

InGaAs PD-TIA Receivers

KPDX10G-H34S

Characteristics

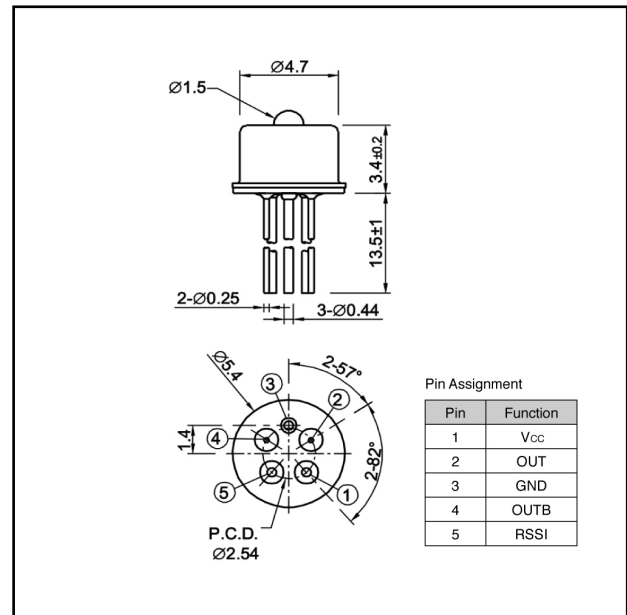
- High speed InGaAs PD with TIA
- High reliability
- -40 to +85oC Operation
- Differential output

Applications

- Optical communications
- Optical LAN
- OE converters

Package

- TO-CAN



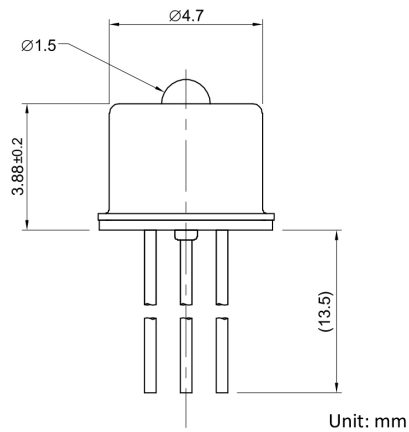
Absolute Maximum Ratings

| Parameter | Symbol | Value | Unit | Conditions |
|-----------------------------|------------|-------------|------|------------|
| Supply voltage | V_{cc} | -0.5 to 5.0 | V | - |
| Maximum optical power input | P_{imax} | 5 | mW | - |
| Operating temperature | T_{opr} | -40 to +85 | | - |
| Storage temperature | T_{stg} | -40 to +85 | | - |

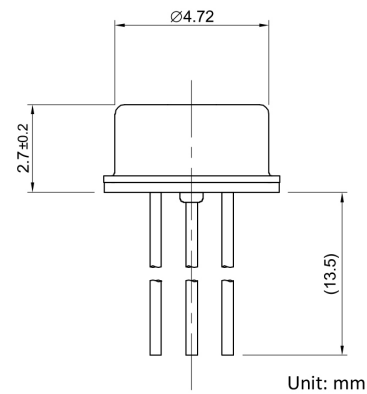
Electrical and Optical characteristics ($T_a=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|-----------------------------|-----------|------|------|------|------|--|
| Sensitive wavelength | | 900 | - | 1700 | nm | - |
| Operating voltage | V_{op} | 3.1 | 3.3 | 3.5 | V | - |
| Supply current | I_{cc} | - | 27 | 34 | mA | - |
| Bit rate | BR | - | 10.3 | - | null | - |
| Bandwidth @-3dB | BW | - | 9 | - | GHz | $R_L=50$ $P_i=-10\text{dBm}$ Small signal modulation |
| Optical sensitivity | P_{min} | - | -18 | - | dBm | Single ended BER= 10^{-10} |
| Output impedance | Z_o | 40 | 50 | 60 | | single ended |
| Differential output voltage | V_o | 280 | 300 | 340 | mVpp | $R_L=50$ |
| Transimpedance | Z_t | - | 6.8 | - | k | $P_i=-15\text{dBm}$ $R_L=50$ Differential |

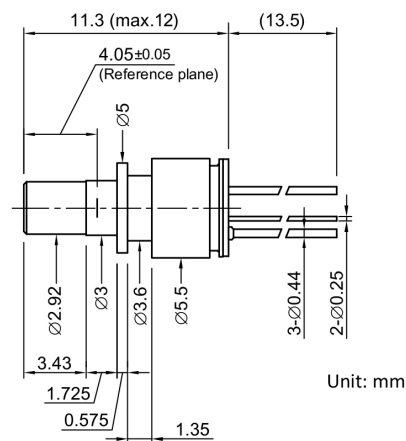
Ball lens type



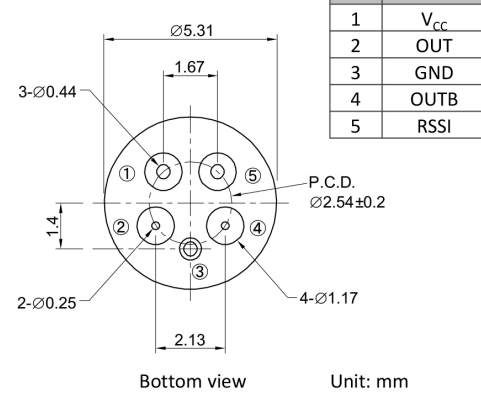
Flat window type



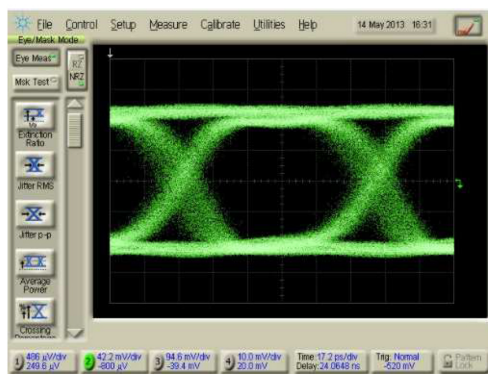
ROSA type



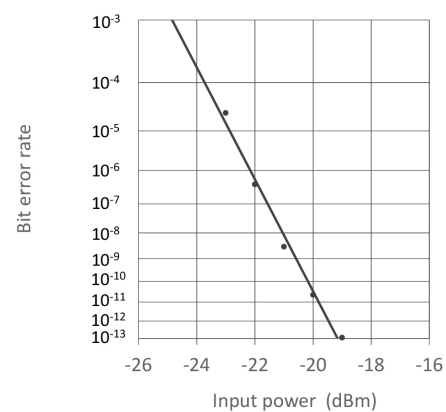
Pin assignment



Eye Diagram



Bit Error Rate



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