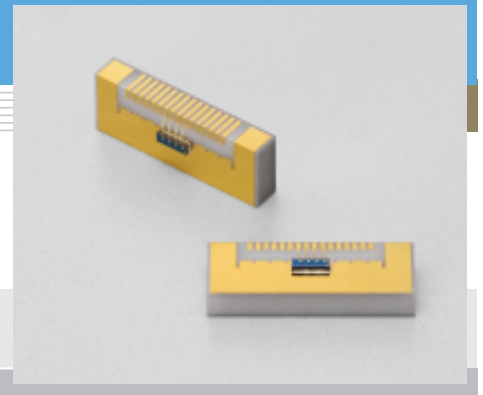


GaAs PIN photodiode array

G8921-01

Photodiode array for data communication



Features

- Active area: $\phi 0.06$ mm
Element pitch: 250 μ m
4-element array
- High-speed response: 10 Gbps [(2.5 Gbps per channel) $\times 4$]
at low bias voltage ($V_R=2$ V)
- Low dark current, low capacitance
- Up to 16 elements available as option

Applications

- Optical fiber communications
- High-speed data link

General ratings

Parameter	Symbol	Value	Unit
Active area	-	$\phi 0.06$	mm
Element pitch	-	250	μ m
Number of elements	-	4	ch

Absolute maximum ratings

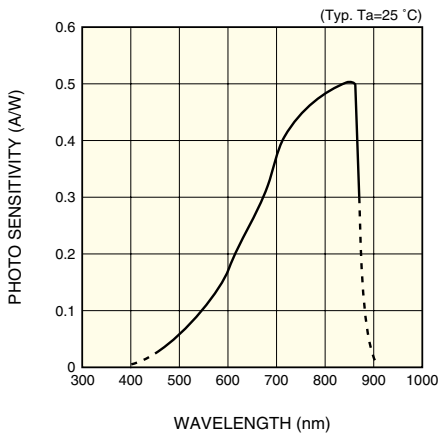
Parameter	Symbol	Remark	Value	Unit
Reverse voltage	V_R Max.		30	V
Reverse current	I_R Max.		0.5	mA
Operating temperature	T_{opr}	*	-40 to +85	$^{\circ}$ C
Storage temperature	T_{stg}		-55 to +125	$^{\circ}$ C

* In N₂ environment or in vacuum

Electrical and optical characteristics (Unless other wise, $T_a=25$ $^{\circ}$ C, per 1 element)

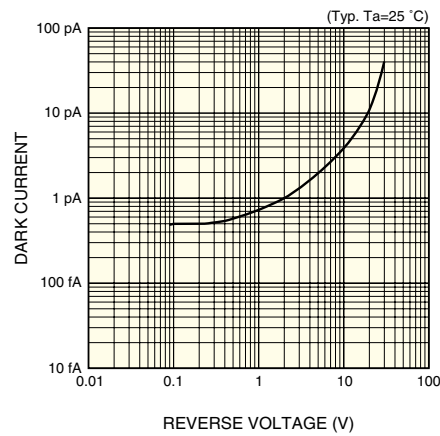
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	470 to 870	-	nm
Peak sensitivity wavelength	λ_p		-	850	-	nm
Photo sensitivity	S	$\lambda=850$ nm	0.45	0.5	-	A/W
Dark current	I_D	$V_R=5$ V	-	2	50	pA
Terminal capacitance	C_t	$V_R=2$ V, $f=1$ MHz	-	0.35	0.5	pF
Cut-off frequency	f_c	$\lambda=850$ nm, $V_R=2$ V, $R_L=50$ Ω , -3 dB	2	-	-	GHz

■ Spectral response



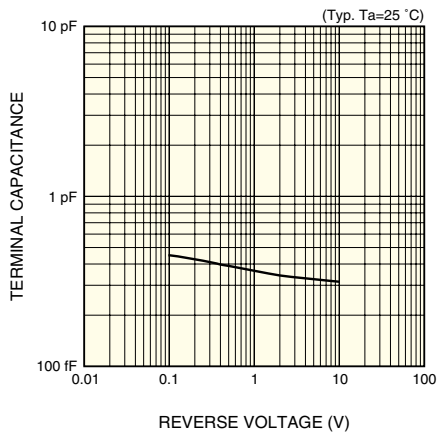
KGPD0048EA

■ Dark current vs. reverse voltage



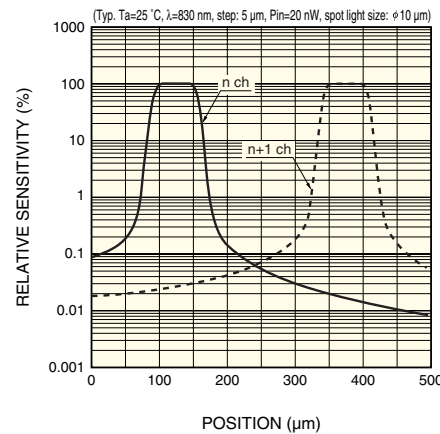
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■ Terminal capacitance vs. reverse voltage



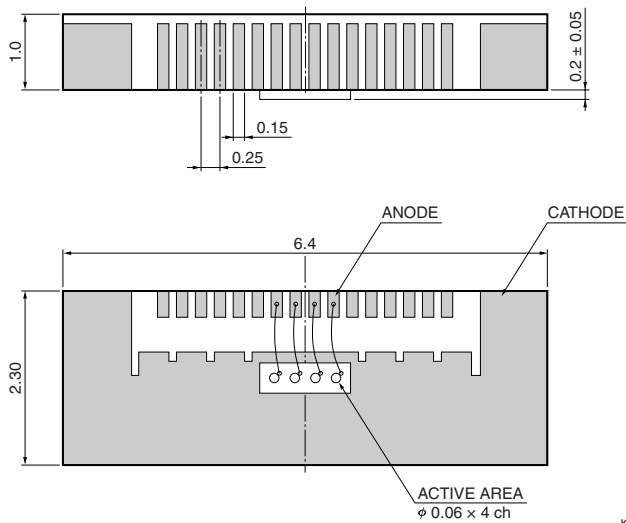
KGPD0050EA

■ Cross-talk characteristic



KGPD0051EA

■ Dimensional outline (unit: mm)



KGPD0017EA

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HAMAMATSU PHOTONICS K.K., Solid State Division

1126-1 Ichino-cho, Higashi-ku, Hamamatsu City, 435-8558 Japan, Telephone: (81) 53-434-3311, Fax: (81) 53-434-5184, <http://www.hamamatsu.com>

U.S.A.: Hamamatsu Corporation: 360 Foothill Road, P.O.Box 6910, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1) 908-231-0960, Fax: (1) 908-231-1218

Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49) 08152-3750, Fax: (49) 08152-2658

France: Hamamatsu Photonics France S.A.R.L.: 19, Rue du Saule Trépu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: 33-(1) 69 53 71 00, Fax: 33-(1) 69 53 71 10

United Kingdom: Hamamatsu Photonics UK Limited: 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire AL7 1BW, United Kingdom, Telephone: (44) 1707-294888, Fax: (44) 1707-325777

North Europe: Hamamatsu Photonics Norden AB: Smidesvägen 12, SE-171 41 Solna, Sweden, Telephone: (46) 8-509-031-00, Fax: (46) 8-509-031-01

Italy: Hamamatsu Photonics Italia S.R.L.: Strada della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39) 02-935-81-733, Fax: (39) 02-935-81-741