

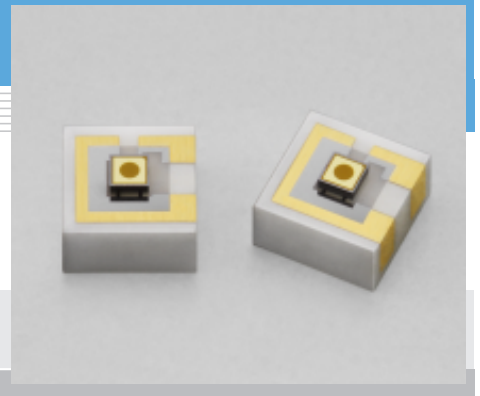
NEW

PHOTODIODE

InGaAs PIN photodiode

G9230-01

Back-illuminated type, uses package with no wire



Features

- Back-illuminated type
- Easy to handle since there are no wires on chip (AnSn eutectic bonding)
Optical fibers can be brought closer to the chip
- Miniature package: 2 × 2 × 1 mm
- High sensitivity: 0.95 A/W Typ. ($\lambda=1.55 \mu\text{m}$)
- Precise chip position tolerance: $\pm 0.075 \text{ mm}$

Applications

- LD monitor
- Optical fiber communication

■ General / Absolute maximum ratings

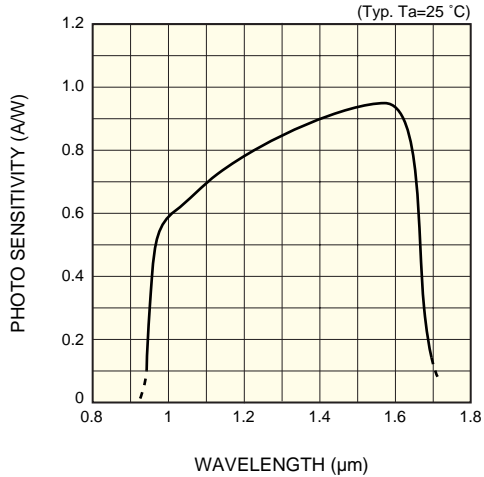
Parameter	Symbol	value	Unit
Active area	-	$\phi 0.3$	mm
Reverse voltage	V_R Max.	10	V
Operating temperature *	$T_{opr.}$	-40 to +85	$^{\circ}\text{C}$
Storage temperature *	$T_{stg.}$	-40 to +85	$^{\circ}\text{C}$

* In N_2 environment or in vacuum

■ Electrical and optical characteristics ($T_a=25 \text{ }^{\circ}\text{C}$)

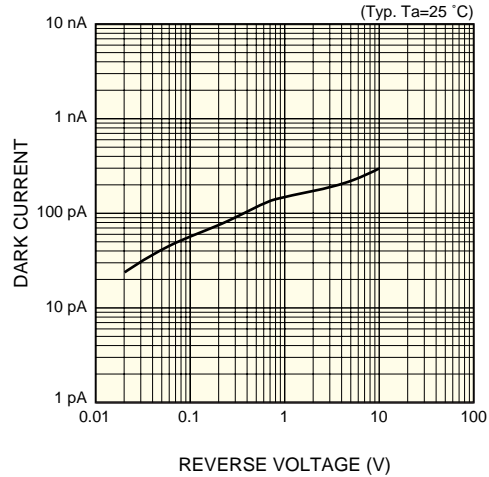
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	0.95 to 1.7	-	μm
Photo sensitivity	S	$\lambda=1.3 \mu\text{m}$	-	0.85	-	A/W
		$\lambda=1.55 \mu\text{m}$	0.85	0.95	-	A/W
Dark current	I_D	$V_R=5 \text{ V}$	-	0.3	1.5	nA
Shunt resistance	Rsh	$V_R=10 \text{ mV}$	-	1000	-	$\text{M}\Omega$
Terminal capacitance	Ct	$V_R=5 \text{ V}, f=1 \text{ MHz}$	-	5	-	pF
Cut-off frequency	f_c	$V_R=5 \text{ V}, R_L=50 \Omega$	-	400	-	MHz
Noise equivalent power	NEP	$\lambda=\lambda_p$	-	4×10^{-15}	-	$\text{W}/\text{Hz}^{1/2}$

■ Spectral response



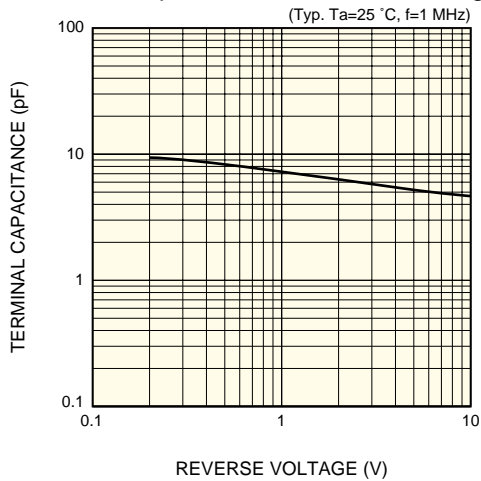
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■ Dark current vs. reverse voltage



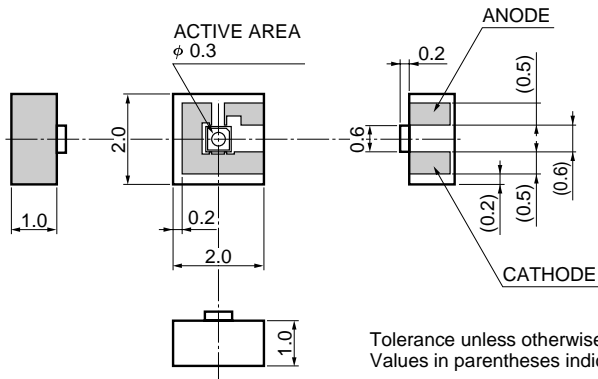
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■ Terminal capacitance vs. reverse voltage



KIRDB0289EA

■ Dimensional outline (unit: mm)



KIRDA0168EA

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HAMAMATSU PHOTONICS K.K., Solid State Division

1126-1 Ichino-cho, Hamamatsu City, 435-8558 Japan, Telephone: (81) 053-434-3311, Fax: (81) 053-434-5184, <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.: 8, Rue du Saule Trapu, 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: Smidsvägen 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