

# Si photodiodes

S2387 series

**For visible to IR, general-purpose photometry**

## Features

- ➔ High sensitivity in visible to infrared range
- ➔ Low dark current
- ➔ High linearity

## Applications

- ➔ Analytical equipment
- ➔ Optical measurement equipment, etc.

## Structure / Absolute maximum ratings

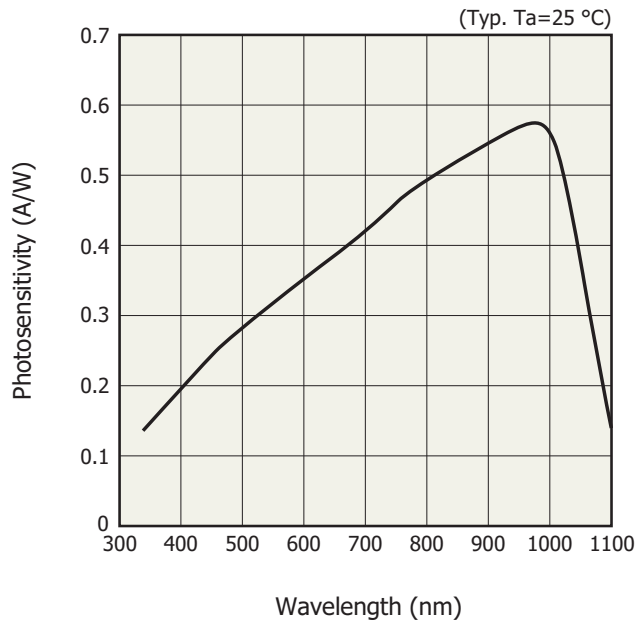
Type No.	Window material	Package (mm)	Photosensitive area size (mm)	Effective photosensitive area (mm <sup>2</sup> )	Absolute maximum ratings		
					Reverse voltage V <sub>R</sub> max (V)	Operating temperature T <sub>opr</sub> (°C)	Storage temperature T <sub>stg</sub> (°C)
S2387-16R	Resin potting	2.7 × 15	1.1 × 5.9	6.4	30	-20 to +60	-20 to +80
S2387-33R		6 × 7.6	2.4 × 2.4	5.7			
S2387-66R		8.9 × 10.1	5.8 × 5.8	33			
S2387-1010R		15 × 16.5	10 × 10	100			
S2387-130R		3.0 × 40	1.2 × 29.1	35			

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<sub>a</sub>=25 °C, unless otherwise noted)

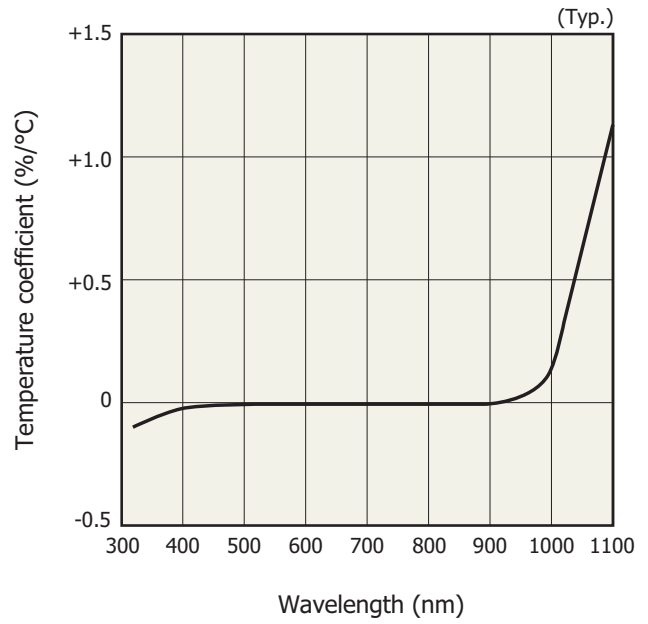
Type No.	Spectral response range λ (nm)	Peak sensitivity wavelength λ <sub>p</sub> (nm)	Photosensitivity S (A/W)			Short circuit current I <sub>sc</sub> 100 lx		Dark current I <sub>D</sub> V <sub>R</sub> =10 mV Max. (pA)	Temp. coefficient of I <sub>D</sub> T <sub>CID</sub> (times/°C)	Rise time t <sub>r</sub> V <sub>R</sub> =0 V R <sub>L</sub> =1 kΩ (μs)	Terminal capacitance C <sub>t</sub> V <sub>R</sub> =0 V f=10 kHz (pF)	Shunt resistance R <sub>sh</sub> V <sub>R</sub> =10 mV		Noise equivalent power NEP V <sub>R</sub> =0 V λ=λ <sub>p</sub> (W/Hz <sup>1/2</sup> )		
			λ <sub>p</sub>	GaP LED 560 nm	He-Ne laser 633 nm	Min. (μA)	Typ. (μA)					Min. (GΩ)	Typ. (GΩ)			
S2387-16R	340 to 1100	960	0.58	0.33	0.37	4.4	6.0	5	1.12	1.8	730	2	50	9.9 × 10 <sup>-16</sup>		
S2387-33R						4.4	5.8									
S2387-66R						24	31								50	
S2387-1010R						68	91									200
S2387-130R						25	32									

