m / 622 Mbps InGaAs PIN-TIA Receiver

## PT-35130 Series

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### FEATURES

- ◇ InGaAs/InP PIN Photodiode with AGC transimpedance amplifier
- ◇ 1.3  $\mu$ m high sensitivity, 1.55  $\mu$ m high rejection
- ◇ Differential ended output
- ◇ Single +3.3V operation
- ◇ Speed Up to 622 Mbps
- ◇ - 40~+85  $^{\circ}$ C operation temperature

### DESCRIPTION

PT-35130 series is 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-12/ SDH STM-4.

AC / ELECTRICAL AND OPTICAL CHARACTERISTICS (T <sub>C</sub> =25 $^{\circ}$ C)						
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
	Detection Range*		1260	1310	1360	nm
	Active Area			75		$\mu$ m
G	Differential Gain	AC coupled, load=50 $\Omega$	16	20	24	V/mW
BW	Bandwidth	-3 dB point	450	-	-	MHz
Psat	Saturation Power	$\lambda$ =1300nm	-3		-	dBm
Sens	Sensitivity	BER=10 <sup>-10</sup> @622Mbps	-	-30	-28	dBm
Rout	Output Resistance		-	50	65	ohm
	Speed			622		Mbps

\*: At least 30 dB isolation for wavelength 1480 to 1580 nm.

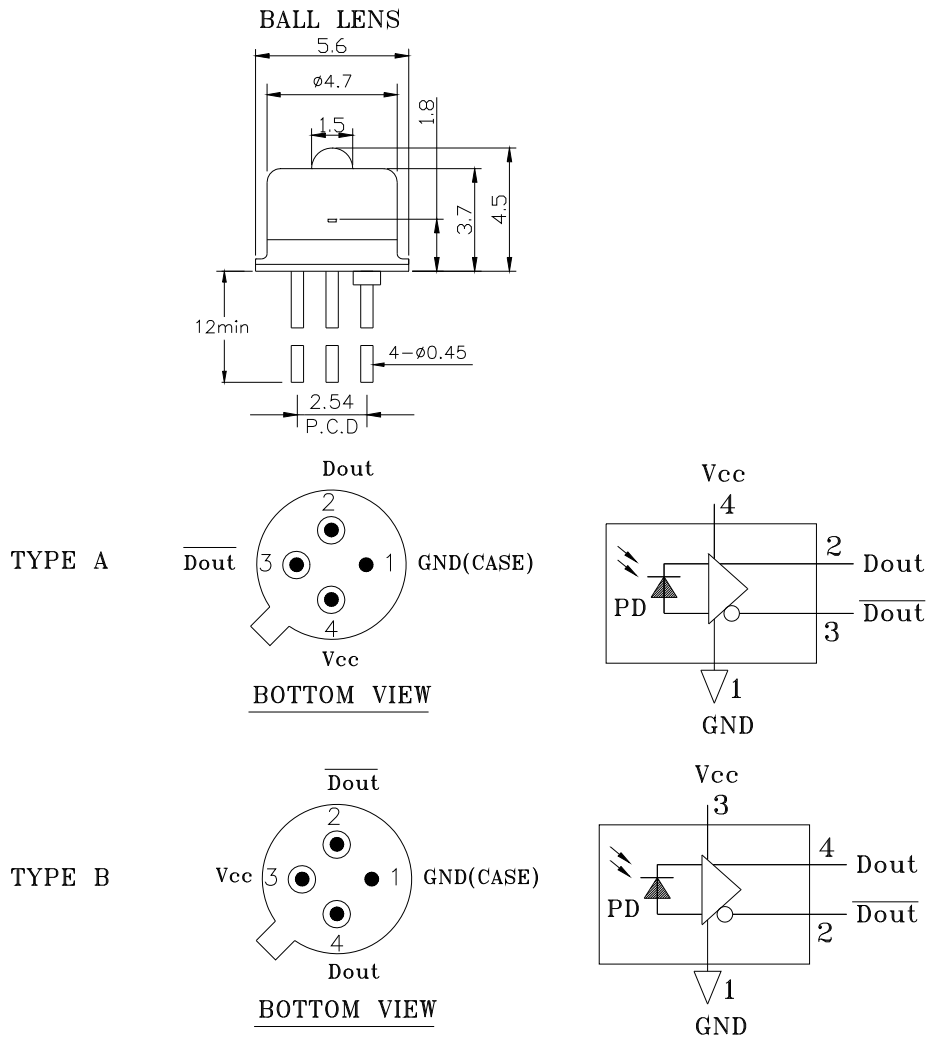
DC / ELECTRICAL CHARACTERISTICS (T <sub>C</sub> =25 $^{\circ}$ C)					
Symbol	Parameter	Min.	Typ.	Max.	Unit
V <sub>CC</sub>	Power Supply	3.1	3.3	3.5	V
I <sub>CC</sub>	Supply Current (no load)	-	30	50	mA

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

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## MECHANICAL DIMENSION (mm) and PIN ASSIGNMENT



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

## ORDER INFORMATION

Part No.: P T - 3 5 1 3 0 □

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

Code	PIN Assignment
Blank	Type A
B	Type B

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## Revision History

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

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