



PDT-A85P5-1GA3

1.25Gb/s GaAs PIN Photodiode with AGC Pre-Amplifier

Overview

The Lasermate PDT-A85P5-1GA3 is a high-speed 850nm GaAs PIN photodiode with an integrated AGC transimpedance pre-amplifier (TIA) in a 5-pin TO-46 package. It supports fiber optic data transmission at 1.25Gbps and is optimized for short-wavelength 850nm fiber optic applications.



Features

- 850nm GaAs PIN photodiode with integrated AGC TIA
- 5-pin TO-46 package with cap lens
- Supports short-wavelength 1.25Gbps fiber optic applications
- Photocurrent monitoring available
- Operates with a single +3.3V power supply
- Optimized for fiber optic communication systems

Applications

- High-speed fiber optic communication
- Short-wavelength 850nm data transmission

Specifications

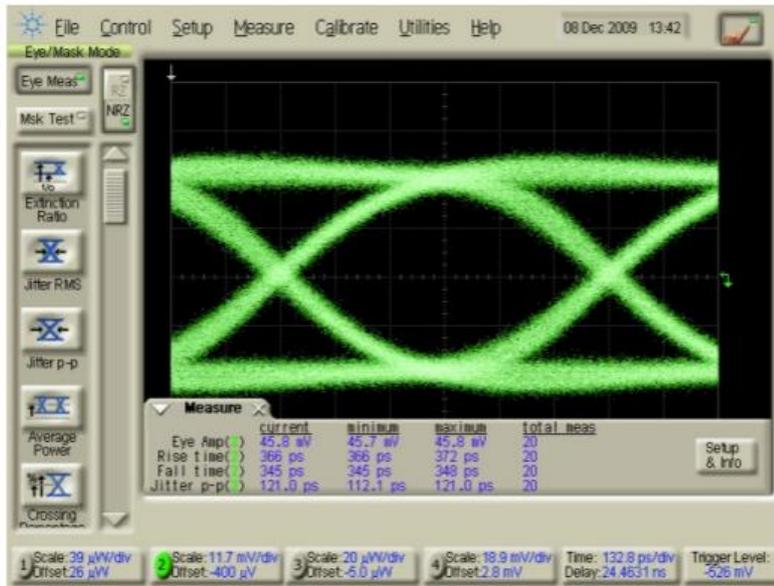
Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage temperature	-40	100	°C	
Operating temperature	-40	85	°C	
Lead solder temperature		260	°C	10 seconds

Electro-Optical Characteristics (Typical values are at + 3.3V@25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Power supply	V _{CC}	3.0	3.3	3.6	V	
Supply current	I _{CC}		22	30	mA	No loads
Differential responsivity	R _d	7.6		17.8	mV/uW	λ=850nm, R _{load} =100ohm, P=-24dBm
Single ended responsivity	R _s	3.8		8.9	mV/uW	λ=850nm, R _{load} =50ohm, P=-24dBm
Small-signal bandwidth	BW	700			MHz	
Low frequency cut off	LF			100	kHz	
Rise/Fall Time (20-80%)	tr/tf			400	ps	P=-24dBm, T _A =25°C
Saturation power	P _{sat}	0			dBm	
Single ended output impedance	R _o		50		ohm	
Wavelength	λ	770		860	nm	
Sensitivity				-26	dBm	λ=850nm, @1244.16Mbps, PRBS7, ER=10dB, BER=10 ⁻¹⁰

Typical Characteristics

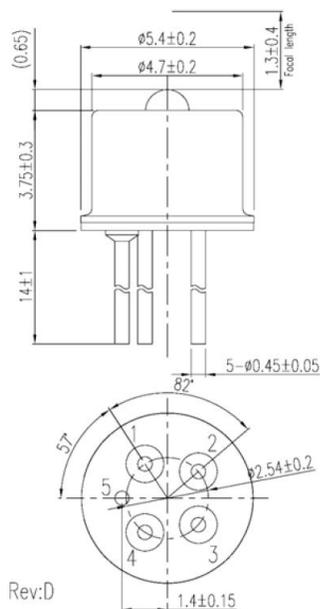
Eye Diagram

R_{load} = 50ohm, P = -24dBm @ 1244.16Mbps, 850nm, PRBS7.



tr = 366ps, tf = 345ps, Jitter p-p = 121.0ps

Outline Dimensions (unit: mm)



Pin Configuration

Pin Number	Function
1	Dout(+)
2	Vcc
3	Isource
4	Dout(-)
5	Gnd

Note: Specifications are subject to change without notice.