

10Gbps 1310/1550nm APD-TIA 5pin TO-46

TYPE NAME: L-TR-EA99-07

Product Description:

The LuxNet L-TR-EA99-07 5-pin APD-TIA TO is designed for 10G PON optical receiver applications including EPON PR-30/PRX-30 & XG-PON1/XG-PON2 ONU. This device integrates APD detector with an Trans-impedance amplifier (TIA) and a capacitor into a TO-46 5-pin header with lens cap. This APD-TO provides special digital diagnostic capability for transceivers with a wide dynamic range of input optical power.

Product Specifications:

Absolute Maximum Ratings

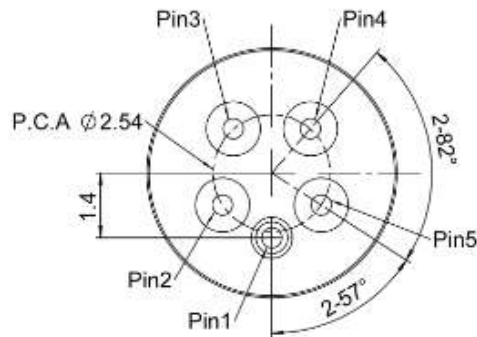
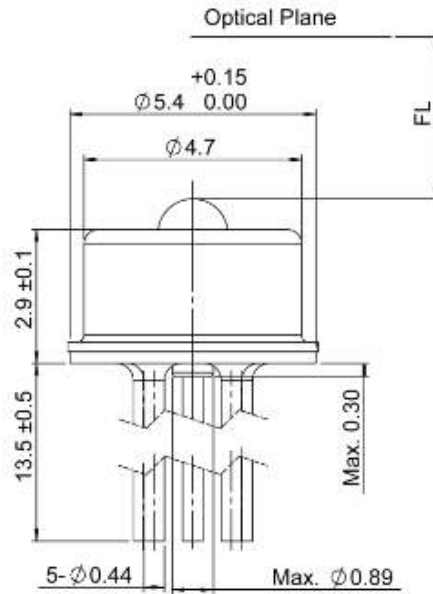
| Parameter | Symbol | Unit | Min. | Max. | Note |
|---------------------------|------------------|------|------|-----------------|-----------------|
| Operating Temperature | T _{op} | °C | -40 | 85 | |
| Storage Temperature | T _{stg} | °C | -40 | 85 | |
| TIA supply voltage | V _{cc} | V | -0.5 | 5 | |
| APD Reverse Current | I _r | mA | - | 2 | |
| APD supply voltage | V _{pd} | V | - | V _{br} | |
| Optical Power | P _{in} | dBm | - | -6 | |
| Solder Reflow Temperature | T _{stg} | °C | - | 260 | 10 seconds max. |

Electro-Optical Characteristics (T_c = 25°C, V_{cc}=3.3V)

| Parameter | Symbol | Unit | Min. | Typ. | Max. | Test Condition |
|----------------------|-------------------|------|------|----------------------|-------|--|
| Power Supply Voltage | V _{cc} | V | 2.97 | 3.3 | 3.63 | |
| Supply Current | I _{cc} | mA | - | 27 | 38 | V _{cc} =3.3V |
| Breakdown Voltage | V _{br} | V | 26 | 30 | 34 | I=10uA |
| Responsivity | Res | A/W | 0.8 | - | - | |
| Operation Voltage | V _{op} | V | - | V _{br} *0.9 | - | |
| Dark current | I _{dark} | nA | - | - | 150 | V _{br} *0.9 |
| Low Frequency Corner | BW _{Low} | KHz | - | - | 30 | 3dB |
| Sensitivity | Sen | dBm | - | - | -30.5 | λ= 1577.20nm ER=7.5, PRBS 2 ³¹⁻¹ , BER=10 ⁻³ , Data rate 10.3125Gbps |
| Over load | Sen | dBm | -7 | - | - | λ= 1577.20nm ER=7.5, PRBS 2 ³¹⁻¹ , BER= Error free Data rate 10.3125Gbps |
| Focal Length | FL | mm | 2.2 | 2.5 | 2.8 | Lens Top to Fiber end |

L-TR-EA99-07

Dimensions: (mm)



| Pin Number | Function |
|------------|-------------------------|
| 1 | GND |
| 2 | Non-inverted Output(D+) |
| 3 | Vcc |
| 4 | VAPD |
| 5 | Inverted Output(D*) |

* Specifications are subject to change without notice.