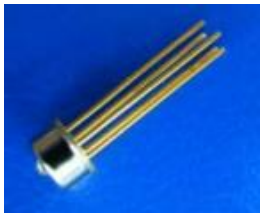
4.25Gbps 1260nm~1620nm InGaAs PIN plus AGC Pre-Amplifier Photodiode in TO-46 Package, 5-pin

Part No. PDT-A13P5-4GA3

Features



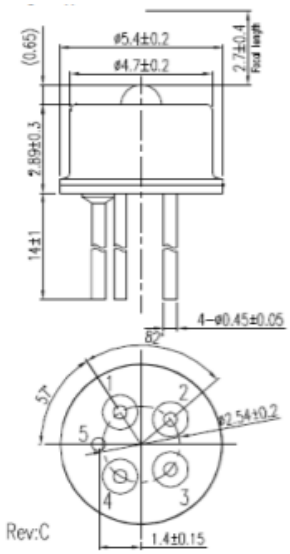
- 1310nm/1550nm InGaAs PINTIA 5 pin TO
- Industry standard TO-46 package with short cap lens and tab-less
- Optimized for fiber optic application
- Design for long wavelength 1.0625Gbps to 4.25Gbps applications
- Photocurrent monitoring available
- Single power supply +3.3V

Specifications

Electro-Optical Characteristics (Typical values are at + 3.3V@25ºC)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Power Supply	V_{CC}	3.0	3.3	3.6	V	
Supply Current	I_{CC}		25	35	mA	No loads
Differential Responsivity	R_d	2.2	3.0	5.0	mV/uW	λ=1310nm, R_{load}=100ohm, P=-18dBm
Single Ended Responsivity	R_s	1.1	1.5	2.5	mV/uW	λ=1310nm, R_{load}=50ohm, P=-18dBm
Small-Signal Bandwidth	BW	1.6			GHz	P=-18dBm
Low-Frequency Cut Off	LF			100	kHz	
Rise/Fall Time (20-80%)	tr/tf		115	150	ps	λ=1310nm, P=-18dBm
Saturation Power	P_{sat}	0			dBm	
Maximum Differential Output Voltage		200	280		mVp-p	λ=1310nm, R_{load}=100ohm, P >-9dBm
Single Ended Output Impedance	R_O		50		ohm	
Wavelength	λ	1260		1620	nm	
Sensitivity				-20.5	dBm	λ=1310nm, @4.25Gbps, PRBS7, ER=6dB, BER=10^{-10}

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. Isink
4. $\overline{\text{Dout}}$
5. Gnd

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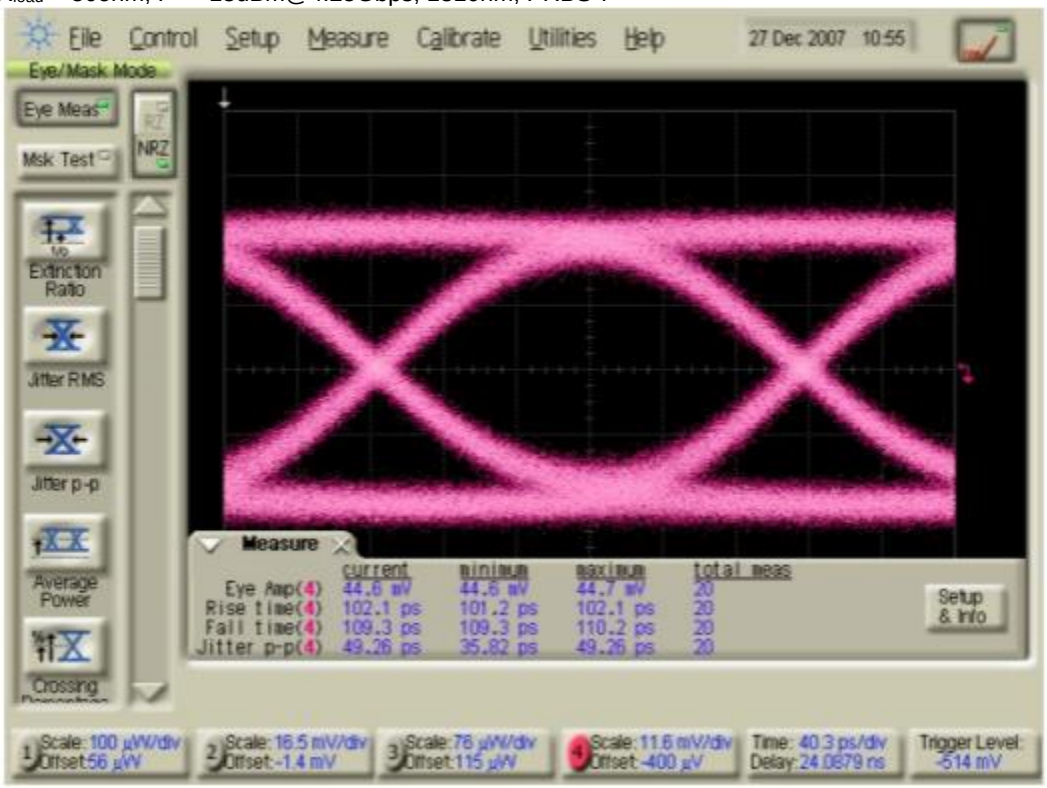
Typical Characteristics

Eye Diagram

R_{load} = 50ohm, P = -18dBm@4.25Gbps, 1310nm, PRBS 7



tr = 102.1ps, tf = 109.3ps, Jitter p-p = 49.26ps

Note: Specifications are subject to change without notice.

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