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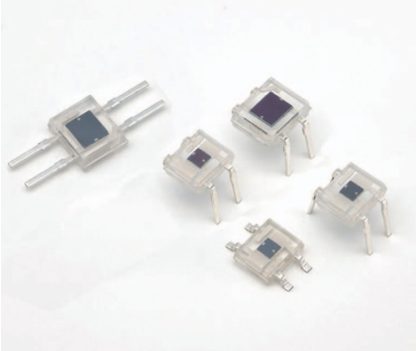
Si photodiodes

S5627-01, 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 Topr (°C)	Storage temperature Tstg (°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.

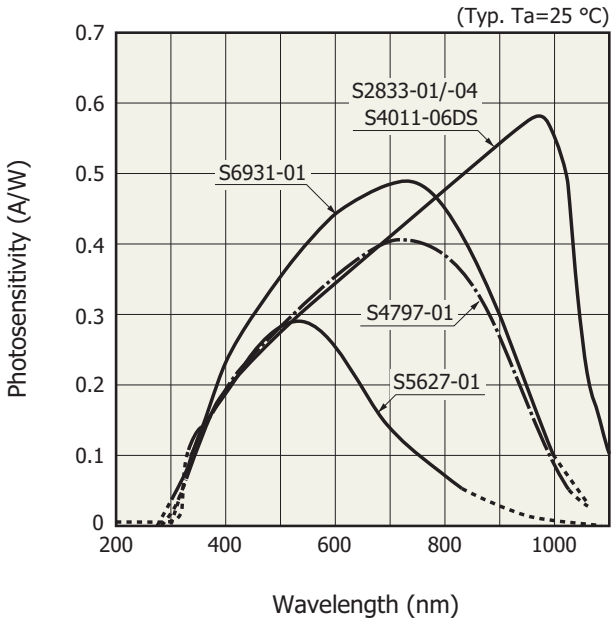
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

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

Type no.	Spectral response range λ (nm)	Peak sensitivity wavelength λp (nm)	Photosensitivity S (A/W)			Infrared sensitivity ratio (%)	Short circuit current Isc 100 lx (μA)	Temp. coefficient of Isc (%/°C)	Dark current I_D V_R=1 V Max. (pA)	Temp. coefficient of I_D T_{CID} (times/°C)	Rise time tr V_R=0 V R_L=1 kΩ (μs)	Terminal capacitance Ct V_R=0 V f=10 kHz (pF)	Shunt resistance Rsh V_R=10 mV	
			λp	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	0.33	0.37		1.2				0.2	50		
S2833-04	320 to 1100	960	0.58		0.38	-	6.5	0.1	10	1.12	2.5	700	10	100
S2833-01														
S4011-06DS							1.9				0.5	200		250

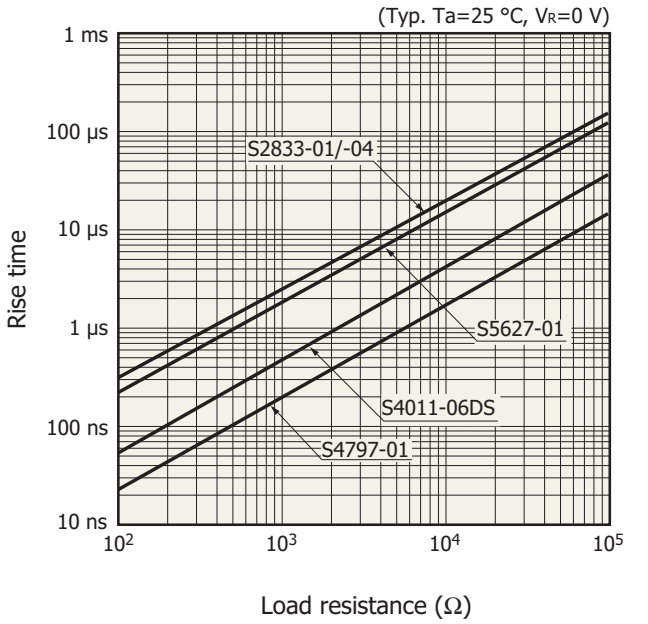
This product does not support lead-free soldering. For details on reflow soldering conditions for surface-mount conponents, please contact our sales office.

