

Si photodiodes

S2386 series

For visible to near IR, general-purpose photometry

Features

- High sensitivity in visible to near infrared range
- Low dark current
- High reliability
- Superior linearity

Applications

- Analytical instruments
- Optical measurement equipment

Structure / Absolute maximum ratings

Type no.	Dimensional outline/ Window material*	Package	Photosensitive area size (mm)	Absolute maximum ratings		
				Reverse voltage VR max (V)	Operating temperature Topr (°C)	Storage temperature Tstg (°C)
S2386-18K	(1)/K	TO-18	1.1 × 1.1	30	-40 to +100	-55 to +125
S2386-18L	(2)/L					
S2386-5K	(3)/K	TO-5	2.4 × 2.4			
S2386-44K	(4)/K		3.6 × 3.6			
S2386-45K	(5)/K		3.9 × 4.6			
S2386-8K	(6)/K	TO-8	5.8 × 5.8			

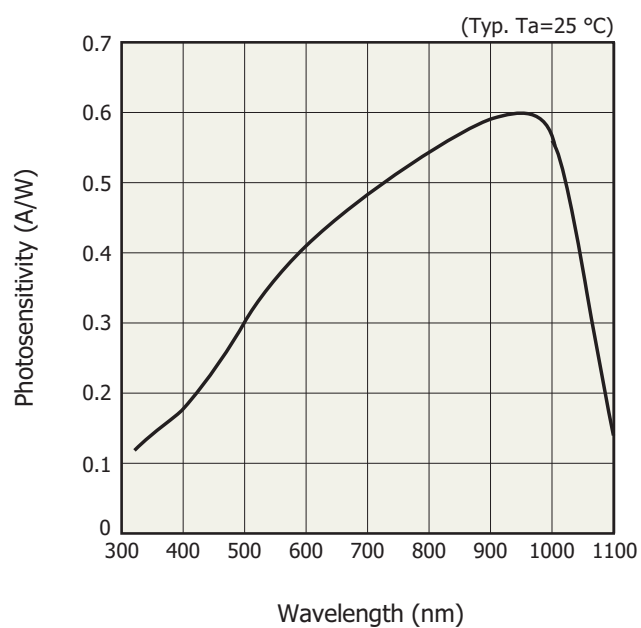
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

* Window material K=borosilicate glass, L=lens type borosilicate glass

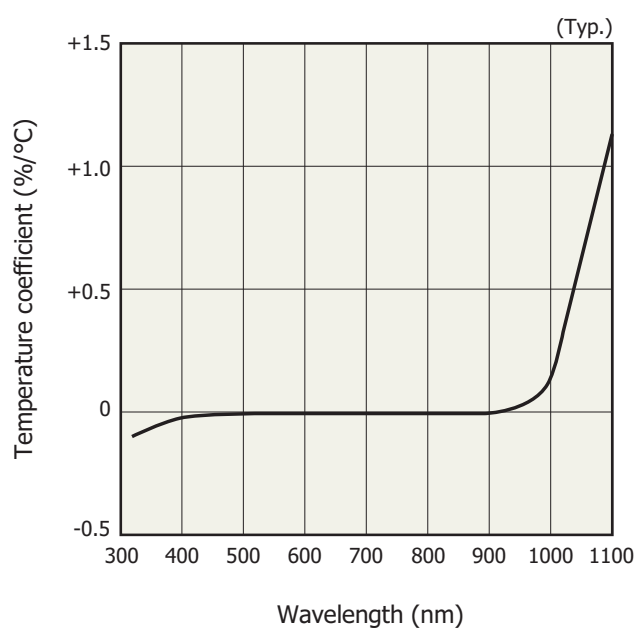
Electrical and optical characteristics (Typ. Ta=25 °C, unless otherwise noted)

