

2.5Gbps PD-TIA Receiver for Parallel Beam

Features

- Long focal point to receive a parallel beam
- Suitable for the bi-directional module
- Low noise and high gain transimpedance
- Low operating voltage of 3.3V
- 5 pin package available for an independent PD connection

Package drawings are in the next page.

Applications

- Optical communication
- Optical LAN
- OE converters
- Long-distance light monitoring

Specifications

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Supply voltage	V_{cc}	-0.5 to 6.0	V
Operating temperature	T_{opr}	-40 to +85	°C
Storage temperature	T_{stg}	-40 to +85	°C

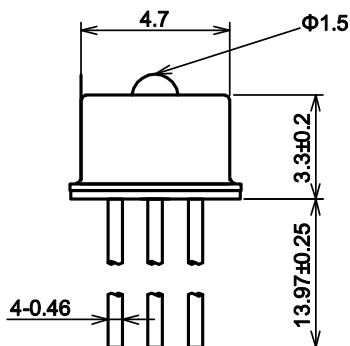
Electrical and Optical characteristics (Ta=25°C unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Operating voltage	V_{op}	3		5	V	
Supply current	I_{cc}		34	63	mA	
Bit rate	BR		2.5		Gbps	
Bandwidth @-3dB	BW		2.0		GHz	$R_L=50\Omega$, $P_i=-10dBm$, small signal modulation
Optical sensitivity	P_{min}		-22.5		dBm	differential, BER=10 ⁻¹⁰
Output impedance	Z_o	48	50	52	Ω	single ended
Differential output voltage	V_o		323	633	mVpp	$R_L>500\Omega$, single
Noise equivalent power	NEP			916	nWrms	
Photo-electric conversion efficiency	η_{PE}	0.84	1.17		kV/W	single ended, $R_L>500\Omega$

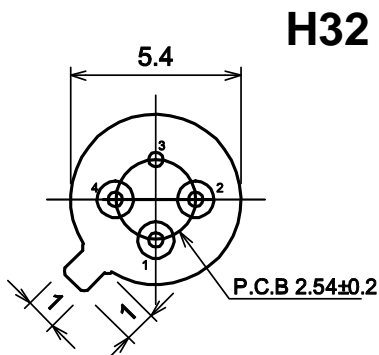
Specifications are subject to change without notice.

Package Options

Dimensions (unit: mm)



Side view



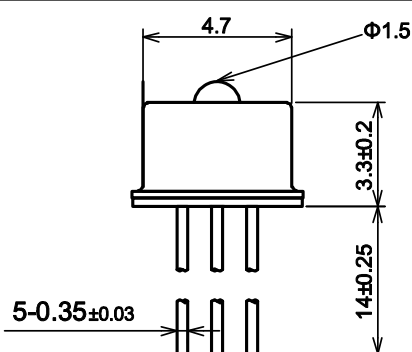
Bottom view

Pin assignment

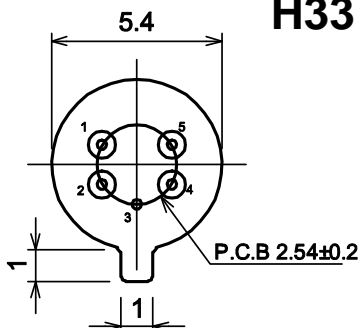
H32

KPDX2GD-H32	
PIN	Function
1	V _{CC}
2	OUT
3	GND
4	OUTB

H33



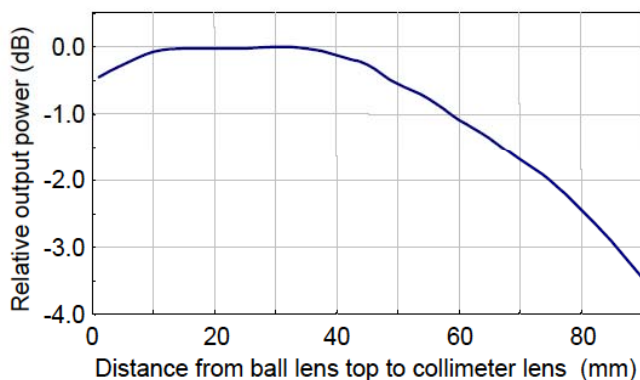
Side view



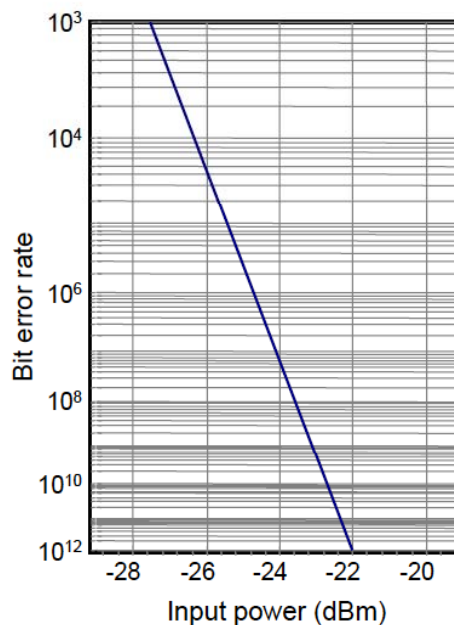
Bottom view

KPDX2GD-H33	
PIN	Function
1	V _{PD}
2	OUT
3	GND
4	OUTB
5	V _{CC}

Collimated beam coupling



Bit error rate



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