# 2.5Gbps InGaAs PIN Photodiode with AGC Pre-Amplifier, 4-pin
## PDT-A13P4-2GF3

**Data Sheet**

## Features

- Industry standard TO-46 package with short cap lens and tab-less
- Optimized for fiber optic applications
- Designed for long wavelength 2.5Gbps applications
- Photocurrent monitoring functionality available
- Single +3.3V power supply requirement

## Specifications

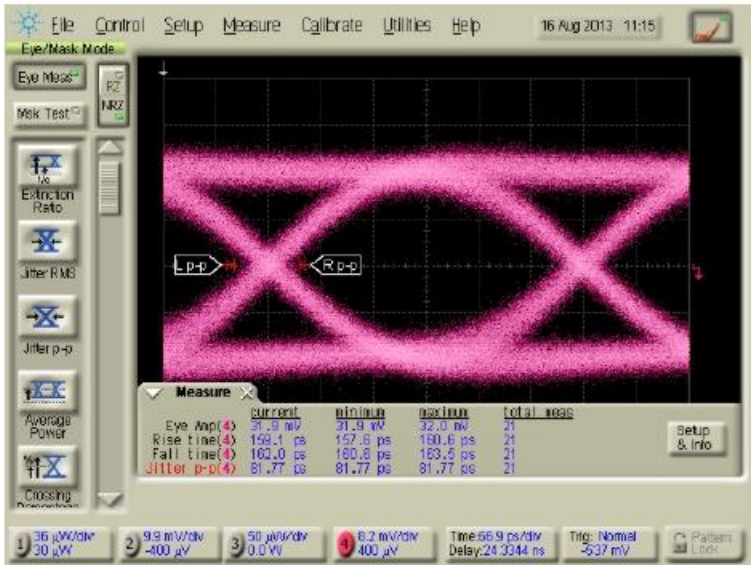
| **Electro-Optical Characteristics** (Typical values are at + 3.3V@25ºC) | | | | | | |
|---|---|---|---|---|---|---|
| Parameters | Symbol | Min. | Typ. | Max. | Unit | Conditions |
| Power Supply | $V_{CC}$ | 3.0 | 3.3 | 3.6 | V | |
| Supply Current | $I_{CC}$ | 30 | 34 | 42 | mA | No loads |
| Differential Responsivity | $R_d$ | 10 | 16 | 26 | mV/uW | λ=1490nm, $R_{load}$=100ohm, P=-27dBm |
| Single Ended Responsivity | $R_s$ | 5 | 8 | 13 | mV/uW | λ=1490nm, $R_{load}$=50ohm, P=-27dBm |
| Small-Signal Bandwidth | BW | 1.4 | | | GHz | |
| Low-Frequency Cut Off | LF | | 15 | | kHz | |
| Rise/Fall Time (20-80%) | tr/tf | | | 200 | ps | P=-27dBm, λ=1490nm |
| Saturation Power | $P_{sat}$ | 0 | 3 | | dBm | |
| Single Ended Output Impedance | $R_O$ | | 50 | | ohm | |
| Wavelength | λ | 1260 | | 1620 | nm | |
| Sensitivity | | | | -28 | dBm | λ=1490nm, @2488.32Mbps, PRBS23, ER=10dB, 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 |

## Typical Characteristics

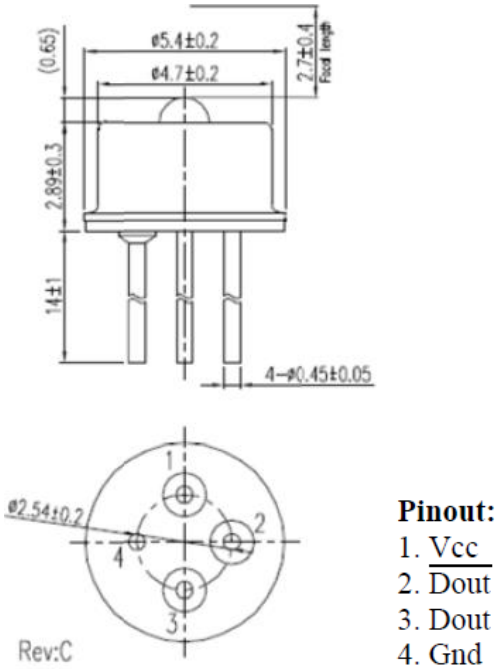
### Eye Diagram

$R_{load}$=50ohm, P=-27dBm@2488.32Mbps, 1490nm, PRBS 23




tr=159.1ps, tf=162.0ps, Jitter p-p=81.77ps

## Outline Dimensions (unit: mm)




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

Note: Specifications are subject to change without notice.