

Si photodiodes



S5627-01

S4797-01

S2833-01 etc.

Photodiodes molded into clear plastic packages

These are Si photodiodes molded into clear plastic packages. Two types are available with sensitivity in the visible range and in the visible to near IR range. Two photosensitive areas of 1.3×1.3 mm and 2.4×2.8 mm are also available. The S5627-01 provides a spectral response characteristic similar to the visible range sensitivity without using visual-compensated filters.

Features

- **S5627-01: Visible range (Filterless type)**
- **S4797-01, S6931-01: Visible to near IR range (Suppressed IR sensitivity type)**
- **S2833-01, S4011-06DS: Visible to near IR range**

Applications

- **Exposure meters**
- **Illuminometers**
- **Stroboscope light control**
- **Copier**
- **Display light control**
- **Optical switches, etc.**

Structure / Absolute maximum ratings

Type no.	Package	Dimensional outline	Photosensitive area size (mm)	Effective photosensitive area (mm ²)	Absolute maximum ratings		
					Reverse voltage V _R max (V)	Operating temperature T _{opr} (°C)	Storage temperature T _{stg} (°C)
S5627-01	DIP type	(1)	1.3 × 1.3	1.6	10	-25 to +85*1	-40 to +100*1
S6931-01		(2)	2.4 × 2.8	6.6			
S4797-01		(3)	1.3 × 1.3	1.6			
S2833-04		(2)	2.4 × 2.8	6.6			
S2833-01	Surface mount type	(4)	2.4 × 2.8	6.6			
S4011-06DS		(5)	1.3 × 1.3	1.6			

*1: No dew condensation

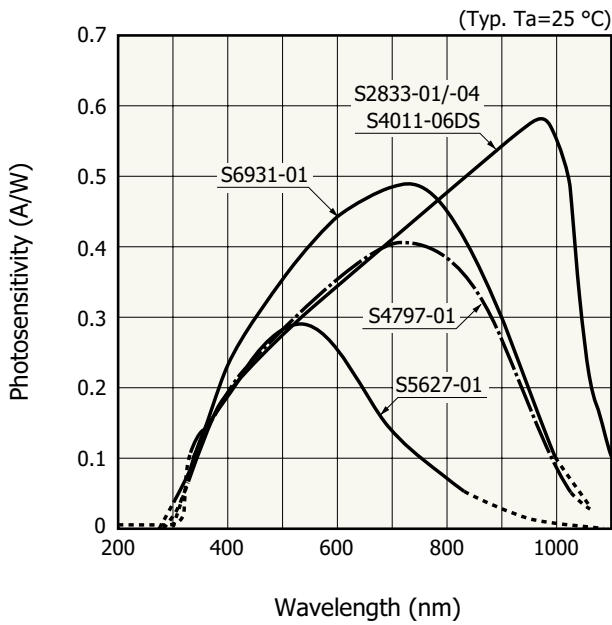
When there is a temperature difference between a product and the surrounding area in high humidity environment, dew condensation may occur on the product surface. Dew condensation on the product may cause deterioration in characteristics and reliability. Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

Electrical and optical characteristics (Typ. T_a=25 °C, unless otherwise noted)

Type no.	Spectral response range λ (nm)	Peak sensitivity wavelength λ _p (nm)	Photosensitivity S (A/W)			Infrared sensitivity ratio (%)	Short circuit current I _{sc} 100 lx (μA)	Temp. coefficient of I _{sc} (%/°C)	Dark current I _D V _R =1 V Max. (pA)	Temp. coefficient of I _D T _{CD} (times/°C)	Rise time t _r V _R =0 V R _L =1 kΩ (μs)	Terminal capacitance C _t V _R =0 V f=10 kHz (pF)	Shunt resistance R _{sh} V _R =10 mV			
			λ _p	GaP LED 560 nm	He-Ne Laser 633 nm								Min. (GΩ)	Typ. (GΩ)		
S5627-01	320 to 840	540	0.3	0.28	0.2	35	0.25	0.25	50	1.13	2	700	0.5	5		
S6931-01	320 to 1000	720	0.48	0.4	0.45	-	4.2	0.1	20	1.12	0.5	200	10	50		
S4797-01			0.4		0.37		1.2				0.2	50				
S2833-04	320 to 1100	960	0.58	0.33	0.38	-	6.5	0.1	10	1.12	2.5	700	10	100		
S2833-01							1.9								0.5	200
S4011-06DS																