Spectral response



KSPDB0129EE

Rise time vs. load resistance



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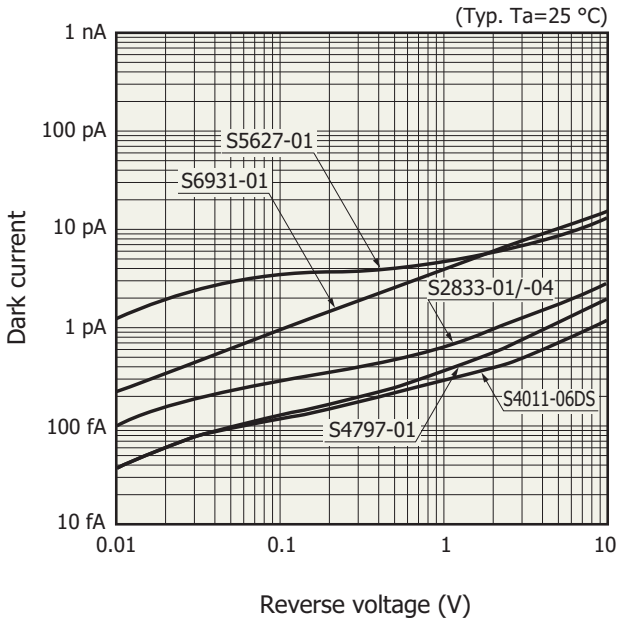
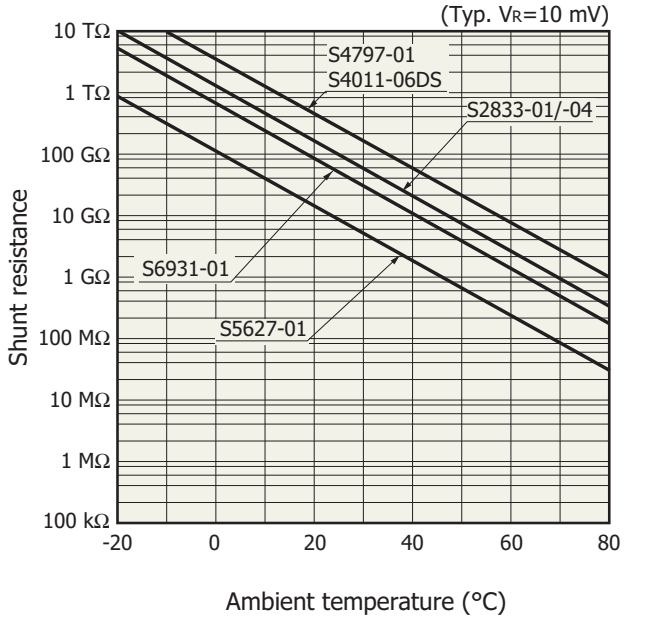
Dark current vs. reverse voltage



KSPDB0131EE

Shunt resistance vs. ambient temperature



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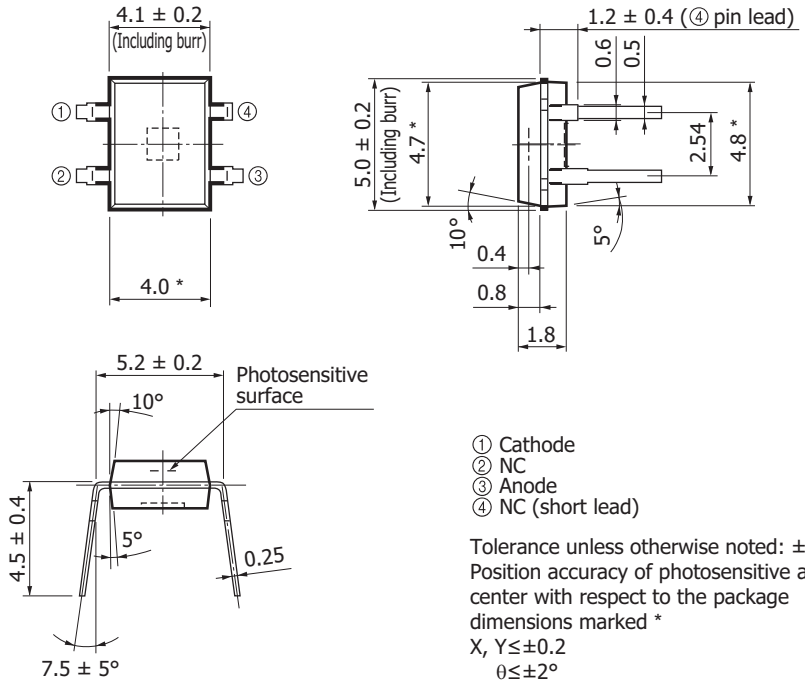
Dimensional outlines (unit: mm)

(1) S5627-01



① Cathode
② NC
③ Anode
④ NC (short lead)

Tolerance unless otherwise noted: ±0.1
Position accuracy of photosensitive area center with respect to the package dimensions marked *
X, Y≤±0.2
θ≤±2°
NC terminal should be open-circuited at use.