Type no.	Spectral response range λ	Peak sensitivity wavelength λ_p	Photosensitivity S (A/W)				Short circuit current Isc 100 lx		Dark current ID VR=10 mV max.	Temp. coefficient of ID TCID	Rise time tr VR=0 V RL=1 kΩ	Terminal capacitance Ct VR=0 V f=10 kHz	Shunt resistance Rsh VR=10 mV		Noise equivalent power NEP VR=0 V $\lambda=\lambda_p$
			λ_p	GaP LED 560 nm	He-Ne laser 633 nm	GaAs LED 930 nm							Min. (GΩ)	Typ. (GΩ)	
	(nm)	(nm)					(nm)	(nm)	(μA)	(μA)	(pA)	(times/°C)			(μs)
	S2386-18K	320 to 1100	960	0.6	0.38	0.43	0.59	1	1.3	2	1.12	0.4	140	5	100
S2386-18L	4							6.5							
S2386-5K	4.4							6.0	5						9.6×10^{-16}
S2386-44K	9.6							12	20					0.5	
S2386-45K	12							17	30					0.3	
S2386-8K	26							33	50					0.2	10

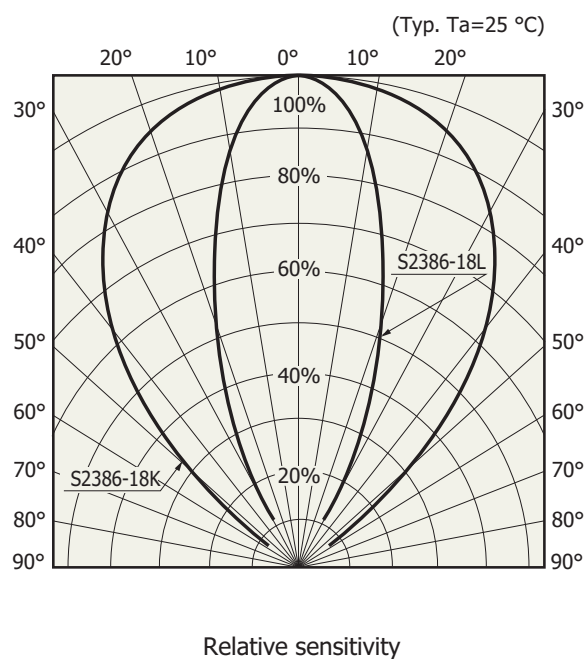
Spectral response



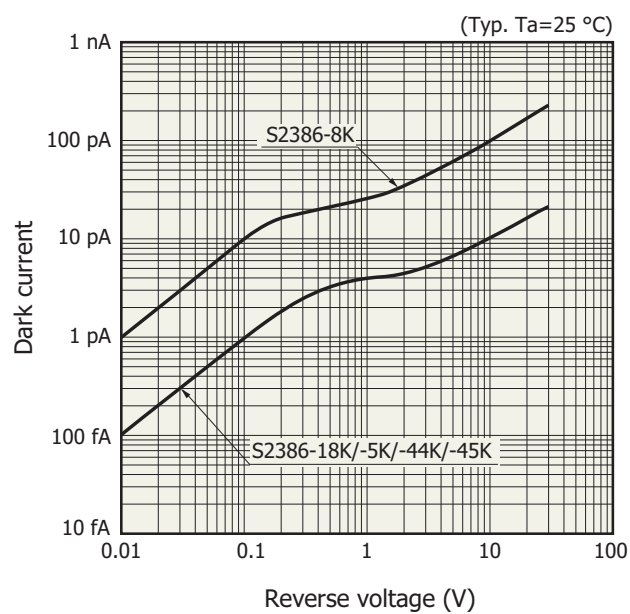
Photosensitivity temperature characteristic



