



PDT-A85P4-1MA4

125MHz GaAs PIN Photodiode with AGC Pre-Amplifier

Overview

The Lasermate PDT-A85P4-1MA4 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 cap lens. It supports 100/155Mbps fiber optic communication and is optimized for short-wavelength 850nm applications.



Features

- 850nm GaAs PIN photodiode with integrated TIA + AGC
- 4-pin TO-46 package with cap lens
- Optimized for fiber optic application
- Suitable for 100/155Mbps data rates
- Single power supply from 3.0 to 5.5 Volt

Applications

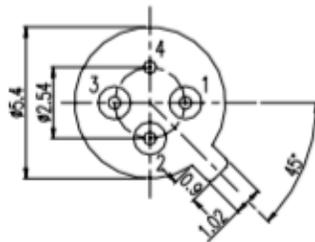
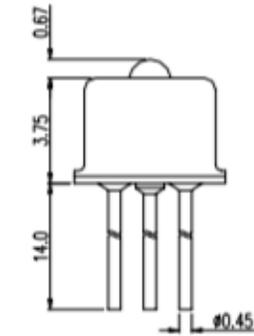
- Fiber optic communication systems
- Short-wavelength 850nm transmission

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 (Typical values are at + 3.3V@25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Power supply	V _{CC}	3.0		5.5	V	
Supply current	I _{CC}			35	mA	No loads
Differential output voltage	V _d			1	V	λ=850nm, 0dBm
Data out rise time (10-90%)	t _r			4.5	ns	λ = 850nm, P _f = 10uW
Data out fall time (10-90%)	t _f			4.5	ns	λ = 850nm, P _f = 10uW
Output resistance (Single-end)	R _{out}		50		Ohm	
Bandwidth	BW	115			MHz	λ = 850nm, P _f = 10uW
Saturation power	P _{sat}	-3			dBm	λ = 850nm
Gain @ 1Mbps → Single-End	G _s	0.05		40	mV/uW	λ = 850nm, R _{load} = 50 ohm
Gain @ 1Mbps → Differential	G _d	0.10		80	mV/uW	λ = 850nm, R _{load} = 100 ohm
Sensitivity				-31	dBm	λ = 850nm, 155Mbps, BER 10 ⁻¹⁰

Outline Dimensions (unit: mm)



Pinout
1.Vcc
2.Dout
3.Dout
4.Gnd

Note: Specifications are subject to change without notice.