

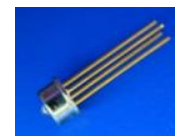


PDT-A13P4-1MB4

125MHz InGaAs PIN plus AGC Pre-Amplifier Photodiode in TO-46 Package, 4-pin

Overview

The Lasermate PDT-A13P4-1MB4 is a high-speed, high sensitivity 100/155Mbps InGaAs photodetector integrated with a transimpedance amplifier (TIA) in a 4-pin TO-46 package with short cap lens, specifically designed for 1310nm/1550nm band optical fiber communications.



Features

- 1310nm/1550nm InGaAs PINTIA 4 pin TO
- Industry standard TO-46 package with short cap lens
- Supports 3.3V to 5.0V applications

Applications

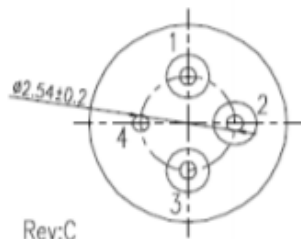
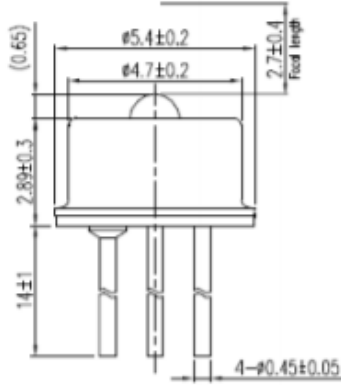
- Optimized for fiber optic application
- Suitable for 100/155 Mbps applications

Specifications

| Electro-Optical Characteristics (Typical values are at $V_{CC}=3.3V$) | | | | | | |
|--|-----------|------|------|------|-------|--|
| Parameters | Symbol | Min. | Typ. | Max. | Unit | Conditions |
| Power Supply | V_{CC} | 3.0 | | 5.5 | V | |
| Supply Current | I_{CC} | | | 35 | mA | No loads |
| Differential Responsivity | R_d | 0.10 | | 120 | mV/uW | $\lambda=1310nm, R_{load}=100ohm$ |
| Single Ended Responsivity | R_s | 0.05 | | 60 | mV/uW | $\lambda=1310nm, R_{load}=50ohm$ |
| 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 | |
| Sensitivity | | | | -36 | dBm | $\lambda=1310nm, @155Mbps, PRBS23, BER=10^{-10}$ |

| 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. Vcc
- 2. $\overline{\text{Dout}}$
- 3. Dout
- 4. Gnd

Note: Specifications are subject to change without notice.