



PDT-A85P4-2GA3

2.5Gbps GaAs PIN plus Pre-Amplifier Photodiode in TO-46 Package, 4-pin

Overview

The Lasermate PDT-A85P4-2GA3 is a high-speed GaAs photodetector integrated with a transimpedance amplifier (TIA) in a 4-pin TO-46 package with cap lens that supports 2.5Gbps data rates at 850nm.



Features

- 850nm GaAs PIN TIA 4 pin TO
- Industry standard TO-46 package with cap lens
- Optimized for fiber optic application
- Suitable for 2.5Gbps applications
- Single power supply from +3.3V

Applications

- Optimized for fiber optic application

Specifications

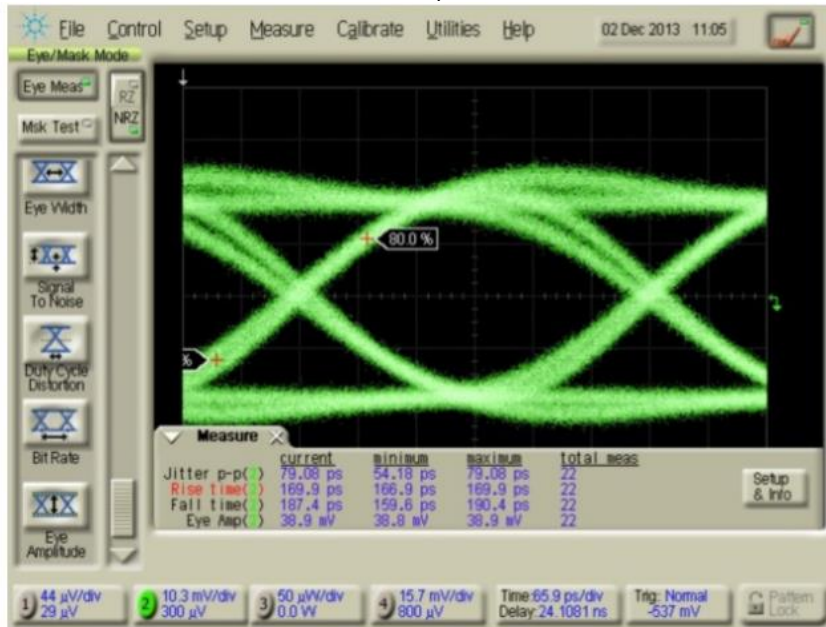
Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage temperature	-40	100	°C	
Operating temperature	-40	85	°C	
Lead solder temperature		260	°C	10 seconds

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}	15	20	24	mA	No loads
Differential responsivity	R_d		3.6		mV/uW	$\lambda=850\text{nm}$, $R_{load}=100\text{ohm}$, $P=-20\text{dBm}$
Single ended responsivity	R_s		1.8		mV/uW	$\lambda=850\text{nm}$, $R_{load}=50\text{ohm}$, $P=-20\text{dBm}$
Small-signal bandwidth	BW		1.5		GHz	$P=-20\text{dBm}$
Low-Frequency Cut off	LF		30		kHz	
Rise / Fall Time (20%~80%)	tr/tf			200	ps	$P=-20\text{dBm}$, $\lambda=850\text{nm}$
Saturation Power	P_{Sat}	0			dBm	
Maximum Differential Output Voltage			140	270	mVp-p	$\lambda = 850\text{nm}$, $R_{load}=100\text{ohm}$, $P= -15\text{dBm}$
Single Ended Output Impedance	R_o		50		ohm	
Wavelength	λ	770		860	nm	
Sensitivity				-23	dBm	$\lambda = 850\text{nm}$, @2488.32Mbps, PRBS7, ER=10dB, BER=10 ⁻¹⁰

Typical Characteristics

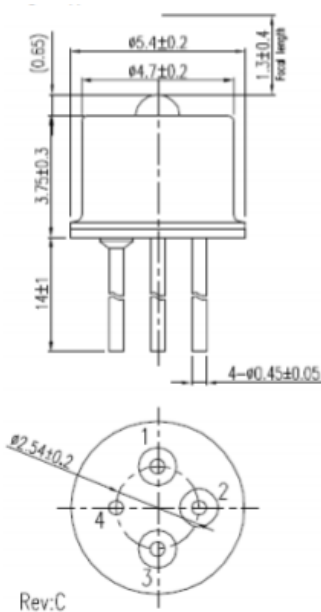
Eye Diagram

$R_{load} = 50\Omega$, $P = -20\text{dBm}$ @2488.32Mbps, 850nm, PRBS7.



$t_r = 169.9\text{ps}$, $t_f = 187.4\text{ps}$, Jitter p-p = 79.08ps

Outline Dimensions (unit: mm)



Pinout:

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

Note: Specifications are subject to change without notice.