

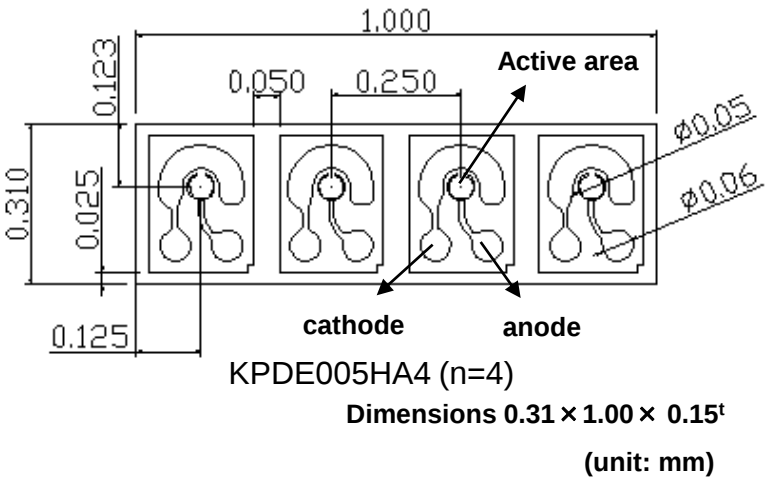
10G InGaAs photodiode array
KPDE005HAn (n: channel number, n=1,2,4,8,12)

Features

- Surface illuminated type
- Large active diameter ($\phi 50\mu\text{m}$)
- Low dark current
- High reliability

Applications

- Optical interconnection
- 10G Ethernet/Fiber channel



Specifications

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
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	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^{\circ}\text{C}$

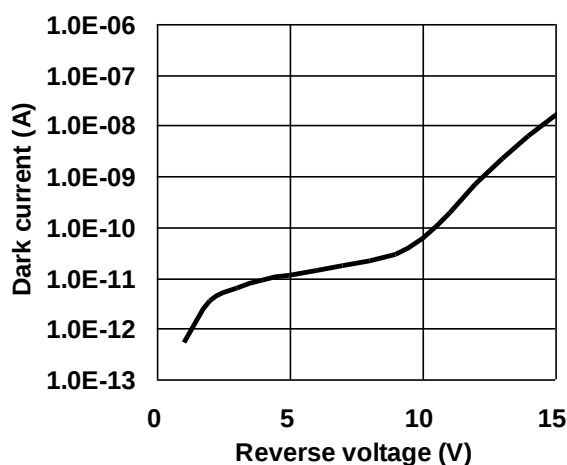
Electrical and Optical characteristics ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Active diameter	D	50			μm	
Bandwidth	BW	7.0	8.0		GHz	$\lambda = 1550\text{nm}$, $P_{in} = 0\text{dBm}$ $R_L = 50\text{ ohm}$, $V_R = 5\text{V}$
Responsivity	R	0.75	0.8		A/W	$V_R = 5\text{V}$, $\lambda = 1550\text{nm}$
Dark current	I_D		30	200	pA	$V_R = 5\text{V}$
Chip capacitance	C_{chip}		0.2	0.3	pF	$V_R = 5\text{V}$, $f = 1\text{MHz}$

Specifications are subject to change without notice.

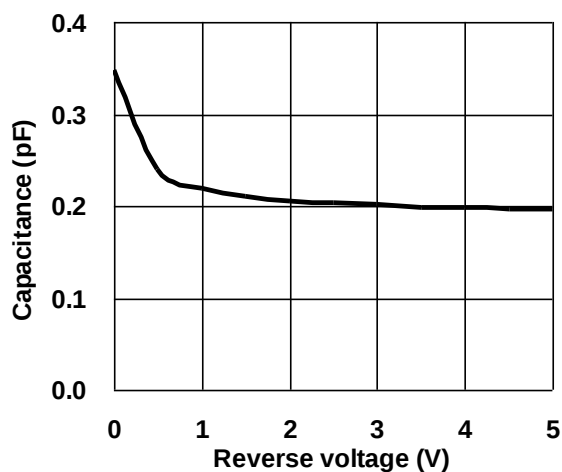
I-V Characteristics

(Ta= 25°C)



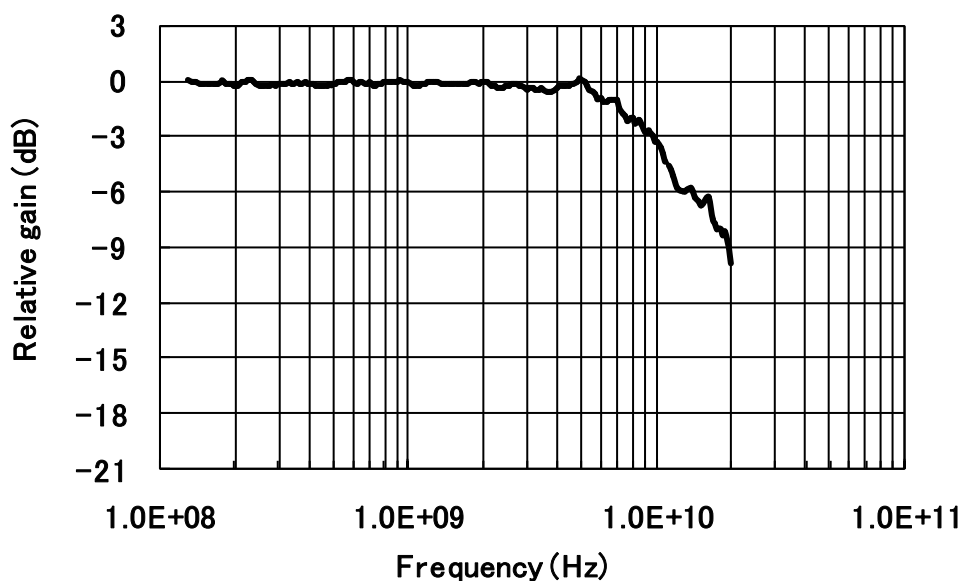
C-V Characteristics

(Ta= 25°C, f=1MHz)



Frequency response

($\lambda = 1550\text{nm}$, Pin =0dBm, $R_L=50\text{ ohm}$, $V_R=5\text{V}$, Ta= 25°C)



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Contacts:

www.kyosemi.co.jp / info@kyosemi.co.jp

Kansai Sales Office: 949-2 Ebisu-cho, Fushimi-ku, Kyoto, 612-8201 Japan Tel: +81 75 605 7311 Fax: +81 75 605 7312 (Overseas Sales Dept.)

Tokyo Sales Office: 24th Sky Building, 2nd Floor, 1-34-3 Shinjuku, Shinjuku-ku, Tokyo 160-0022 Japan Tel: +81 3 5312 5360 Fax: +81 3 5312 5367

Eniwa Operation: 385-31 Toiso, Eniwa-shi, Hokkaido 061-1405 Japan Tel: +81 123 34 3111 Fax: +81 123 34 2110

Kyosemi Opto America Corp: 3003 Bunker Hill Lane, Suite 102, Santa Clara, CA 95054 USA Tel: +1 408 492 1486 Fax: +1 408 492 9843

www.kyosemi-opto.com