Directivity

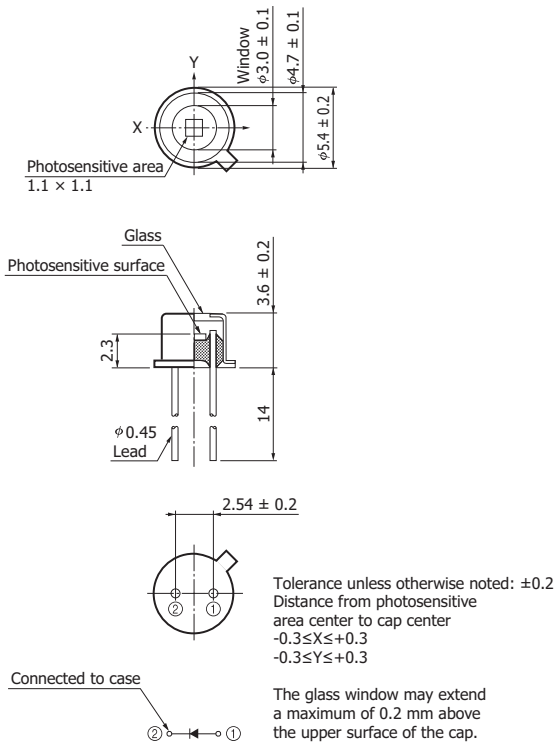


Dark current vs. reverse voltage



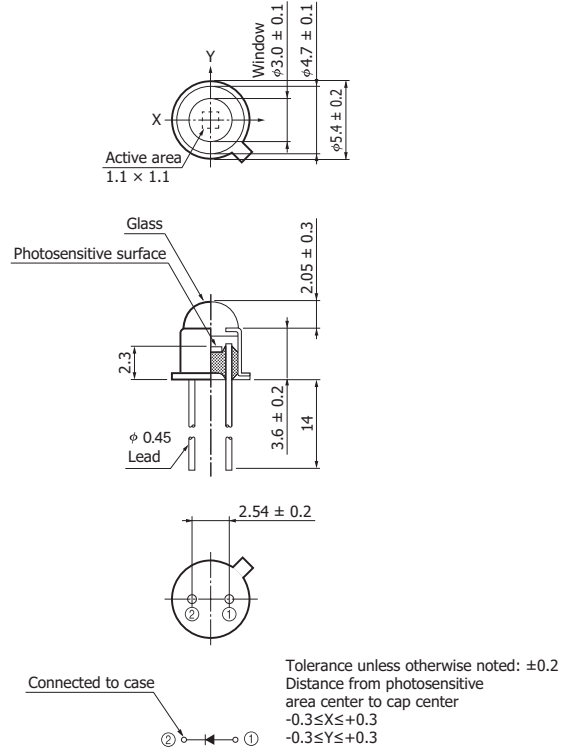
Dimensional outlines (unit: mm)

