

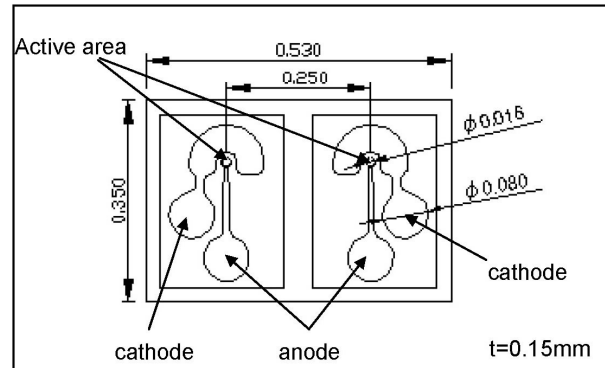
# InGaAs Photodiodes KPDEH16DC

## ■ Features

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

## ■ Applications

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



## ■ Specifications

### ⬇ Absolute Maximum Ratings

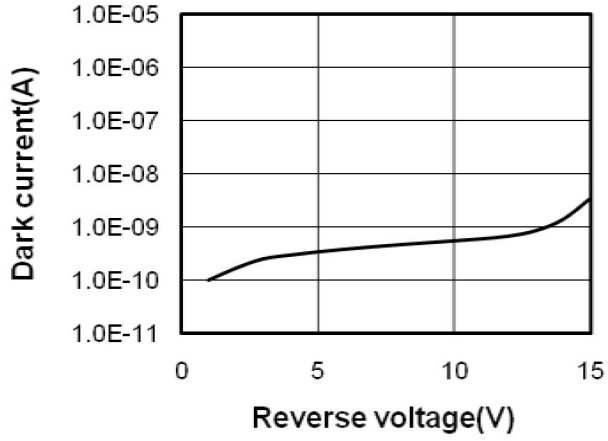
Parameter	Symbol	Value	Unit	Conditions
Reverse voltage	$V_R$	15	V	
Reverse Current	$I_R$	10	mA	
Forward current	$I_F$	5	mA	
Operating temperature	$T_{opr}$	-40 to +85		To avoid a dew condensation
Storage temperature	$T_{stg}$	-40 to +85		To avoid a dew condensation

### ⬇ Electrical and Optical characteristics

Parameter	Symbol	Value			Unit	Conditions
		Min.	Typ.	Max		
Sensitive size	D		16		$\mu\text{m}$	
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

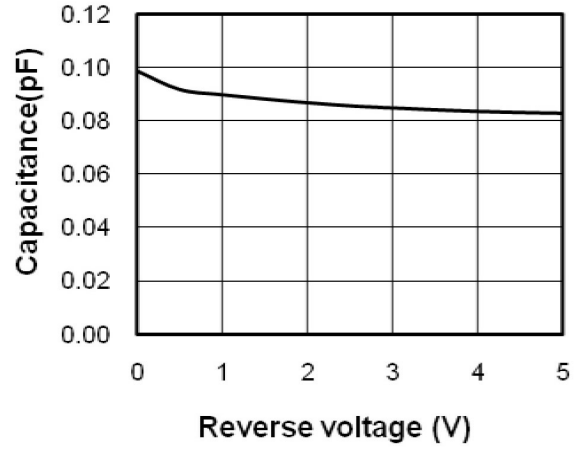
### I-V Characteristics

(Ta= 25°C)



### C-V Characteristics

(Ta= 25°C, f=1MHz)



### Frequency response

(λ = 1550nm, RL=50 ohm, VR=2V, Ta= 25°C )

