
5V / 1.55 μ m / 155 Mbps InGaAs PIN-TIA Receiver

PT-53100 Series

FEATURES

- ✧ InGaAs/InP PIN Photodiode with AGC transimpedance amplifier
- ✧ Differential ended output
- ✧ 1.55 μ m high sensitivity, 1.3 μ m high rejection
- ✧ Single +5V operation
- ✧ Speed Up to 170 Mbps
- ✧ - 40 ~ +85 °C operation temperature

DESCRIPTION

PT-53100 series are designed as optical signal receivers with 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.

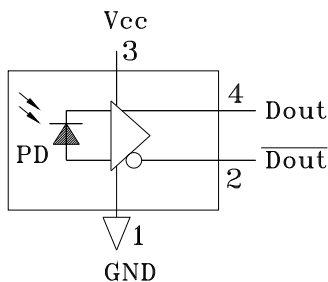
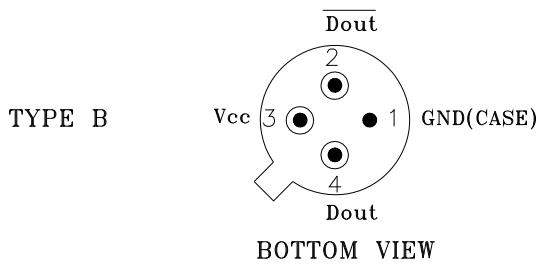
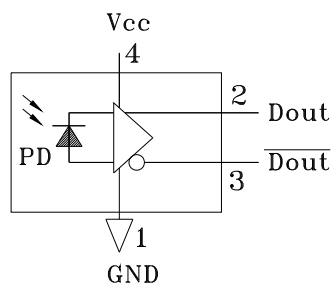
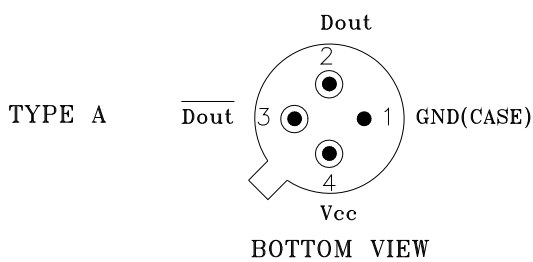
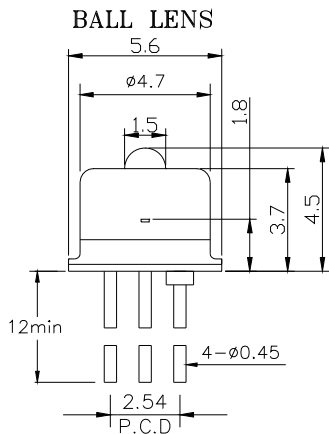
AC / ELECTRICAL AND OPTICAL CHARACTERISTICS (T _C =25°C)						
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
	Detection Range		1480	1550	1600	nm*
	Active Area			75		μ m
G	Gain@10Mbps Differential	λ =1300nm	0.17	-	220	V/mW
BW	Bandwidth	P _f =1 μ W	120	140		MHz
Psat	Saturation Power	λ =1300nm	-3	0		dBm
Sens	Sensitivity	BER=10 ⁻¹⁰ @155Mbps	-	-	-33	dBm
Rout	Output Resistance		-	50	65	ohm
	Speed			155		Mbps

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

DC / ELECTRICAL CHARACTERISTICS (T _C =25°C)					
Symbol	Parameter	Min.	Typ.	Max.	Unit
V _{CC}	Power Supply	4.5	5	5.5	V
I _{CC}	Supply Current (no load)	-	-	30	mA

ABSOLUTE MAXIMUM RATING (T _C =25 °C)			
Symbol	Parameter	Value	Unit
V	Voltage	6	V
T _{opr}	Operating Temperature	-40~+85	°C
T _{stg}	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