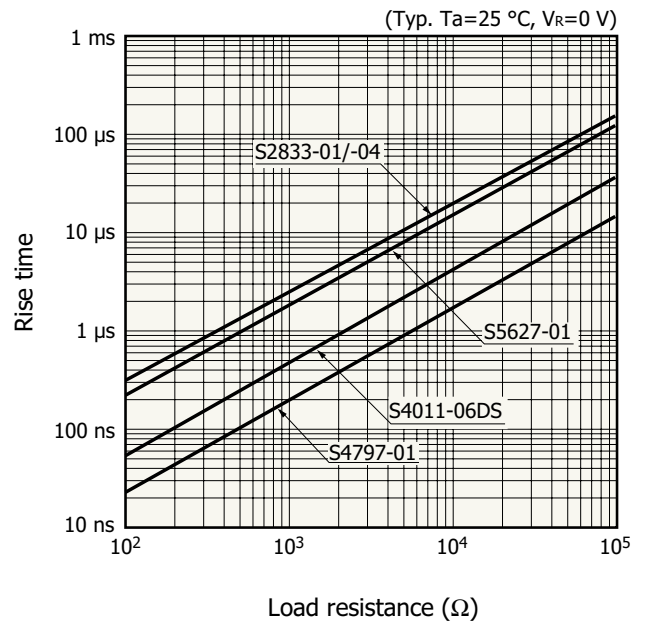
This product does not support lead-free soldering. For details on reflow soldering conditions for surface-mount components, please contact our sales office.

