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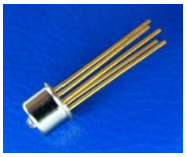
PDT-A85P4-1GB3
1.25Gbps 850nm GaAs PIN Photodiode with AGC Pre-Amplifier

Overview



The Lasermate PDT-A85P4-1GB3 is a high-speed 850nm GaAs PIN photodetector integrated with a transimpedance amplifier (TIA) and automatic gain control (AGC) in a 4-pin TO-46 package with a long cap lens and tab-less design. It supports 1.25Gbps (1244.16 Mbps) short-wavelength fiber optic communication applications and operates from a single +3.3V power supply. This device is optimized for reliable, high-performance optical data reception in compact receiver modules.

Features

- 850nm GaAs PIN photodiode with integrated TIA and AGC
- 4-pin TO-46 package with long cap lens, tab-less
- Supports 1.25Gbps (1244.16 Mbps) optical communication
- Optimized for short-wavelength fiber optic links
- Operates from a single +3.3V power supply

Applications

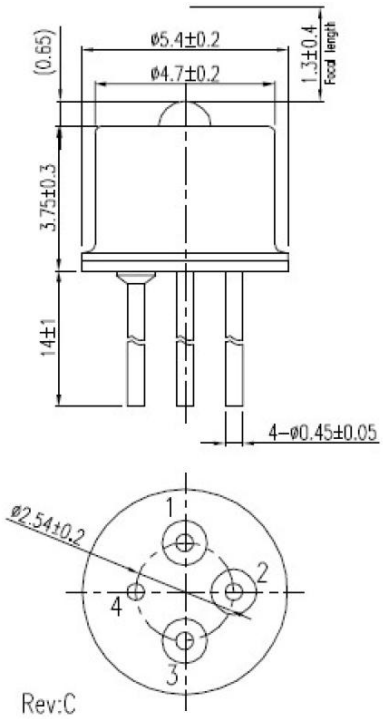
- 1.25Gbps fiber optic receivers
- Short-wavelength (850nm) optical communication
- Optical transceiver modules

Specifications

Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage temperature	-40	100	°C	
Operating temperature	-40	85	°C	
Lead solder temperature		260	°C	10 seconds

Electro-Optical Characteristics (T_A=25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Power supply	V_{CC}	3.0	3.3	3.6	V	
Supply current	I_{CC}		28	35	mA	No loads
Differential responsivity	Rd	6.0	10	16	mV/uW	λ=850nm, R_{load}=100ohm, P=-24dBm
Single ended responsivity	Rs	3.0	5.0	8.0	mV/uW	λ=850nm, R_{load}=50ohm, P=-24dBm
Small-signal bandwidth	BW	730			MHz	
Low frequency cut off	LF			115	kHz	
Rise/Fall Time (20-80%)	tr/tf			400	ps	P=-24dBm, λ=850nm
Saturation power	P_{sat}	0			dBm	
Single ended output impedance	R_O		50		ohm	
Wavelength	λ	770		860	nm	
Sensitivity				-25	dBm	λ=850nm, @1244.16Mbps, PRBS7, ER=10dB, BER=10^{-10}

Outline Dimensions (unit: mm)



Pinout Configuration

Pin Number	Function
1	Vcc
2	Dout (-)
3	Dout (+)
4	GND

Note: Specifications are subject to change without notice.