

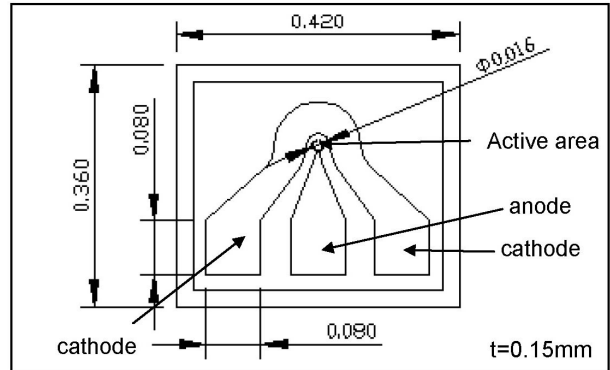
InGaAs Photodiodes KPDEH16C

Features

- Surface illuminated type
- Ultra high speed
- Low dark current

Applications

- 100GbE/40GbE(IEEE802.3ba)
- 100Gbps long haul
- Digital coherent receivers



Specifications

Absolute Maximum Ratings

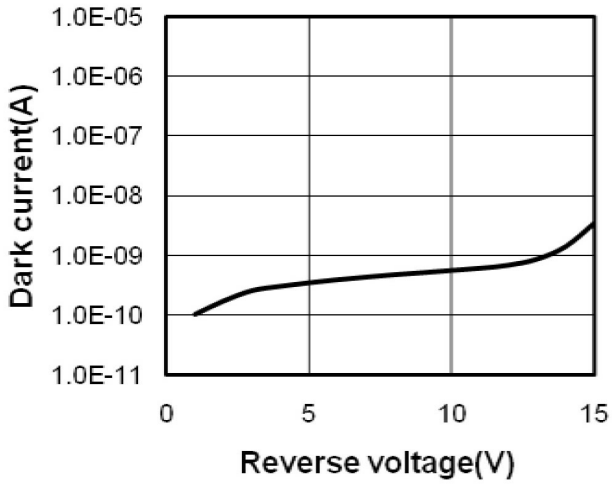
Parameter	Symbol	Value	Unit	Conditions
Reverse voltage	V_R	15	V	
Reverse Current	I_R	10	mA	
Forward current	I_F	5	mA	
Operating temperature	T_{opr}	-40 to +85		To avoid a dew condensation
Storage temperature	T_{stg}	-40 to +85		To avoid a dew condensation

Electrical and Optical characteristics

Parameter	Symbol	Value			Unit	Conditions
		Min.	Typ.	Max		
Sensitive size	D		16		μm	
Bandwidth	BW	25	28		GHz	$\lambda=1550\text{nm}$, $V_R=2\text{V}$, small signal modulation
Responsivity	R	0.50	0.55		A/W	$V_R=2\text{V}$, $\lambda=1550\text{nm}$
Dark current	I_D		0.5	5	nA	$V_R=2\text{V}$
Chip capacitance	C_{chip}		0.08	0.1	pF	$V_R=2\text{V}$, $f=1\text{MHz}$
Optical Return Loss	OR_L	0			dB	0
Polarization Dependent Loss	P_{DL}			0	dB	0

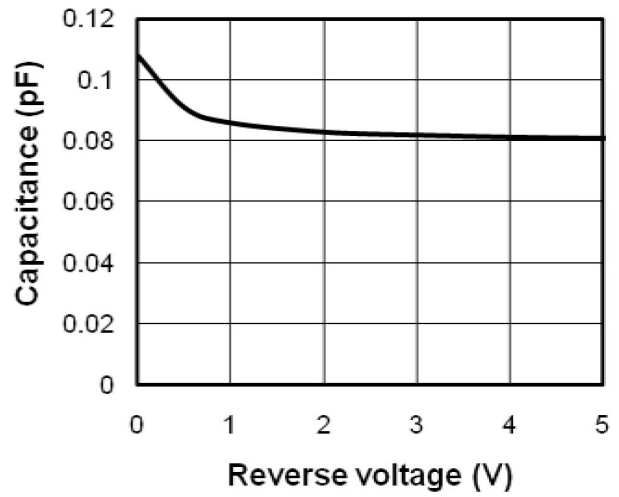
I-V Characteristics

(Ta= 25°C)



C-V Characteristics

(Ta= 25°C, f=1MHz)



Frequency response

(λ = 1550nm, R_L=50 ohm, V_R=2V, Ta= 25°C)

