



## PDT-A13P5-1MC4

### 125MHz InGaAs PIN plus AGC Pre-Amplifier Photodiode in TO-46 Package, 5-pin

#### Overview

The Lasermate PDT-A13P5-1MC4 is a high-speed, high sensitivity 100/155Mbps InGaAs photodetector integrated with a transimpedance amplifier (TIA) in a 5-pin TO-46 package with short cap lens, specifically designed for 1310nm/1550nm band optical fiber communications.



#### Features

- InGaAs PINTIA 5 pin TO
- Industry standard TO-46 package with short cap lens and tab-less
- Photocurrent monitoring available
- Supports 3.3V to 5.0V applications

#### Applications

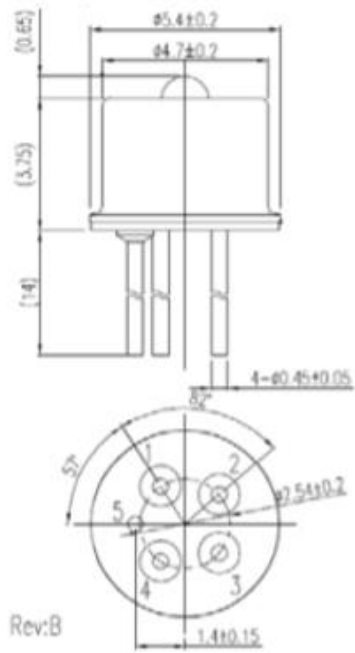
- Optimized for fiber optic application
- Suitable for 100/155 Mbps applications

#### Specifications

Electro-Optical Characteristics (Typical values are at $V_{CC}=3.3V$ at $25^{\circ}C$ )						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Power Supply	$V_{CC}$	3.0	3.3	5.5	V	
Supply Current	$I_{CC}$			36	mA	No loads
Differential Responsivity	$R_d$	24		54	mV/uW	$P=-33dBm, \lambda=1310nm, R_{load}=100ohm$
Single Ended Responsivity	$R_s$	0.05		60	mV/uW	$P=-33dBm, \lambda=1310nm, R_{load}=50ohm$
Small-Signal Bandwidth	BF	115			MHz	$\lambda=1310nm, P_r=10uW$
Rise/Fall Time (20-80%)	tr/tf			4.5	ns	$\lambda=1310nm, P_r=10uW$
Saturation Power	$P_{sat}$	0			dBm	$\lambda=1310nm$
Single Ended Output Impedance	$R_o$		50		ohm	
Wavelength	$\lambda$	1260		1620	nm	
Sensitivity			-38.5	-37	dBm	$\lambda=1310nm, @155.52Mbps, PRBS23, BER=10^{-10}$

Absolute Maximum Ratings					
Parameters	Min.	Max.	Unit	Conditions	
Storage Temperature	-40	100	$^{\circ}C$		
Operating Temperature	-40	85	$^{\circ}C$		
Lead Solder Temperature		260	$^{\circ}C$	10 seconds	

**Outline Dimensions (unit: mm)**



- Pinout:**
1. Dout
  2. Vcc
  3. Isink
  4.  $\overline{\text{Dout}}$
  5. Gnd

Note: Specifications are subject to change without notice.