

1310 nm 2.5 Gbps PIN-TIA

DI2E-8063-6

TYPE NAME: DI2E-8063-6

Product Description:

The LuxNet DI2E-8063-6 PIN-TIA is designed for high speed, high performance data communication and telecommunication applications. This device integrates our high speed 1310 nm PIN detector with an STM16/OC48 trans-impedance amplifier (TIA), capacitors, and a TO-46 header with a cap window. The product is designed for OC-48 optical communication systems. The PIN-TIA assembly can be integrated with different types of ports engaged with a fiber connector to transmit the light from fiber through a receptacle into the PIN detector with high coupling efficiency.

Product Specifications:

Absolute Maximum Ratings (T = 25°C):

| Parameter | Symbol | Unit | Min. | Max. | Note |
|---------------------------|------------------|------|------|------|-----------------|
| Operating Temperature | T _{op} | °C | -40 | 85 | |
| Storage Temperature | T _{stg} | °C | -40 | 100 | |
| Solder Reflow Temperature | T _{stg} | °C | | 260 | 10 seconds max. |
| Power Supply Voltage | V _P | V | -0.5 | 6 | |
| Optical Power | P _{in} | dBm | | 5 | |

Electro-Optical Characteristics (T = 25°C, unless noted otherwise):

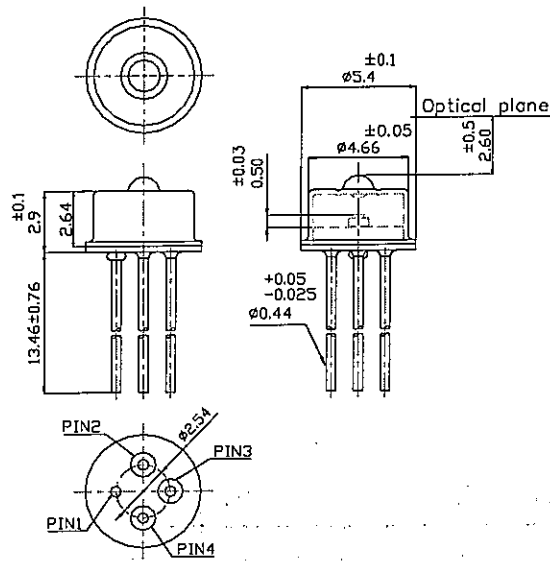
| Parameter | Symbol | Unit | Min. | Typ. | Max. | Test Condition |
|-------------------------------|--------------------------------|------|------|---------|---------|---|
| Supply Voltage | V | V | 3.0 | 3.3 | 3.6 | |
| Supply Current | I _{cc} | mA | | 44 | 59 | V _{cc} =3.3V, P _{in} = 0 μW, R _L = 50Ω, |
| Output Voltage (differential) | V _{op} | mV | | | 330 | P _{in} = 100 μW, R _L = 50Ω |
| Responsivity | R | V/W | | 4900 | | λ=1310nm P _{in} = 20μW, AC Coupled to R _L = 50Ω |
| Upper -3dB Bandwidth | BW | GHz | 1.65 | 2.05 | 2.5 | R _L = 50Ω |
| Sensitivity | S | dBm | | -24 | | λ=1310nm 2 ²³ - 1 PRBS, BER= 10 ⁻¹⁰ |
| Wavelength | λ | nm | 1100 | 1310 | 1650 | |
| Rise/Fall Time | τ _r /τ _f | ps | | 150/150 | 250/250 | V _{cc} =3.3V; (20%-80%) |

* Specifications are subject to change without notice.

* Screening per customer-specified reject limits is available.

Version 1.1

Dimensions: (mm)
All dimensions are nominal



PINOUT

| DI2E-8063-6 | |
|-------------|-------------------------|
| Pin Number | Function |
| 1 | GND |
| 2 | Vcc |
| 3 | Inverted Output (D*) |
| 4 | Non-inverted Output (D) |

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* Screening per customer-specified reject limits is available.