Spectral response



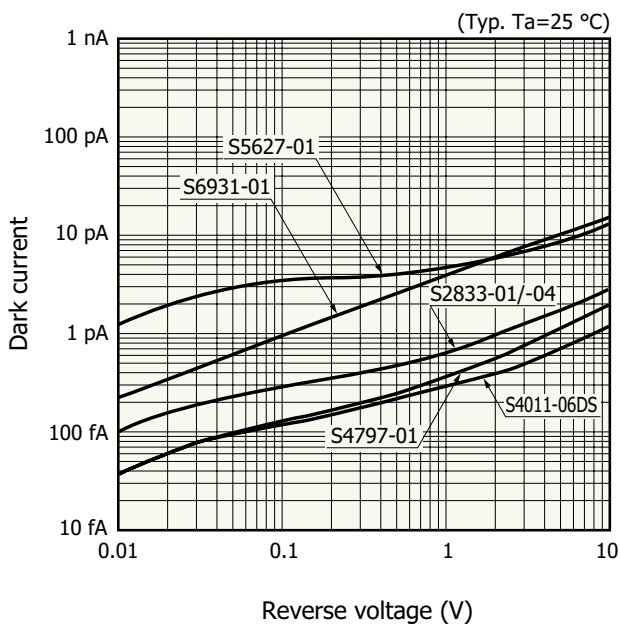
KSPDB0129EE

Rise time vs. load resistance



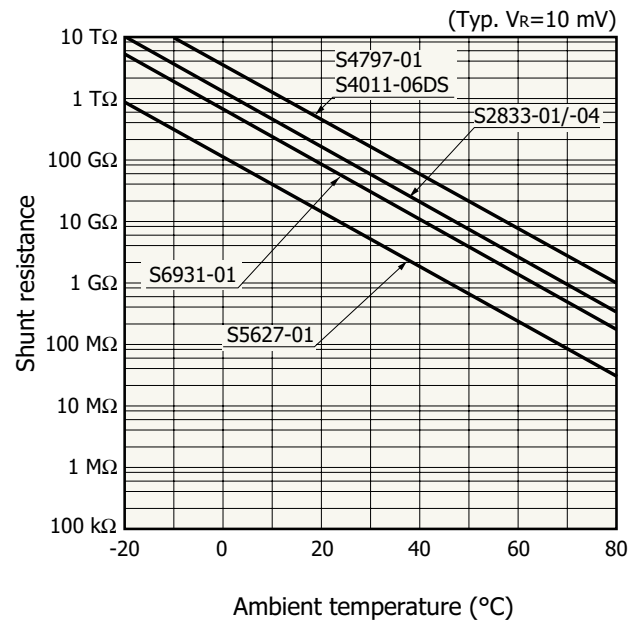
KSPDB0130EE

Dark current vs. reverse voltage



KSPDB0131EE

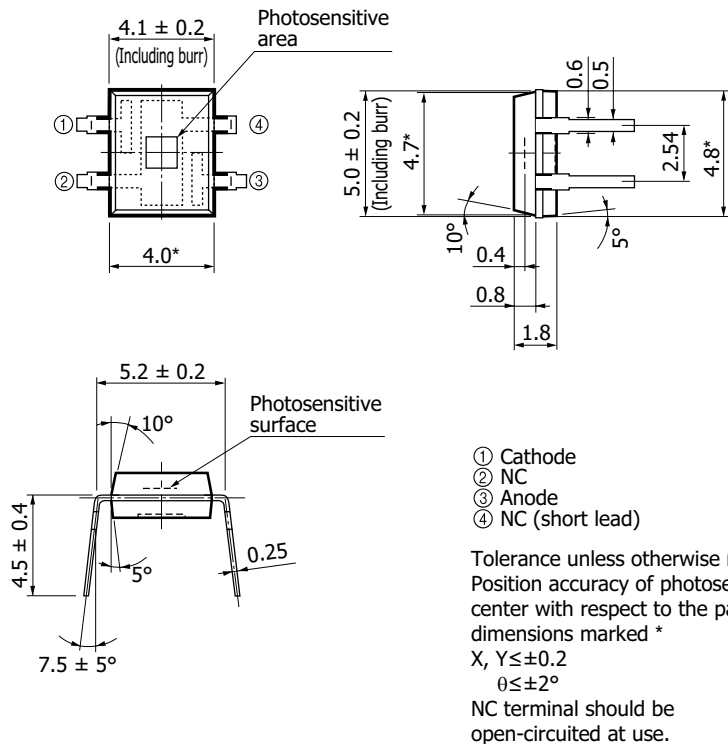
Shunt resistance vs. ambient temperature



KSPDB0132EE

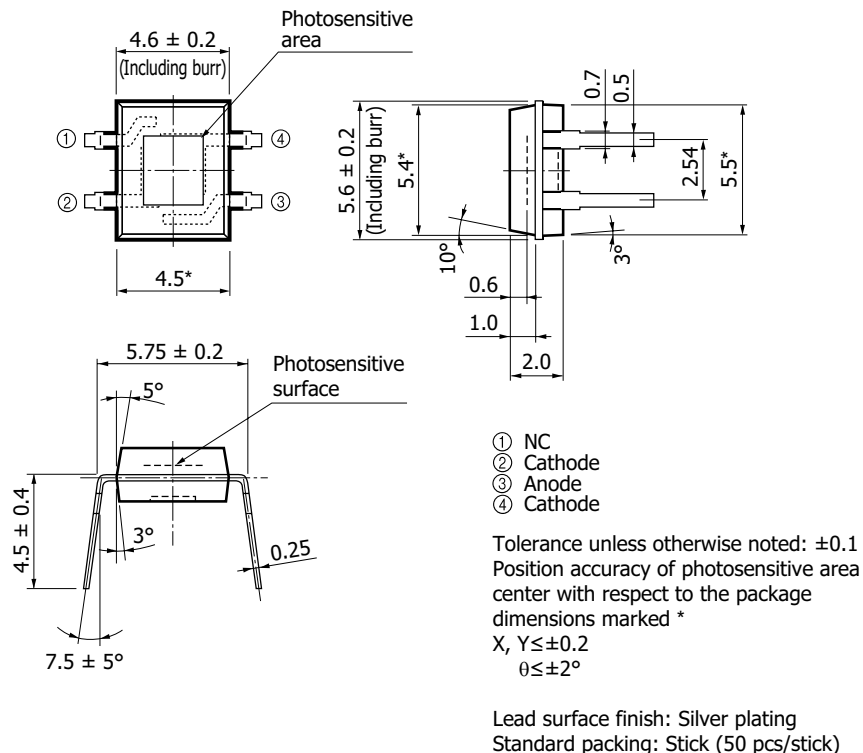
Dimensional outlines (unit: mm)

