

InGaAs PD-TIA Receivers

KPDX10G-T

Characteristics

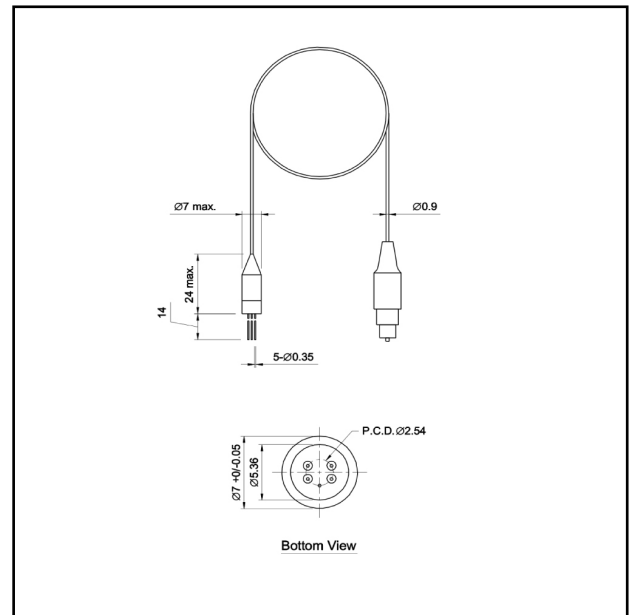
- High speed InGaAs PD with TIA
- High reliability
- -40 to +85°C Operation
- Differential output

Applications

- Optical communications
- Optical LAN
- OE converters

Package

- PIGTAIL



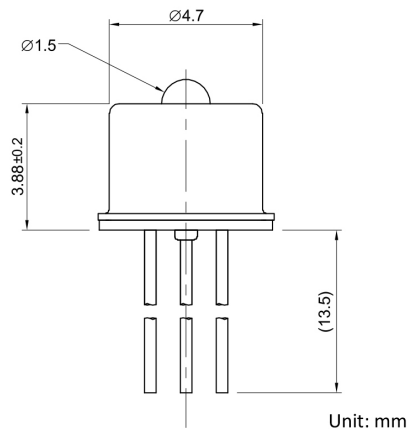
Absolute Maximum Ratings

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		-

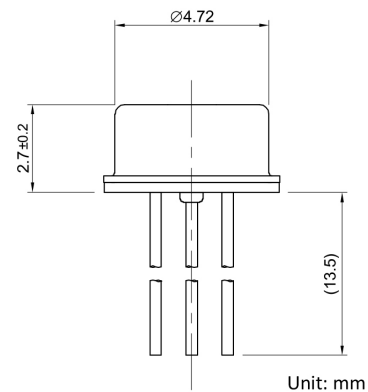
Electrical and Optical characteristics ($T_a=25^\circ\text{C}$ unless otherwise noted)

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	-
Transimpedance	Z_t	-	6.8	-	k	$P_i=-15\text{dBm}$ $R_L=50$ Differential

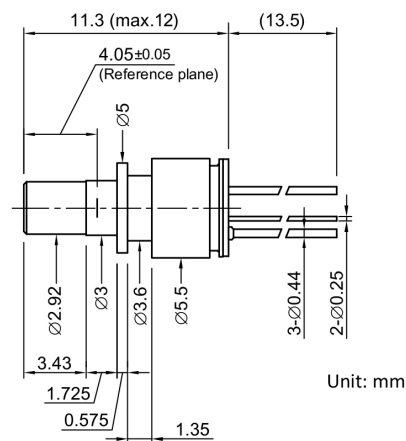
Ball lens type



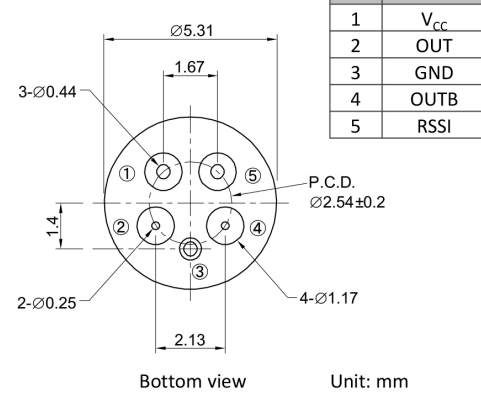
Flat window type



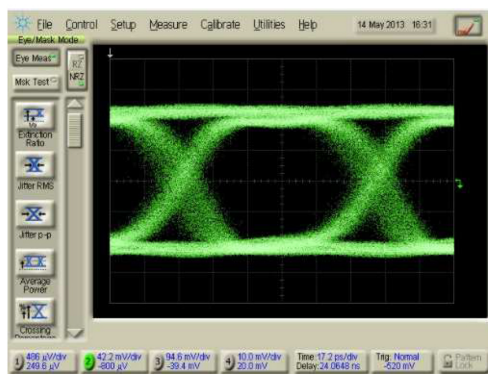
ROSA type



Pin assignment

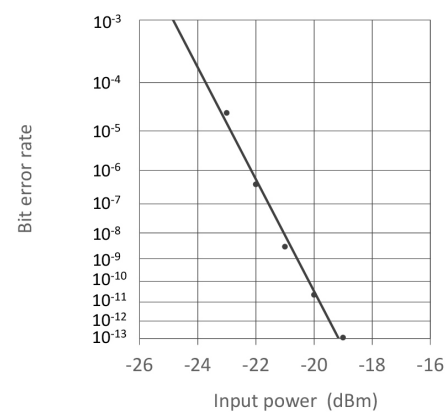


Eye Diagram



Pi=-18dBm with Limiting AMP

Bit Error Rate



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