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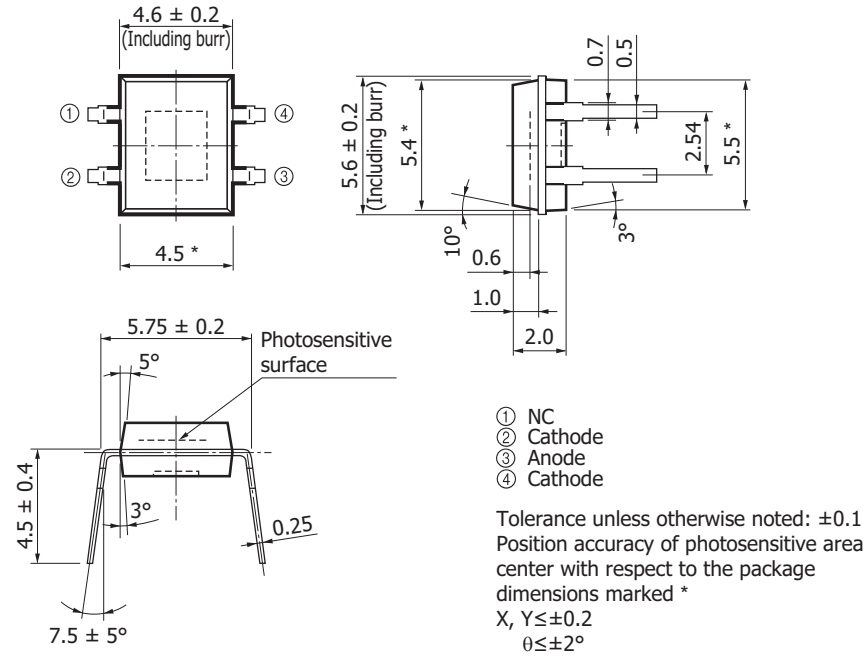
(2) S6931-01, S2833-04



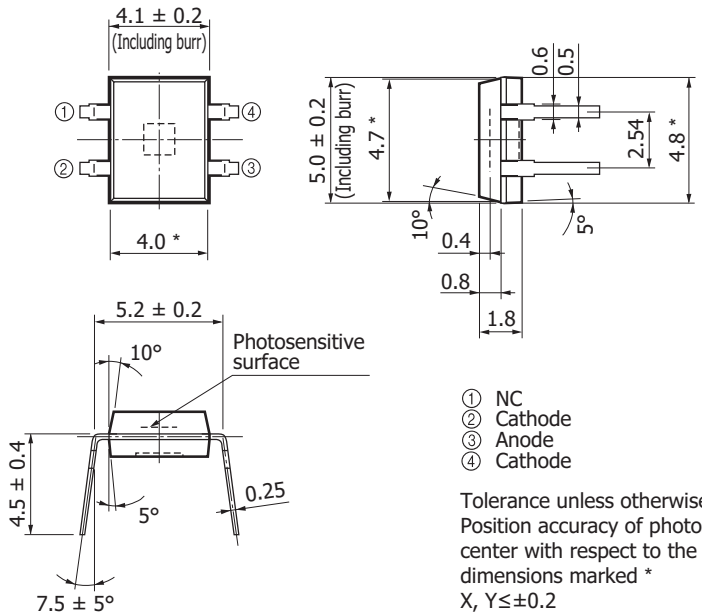
① NC
② Cathode
③ Anode
④ Cathode

Tolerance unless otherwise noted: ±0.1
Position accuracy of photosensitive area center with respect to the package dimensions marked *
X, Y≤±0.2
θ≤±2°

