

High Sensitive InGaAs Photodiode

Features

- Large active area convenient for optical coupling
- Low dark current
- Respond to C-Band and 1310nm, L-Band
- High reliability

Package drawings are seen in datasheet of 'Package Option for KPDE, KPDG, KPID Series.'

Applications

- Near infrared sensors
- Laser diode and LED power monitor
- Near infrared spectroscopy
- Optical measurements and sensing

Specifications

Absolute Maximum Ratings

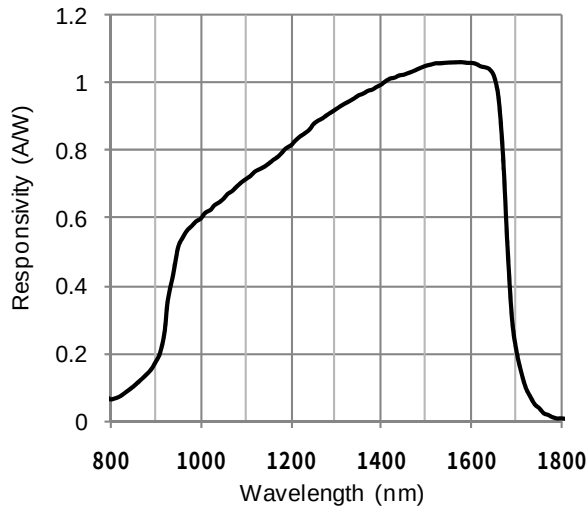
Parameter	Symbol	Value	Unit
Reverse voltage	V_R	20	V
Maximum optical power input	$P_{i\max}$	30	mW
Forward current	I_F	50	mA
Operating temperature	T_{opr}	-40 to +85	°C
Storage temperature	T_{stg}	-40 to +85	°C

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

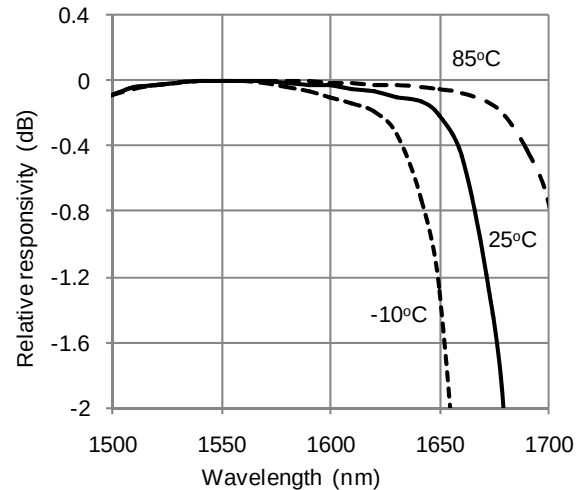
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Active diameter	D	300			μm	
Bandwidth	BW	400	600		MHz	$P_i=-10\text{dBm}$, small signal modulation, $V_R=5\text{V}$
Responsivity	R	0.8	0.9		A/W	$\lambda=1310\text{nm}$, $V_R=5\text{V}$
		0.9	1.0			$\lambda=1550\text{nm}$, $V_R=5\text{V}$
Dark current	I_D		100	600	pA	$V_R=5\text{V}$
Chip capacitance	C_{chip}		4.0	6.0	pF	$V_R=5\text{V}$, $f=1\text{MHz}$
Total capacitance	C_t		4.0	6.0	pF	$V_R=5\text{V}$, $f=1\text{MHz}$
Responsivity uniformity	ΔR			0.5	dB	$\lambda=1530-1610\text{nm}$ $T_{opr}=-10\text{ to }+85^\circ\text{C}$

Specifications are subject to change without notice.

