



10Gbps 1260nm~1620nm InGaAs PIN plus Pre-Amplifier Photodiode in TO-46 Package, 5-pin

Part No. PDT-A13P5-10GA3

Features

- 1310nm InGaAs PINTIA 5 pin TO
- Industry standard TO-46 package with long cap lens
- Optimized for fiber optic application
- Design for long wavelength 1.25Gbps to 10.3125Gbps applications
- Photocurrent monitoring available
- Single power supply +3.3V



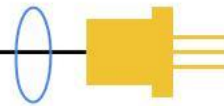
Specifications

Electro-Optical Characteristics (Typical values are at +3.3V @ 25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Power Supply	V _{CC}	3.0		3.6	V	
Supply Current	I _{CC}			62	mA	No loads
Differential Responsivity	R _d	2.8		6.8	mV/uW	λ=1310nm, R _{load} =100ohm, P=-18dBm
Single Ended Responsivity	R _s	1.4		3.4	mV/uW	λ=1310nm, R _{load} =50ohm, P=-18dBm
TIA RSSI	Slope	0.9	1.0	1.1	mA/mA	
	Offset	0	40	100	nA	
	Linearity Limit			1.6	mA	
Small-Signal Bandwidth	BW	7.0			GHz	P=-18dBm ⁽¹⁾
Low-Frequency Cut Off	LF			70	kHz	
Rise/Fall Time (20-80%)	tr/tf			50	ps	P=-18dBm, λ=1310nm ⁽¹⁾
Saturation Power	P _{sat}	0			dBm	
Single Ended Output Impedance	R _o		50		ohm	
Wavelength	λ	1260		1620	nm	
Sensitivity				-15.5	dBm	λ=1310nm, @10.3125Gbps ⁽¹⁾ , PRBS31, ER=7dB, BER=10 ⁻¹²

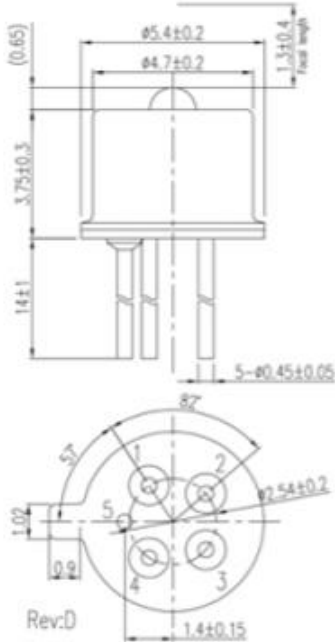
Notes:

1. The spec and tested data are subject to ROSM level (flexible circuit attached) measurement.
2. The above specifications are subject to change without notice.

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



Outline Dimensions (unit: mm)



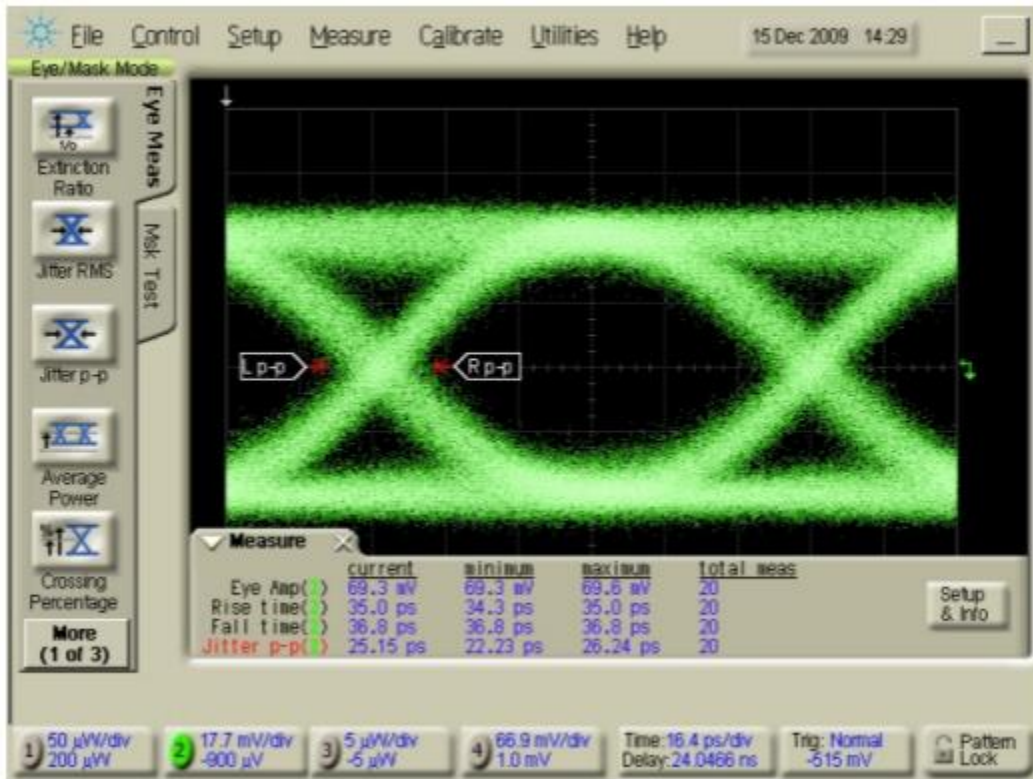
Pinout:

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

Typical Characteristics

Eye Diagram

$R_{load} = 50\Omega$, $P = -18\text{dBm}$ @10.3125Gbps, 1310nm, PRBS 31⁽¹⁾



$t_r=35.0\text{ps}$, $t_f=36.8\text{ps}$, Jitter p-p=25.15ps

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