

KP-H InGaAs Photodiode

KPDEH16L-CC1D

An InGaAs photodiode with 35GHz bandwidth. The incidence of the laser light is improved by integrating the photodiode with a condensing lens and ensuring an optical alignment tolerance of $\pm 30\mu\text{m}$. This CoC product is easy to use, because it is mounted on a high-frequency carrier that is custom designed for the photodiode.

Characteristics

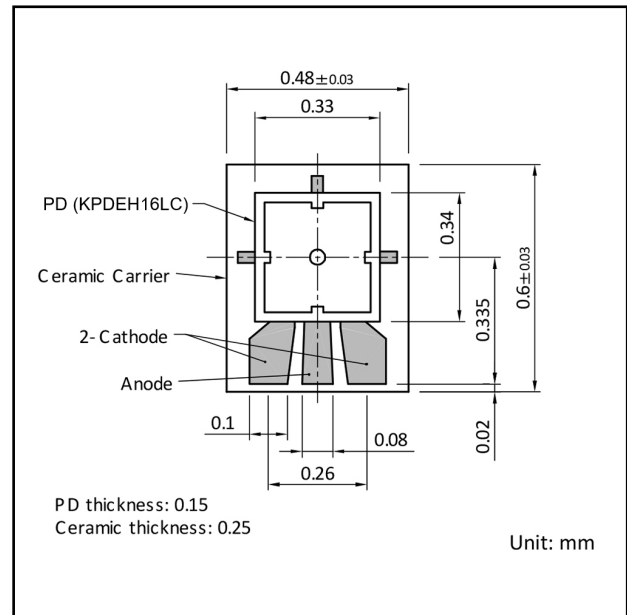
- Supports 35GHz bandwidth (when used with commercially available transimpedance amplifier)
- Achieving $40\mu\text{m}$ light receiving diameter by using integrated condensing lens
- Equipped with a dedicated high frequency carrier to improve mountability

Applications

- 400GbE (PAM4) / 100GbE
- 400Gbps / 200Gbps / 100Gbps Digital coherent system

Package

- CoC



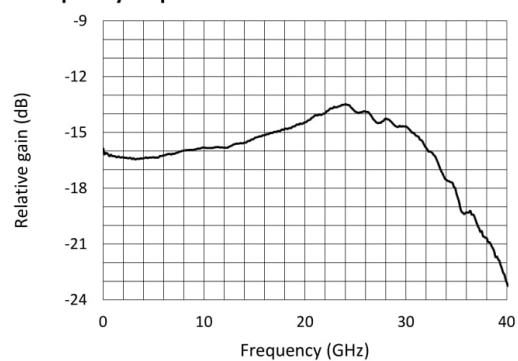
Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Conditions
Reverse voltage	V_R	5	V	-
Reverse Current	I_R	5	mA	-
Maximum optical power input	P_{imax}	5	mW	-
Forward current	I_F	5	mA	-
Operating temperature	T_{opr}	-40 to +85		Avoid dew condensation
Storage temperature	T_{stg}	-40 to +85		Avoid dew condensation

Electrical and Optical characteristics (Ta=25 °C, $V_R=2V$ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Active area	S	-	40	-	μm	-
Sensitive wavelength		900	-	1700	nm	-
Bandwidth	BW	-	35	-	GHz	$R_L=50 \Omega$, $\lambda=1550nm$, $P_{in}=0dBm$, Small signal modulation with TIA
Responsivity	R	-	0.7 0.6	-	A/W	$\lambda=1310nm$ $\lambda=1550nm$
Dark current	I_D	-	20	-	nA	$V_R=2V$

Frequency response with TIA



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