(1) S5627-01



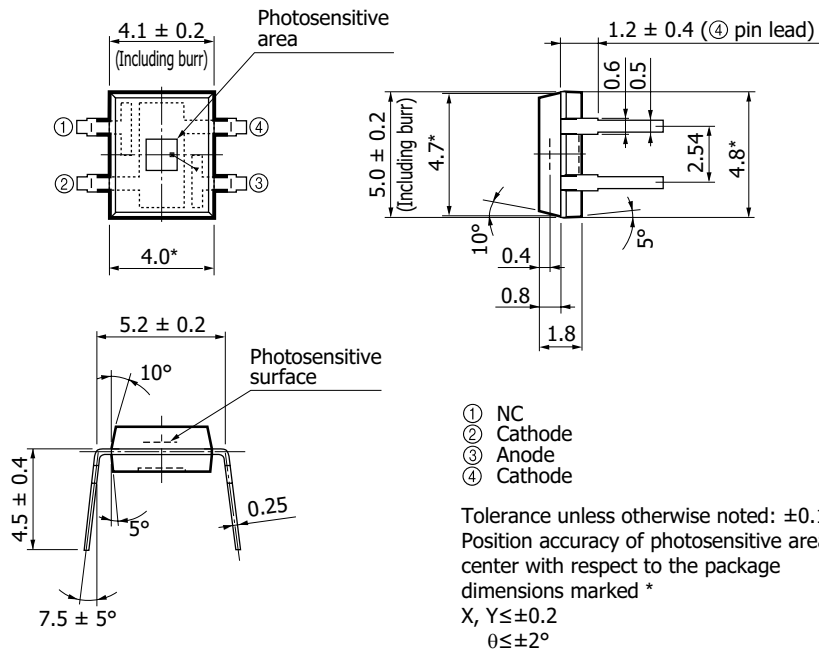
KSPDA0119EC

(2) S6931-01, S2833-04



KSPDA0184EB

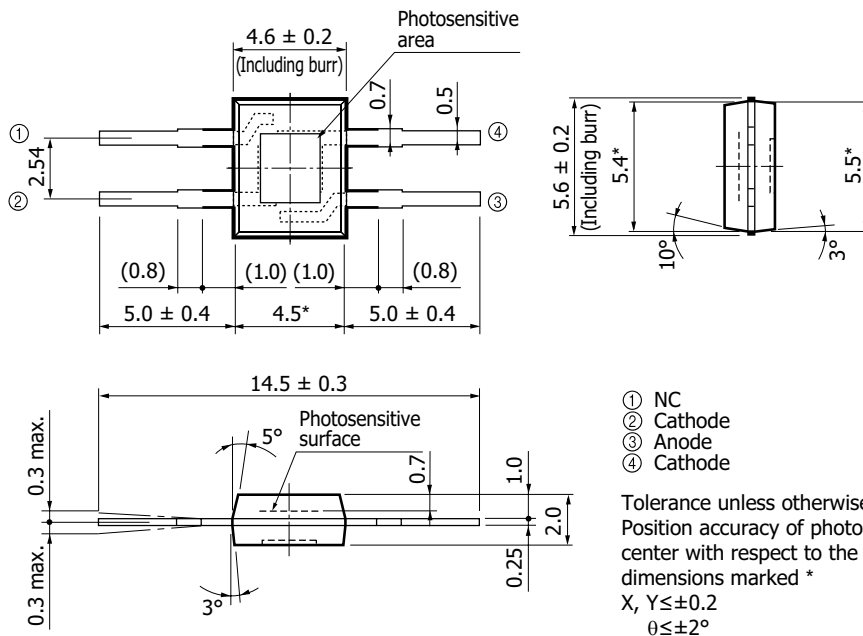
(3) S4797-01



Lead surface finish: Silver plating
 Standard packing: Stick (50 pcs/stick)