### Spectral response



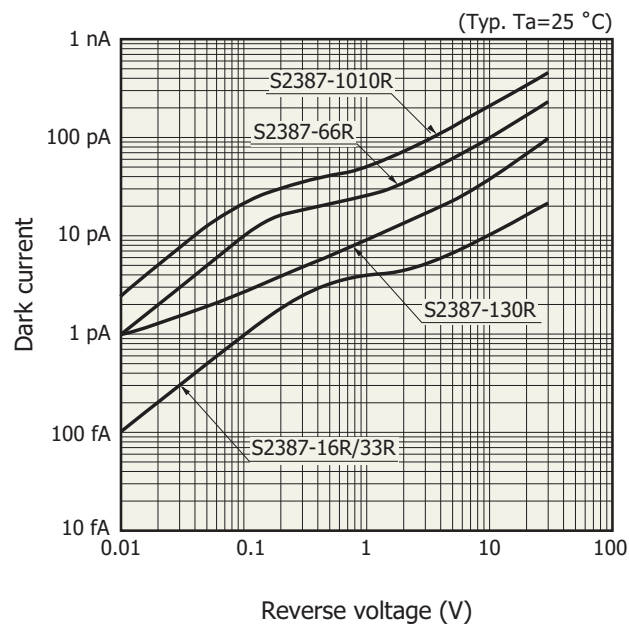
KSPDB0115EB

### Photosensitivity temperature characteristic



KSPDB0058EC

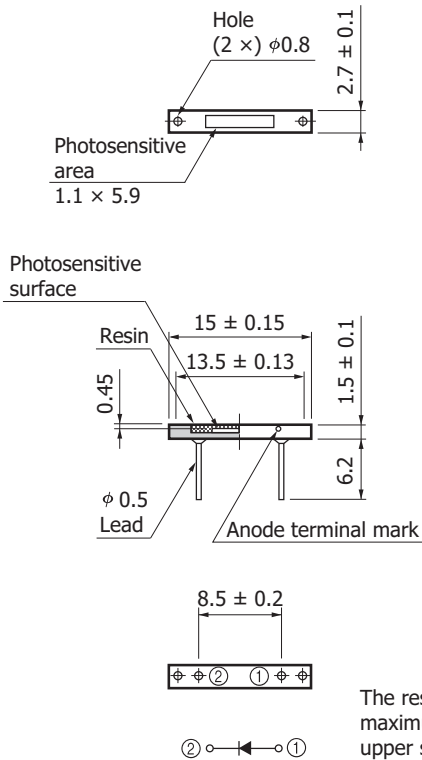
### Dark current vs. reverse voltage



KSPDB0117EC

Dimensional outlines (unit: mm)

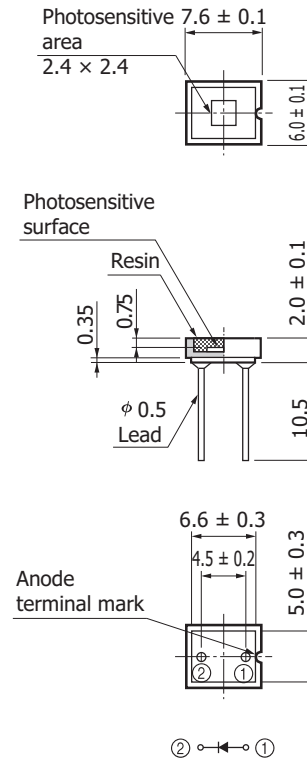
S2387-16R



The resin potting may extend a maximum of 0.1 mm above the upper surface of the package.

