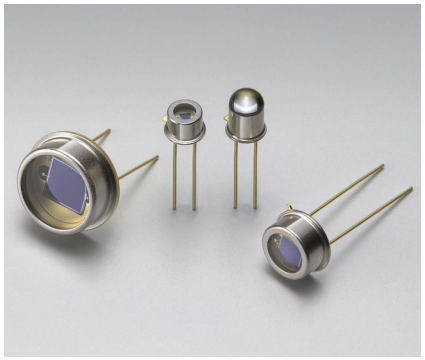
HAMAMATSU
PHOTON IS OUR BUSINESS

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			

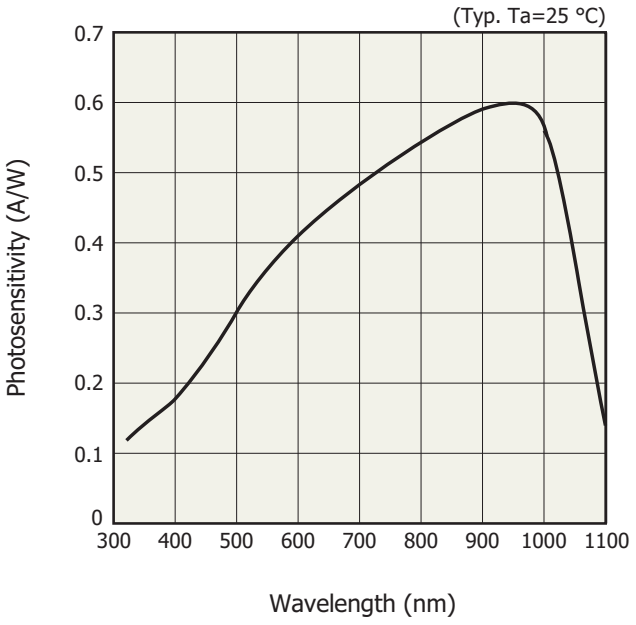
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

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

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

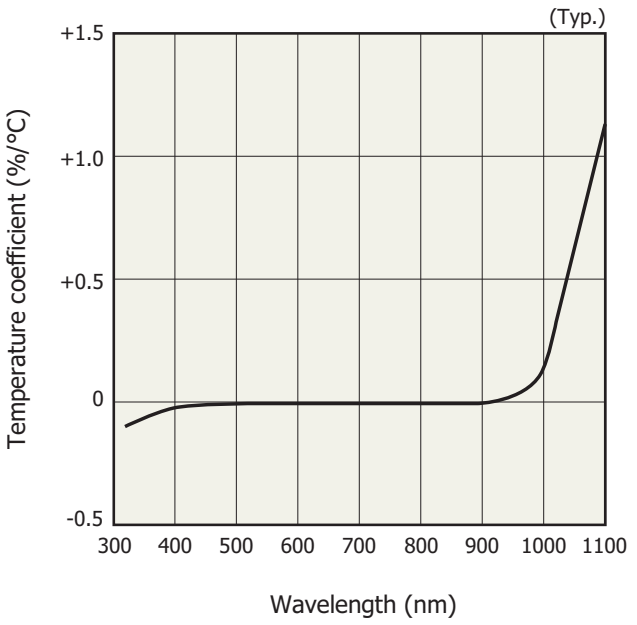
Type no.	Spectral response range λ (nm)	Peak sensitivity wavelength λp (nm)	Photosensitivity S (A/W)				Short circuit current Isc 100 lx		Dark current ID VR= 10 mV max. (pA)	Temp. coefficient of ID TCID (times/°C)	Rise time tr VR=0 V RL=1 kΩ (µs)	Terminal capacitance Ct VR=0 V f=10 kHz (pF)	Shunt resistance Rsh VR=10 mV		Noise equivalent power NEP VR=0 V λ=λp (W/Hz$^{1/2}$)
			λp	GaP LED 560 nm	He-Ne laser 633 nm	GaAs LED 930 nm	Min. (µA)	Typ. (µA)					Min. (GΩ)	Typ. (GΩ)	
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	6.8×10^{-16}
S2386-18L							4	6.5							
S2386-5K							4.4	6.0	5		1.8	730	2	50	9.6×10^{-16}
S2386-44K							9.6	12	20		3.6	1600	0.5	25	1.4×10^{-15}
S2386-45K							12	17	30		5.5	2300	0.3		
S2386-8K							26	33	50		10	4300	0.2	10	2.1×10^{-15}

