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850 nm 1.25 Gbps PIN-TIA (Preliminary)

MG1S-8013-x Series

TYPE NAME: MG1S-8013-1, MG1S-8013-6

Product Description:

The LuxNet MG1S-8013-x PIN-TIA is designed for high-speed, high-performance data communication and telecommunication applications. This device integrates our high-speed 850 nm PIN detector with a 1.25Gbps trans-impedance amplifier (TIA) and capacitors into a TO-46 header with a lens cap window. The product is designed for 1.25Gbps Fiber Channel, Gigabit Ethernet, and ATM/SONET transceiver modules and systems. The PIN-TIA assembly can be integrated with different types of ports engaged with a fiber connector to transmit the light from fiber through receptacle into the PIN detector with high coupling efficiency.

Product Specifications:

Absolute Maximum Ratings (T = 25°C):

Parameter	Symbol	Unit	Min.	Max.	Note
Operating Temperature	T _{op}	°C	-40	85	
Storage Temperature	T _{stg}	°C	-40	85	
Solder Reflow Temperature	T _{stg}	°C		260	10 seconds max.
Power Supply Voltage	V _p	V	-0.5	6	
Optical power	P _{in}	dBm		5	

Electro-Optical Characteristics (T = 25°C, unless noted otherwise):

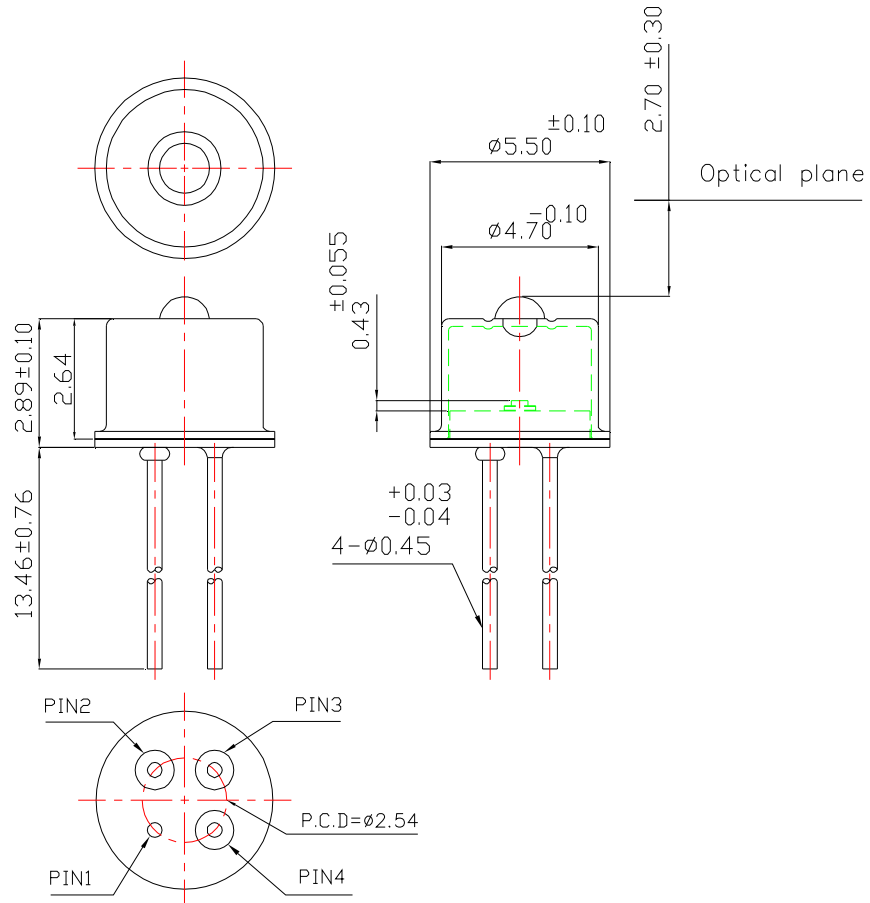
Parameter	Symbol	Unit	Min.	Typ.	Max.	Test Condition
Supply Voltage	V _{cc}	Volts	3.0	3.3	3.6	
Supply Current	I _{cc}	mA	23	30	39	P=0 μW, R _L =50Ω
Output Voltage (differential)	V _{out}	mV		275	500	P=7.5 μW, R _L =50Ω
Responsivity	R	KV/W		35.4		P=7.5 μW, R _L =50Ω
Upper -3dB Bandwidth	BW _{upper}	MHz	700	1000		R _L = 50Ω
Sensitivity	S	dBm		-22.5	-17	λ=850nm 2 ⁷ -1 PRBS, BER=10 ⁻¹⁰ ER=9~10dB
Wavelength	λ	nm	760	850	860	
Rise/Fall Time	τ _r /τ _f	ps	200	300	400	20%-80%

- * Specifications are subject to change without notice.
- * Screening per customer-specified reject limits is available.

Version 1.2

MG1S-8013-x (PIN-TIA)

Dimensions: (mm)
All dimensions are nominal



PINOUT

	MG1S-8013-1	MG1S-8013-6
Number	Function	Function
1	Gnd	GND
2	Non-Inverted Output(D+)	Vcc
3	Vcc	Inverted Output (D*)
4	Inverted Output(D*)	Non-Inverted Output (D+)

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