(1) S2386-18K



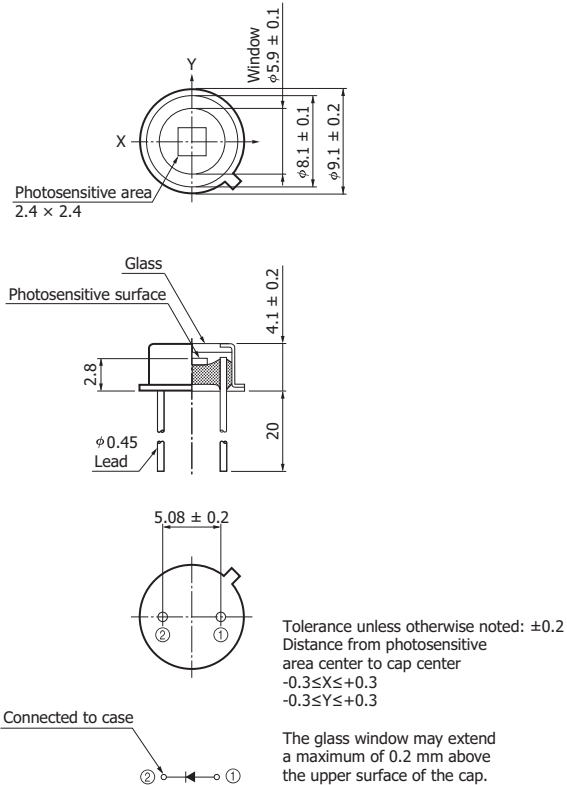
KSPDA0191ED

(2) S2386-18L



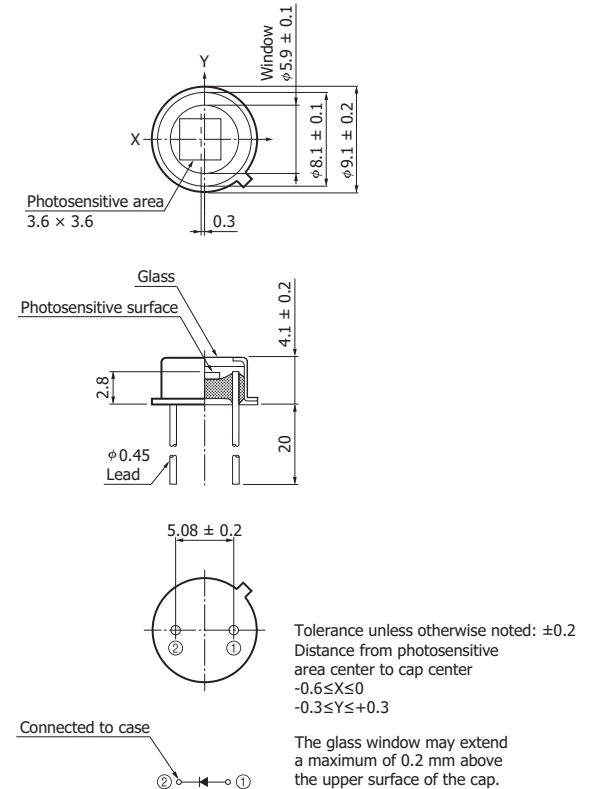
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(3) S2386-5K



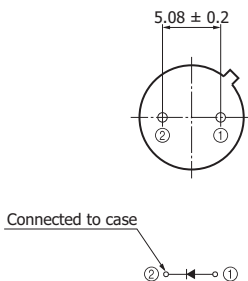
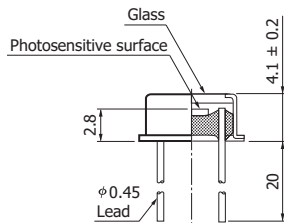
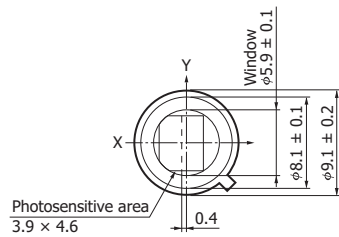
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(4) S2386-44K



KSPDA0193ED

(5) S2386-45K

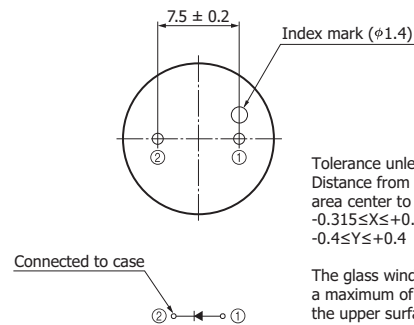
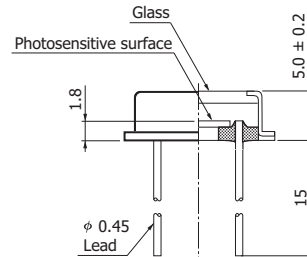
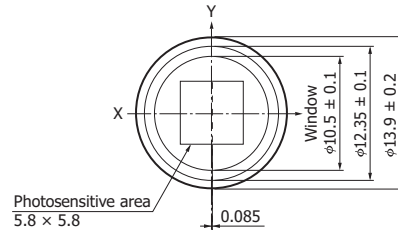


Tolerance unless otherwise noted: ± 0.2
 Distance from photosensitive area center to cap center
 $-0.7 \leq X \leq -0.1$
 $-0.3 \leq Y \leq +0.3$

The glass window may extend a maximum of 0.2 mm above the upper surface of the cap.

KSPDA0178EF

(6) S2386-8K



Tolerance unless otherwise noted: ± 0.2
 Distance from photosensitive area center to cap center
 $-0.315 \leq X \leq +0.485$
 $-0.4 \leq Y \leq +0.4$

The glass window may extend a maximum of 0.2 mm above the upper surface of the cap.

KSPDA0194ED

Related information

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

Precautions

- Disclaimer
- Metal, ceramic, plastic package products

Technical information

- Si photodiode/Application circuit examples

Information described in this material is current as of April 2019.

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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