KSPDA0106EB

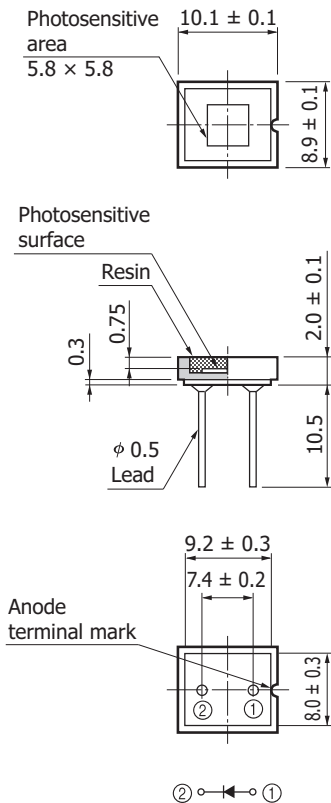
S2387-33R



The resin potting may extend a maximum of 0.1 mm above the upper surface of the package.

KSPDA0108EB

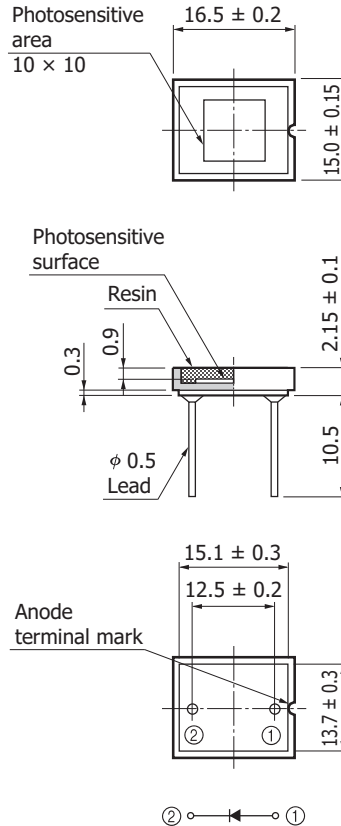
S2387-66R



The resin potting may extend a maximum of 0.1 mm above the upper surface of the package.

KSPDA0110EB

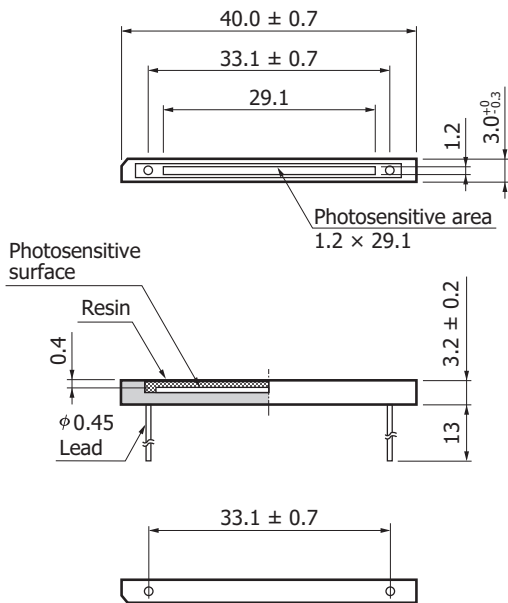
S2387-1010R



The resin potting may extend a maximum of 0.1 mm above the upper surface of the package.

KSPDA0112EB

S2387-130R



The resin coating may extend a maximum of 0.1 mm above the upper surface of the package.

KSPDA0117EB

Information described in this material is current as of November, 2012.

Product specifications are subject to change without prior notice due to improvements or other reasons. Before assembly into final products, please contact us for the delivery specification sheet to check the latest information.

Type numbers of products listed in the delivery specification sheets or supplied as samples may have a suffix "(X)" which means preliminary specifications or a suffix "(Z)" which means developmental specifications.

The product warranty is valid for one year after delivery and is limited to product repair or replacement for defects discovered and reported to us within that one year period. However, even if within the warranty period we accept absolutely no liability for any loss caused by natural disasters or improper product use.

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