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

KSPDA0184EA

(3) S4797-01



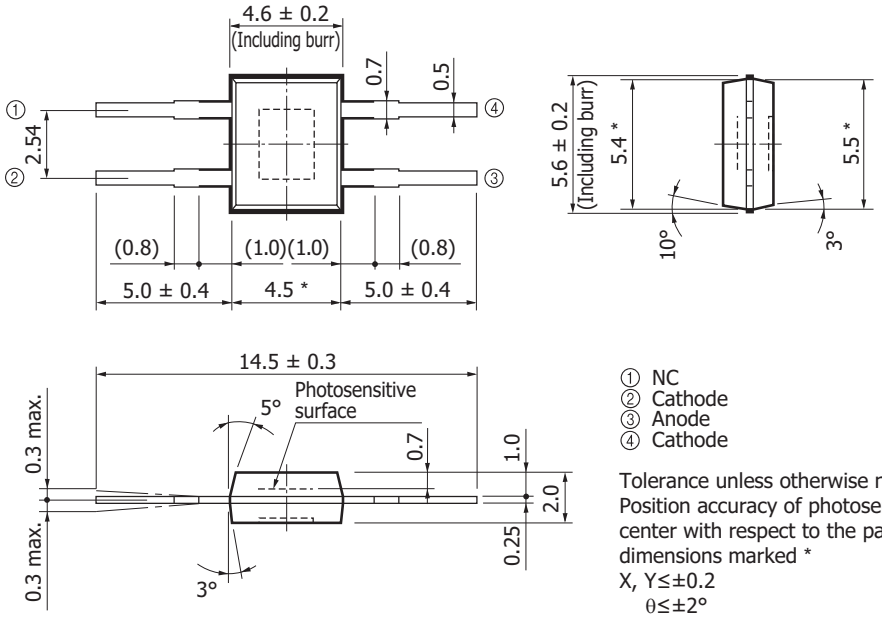
① NC
② Cathode
③ Anode
④ Cathode

Tolerance unless otherwise noted: ±0.1
Position accuracy of photosensitive area center with respect to the package dimensions marked *
X, Y≤±0.2
θ≤±2°

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

KSPDA0121EB

(4) S2833-01



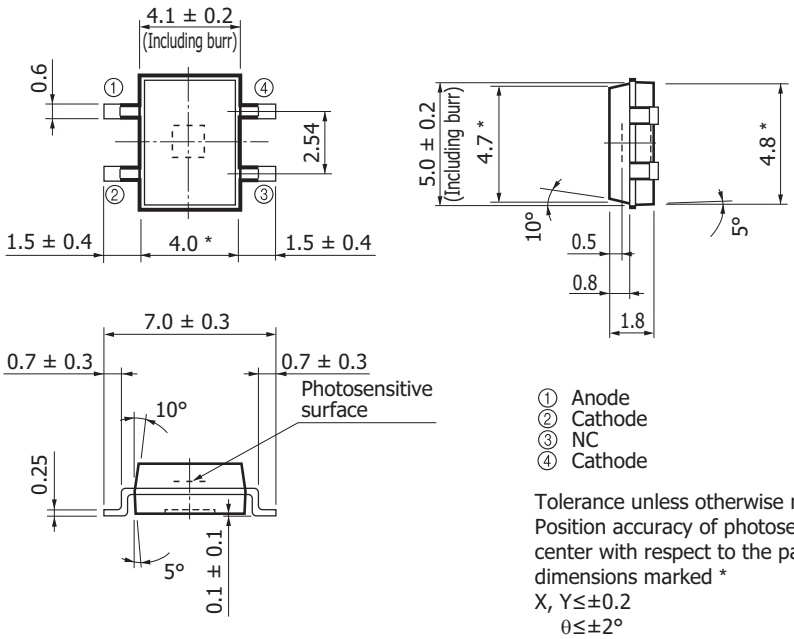
① NC
② Cathode
③ Anode
④ Cathode

Tolerance unless otherwise noted: ±0.1
Position accuracy of photosensitive area center with respect to the package dimensions marked *
X, Y≤±0.2
θ≤±2°

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

KSPDA0123EB

(5) S4011-06DS



① Anode
② Cathode
③ NC
④ Cathode

Tolerance unless otherwise noted: ±0.1
Position accuracy of photosensitive area center with respect to the package dimensions marked *
X, Y≤±0.2
θ≤±2°

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

KSPDA0163EC

Related information

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

■ Precautions

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

■ Technical information

· Si photodiode/Application circuit examples

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