KSPDA0121EC

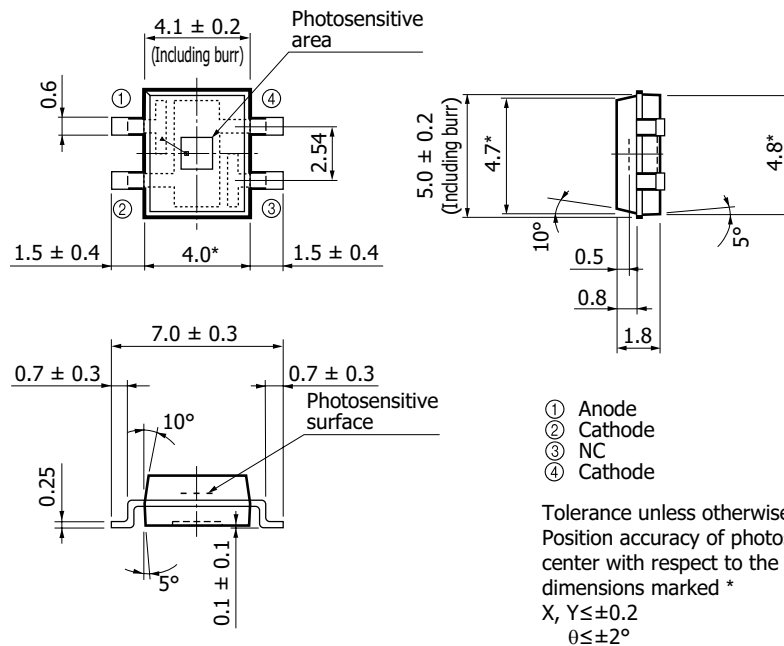
(4) S2833-01



Lead surface finish: Silver plating
 Standard packing: Stick (50 pcs/stick)

KSPDA0123EC

(5) S4011-06DS



Lead surface finish: Silver plating
Standard packing: Stick (50 pcs/stick)

KSPDA0163ED

Related information

www.hamamatsu.com/sp/ssd/doc_en.html

Precautions

- Disclaimer
- Metal, ceramic, plastic package products
- Surface mount type products

Technical note

- Si photodiode

Information described in this material is current as of June 2022.

Product specifications are subject to change without prior notice due to improvements or other reasons. This document has been carefully prepared and the information contained is believed to be accurate. In rare cases, however, there may be inaccuracies such as text errors. Before using these products, always contact us for the delivery specification sheet to check the latest specifications.

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HAMAMATSU

www.hamamatsu.com

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

U.S.A.: HAMAMATSU CORPORATION: 360 Foothill Road, Bridgewater, NJ 08807, U.S.A., Telephone: (1)908-231-0960, Fax: (1)908-231-1218 E-mail: usa@hamamatsu.com

Germany: HAMAMATSU PHOTONICS DEUTSCHLAND GMBH.: Arzbergerstr. 10, 82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-265-8 E-mail: info@hamamatsu.de

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 E-mail: infos@hamamatsu.fr

United Kingdom: HAMAMATSU PHOTONICS UK LIMITED: 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire AL7 1BW, UK, Telephone: (44)1707-294888, Fax: (44)1707-325777 E-mail: info@hamamatsu.co.uk

North Europe: HAMAMATSU PHOTONICS NORDEN AB: Torshamnsgatan 35 16440 Kista, Sweden, Telephone: (46)8-509 031 00, Fax: (46)8-509 031 01 E-mail: info@hamamatsu.se

Italy: HAMAMATSU PHOTONICS ITALIA S.R.L.: Strada della Moia, 1 int. 6, 20044 Arese (Milano), Italy, Telephone: (39)02-93 58 17 33, Fax: (39)02-93 58 17 41 E-mail: info@hamamatsu.it

China: HAMAMATSU PHOTONICS (CHINA) CO., LTD.: 1201 Tower B, Jianning Center, 27 Dongsanhuan Beilu, Chaoyang District, 100020 Beijing, P.R. China, Telephone: (86)10-6586-6006, Fax: (86)10-6586-2866 E-mail: hpc@hamamatsu.com.cn

Taiwan: HAMAMATSU PHOTONICS TAIWAN CO., LTD.: 8F-3, No.158, Section 2, Gongdao 5th Road, East District, Hsinchu, 300, Taiwan R.O.C. Telephone: (886)3-659-0080, Fax: (886)3-659-0081 E-mail: info@hamamatsu.com.tw