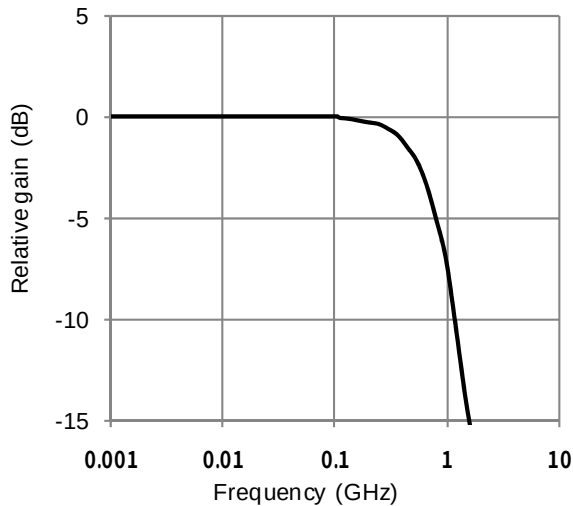
Spectral Responsivity



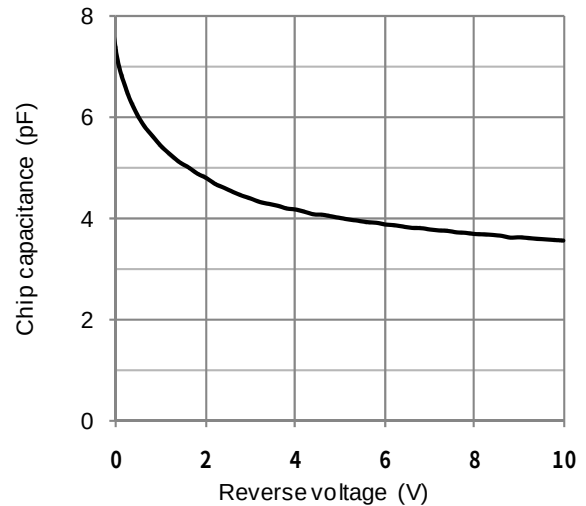
Uniformity of spectral responsivity



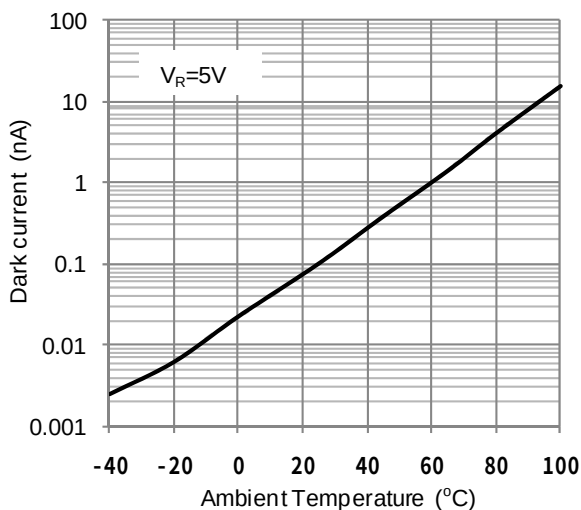
Frequency response



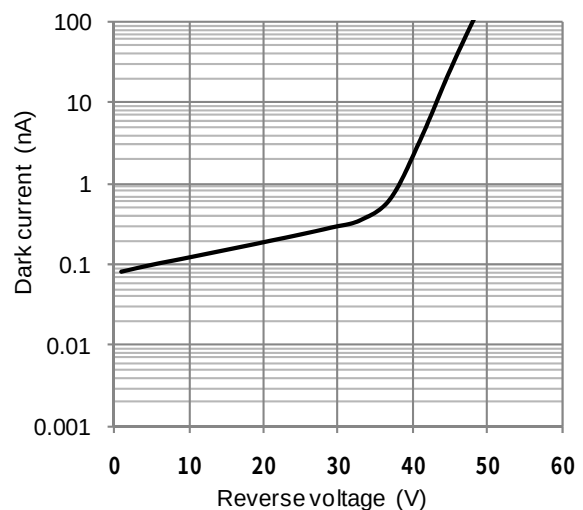
C-V characteristics



Dark current - ambient temperature



Dark current - reverse voltage



Specifications are subject to change without notice.

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