Spectral response



KSPDB0110EB

Photosensitivity temperature characteristic



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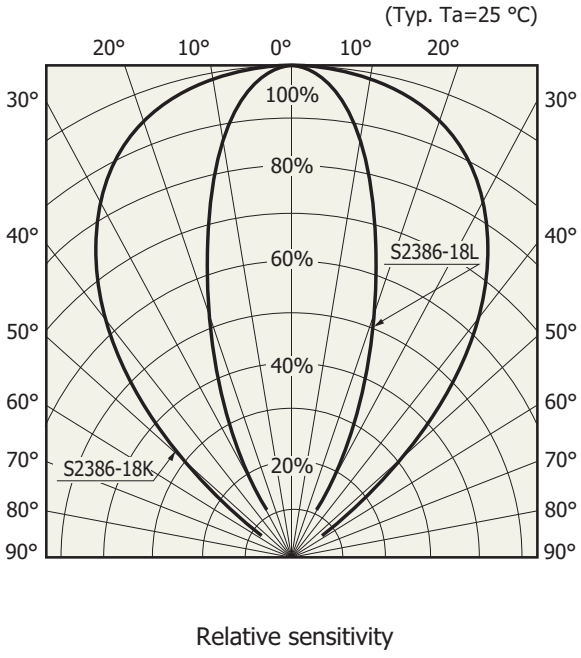
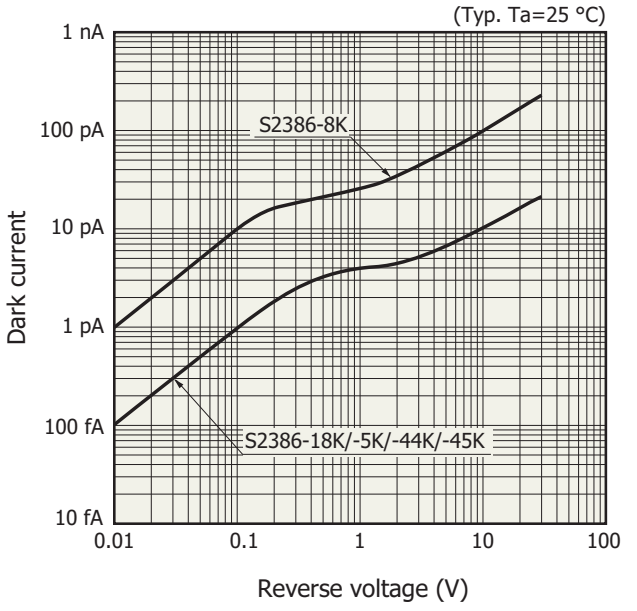
Directivity



KSPDB0111EA

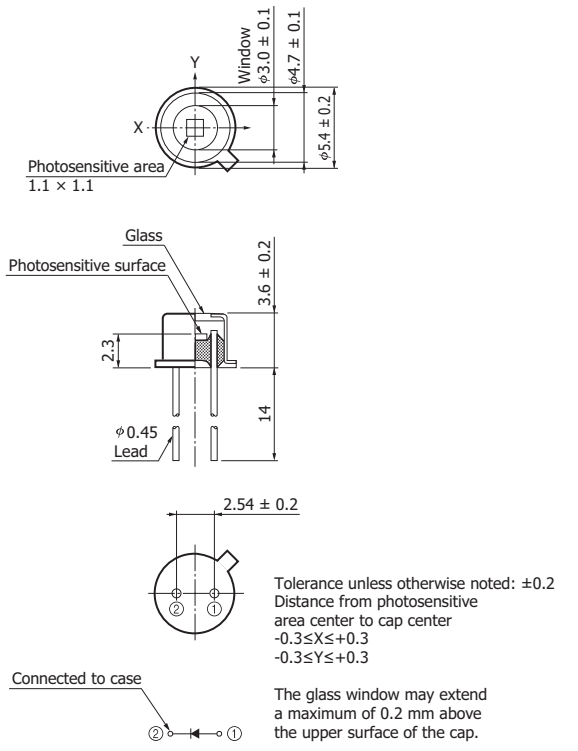
Dark current vs. reverse voltage



KSPDB0113ED

Dimensional outlines (unit: mm)

(1) S2386-18K



Tolerance unless otherwise noted: ±0.2
Distance from photosensitive area center to cap center
-0.3≤X≤+0.3
-0.3≤Y≤+0.3

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

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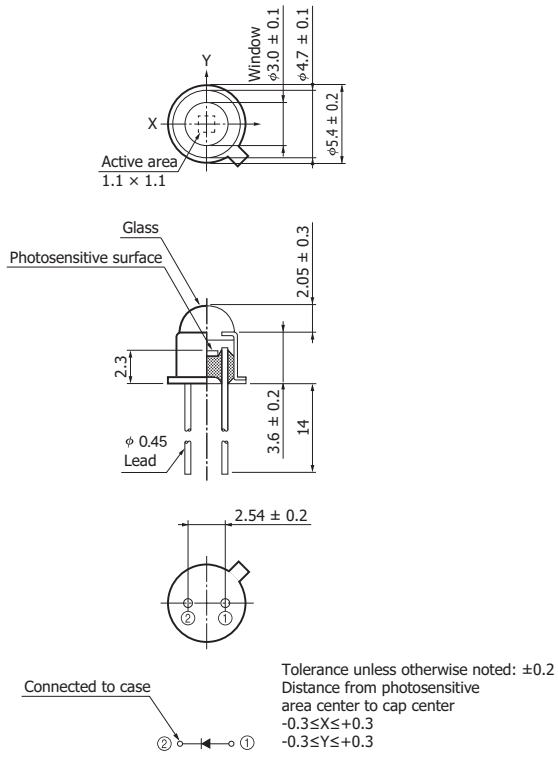
(2) S2386-18L



Tolerance unless otherwise noted: ±0.2
Distance from photosensitive area center to cap center
-0.3≤X≤+0.3
-0.3≤Y≤+0.3

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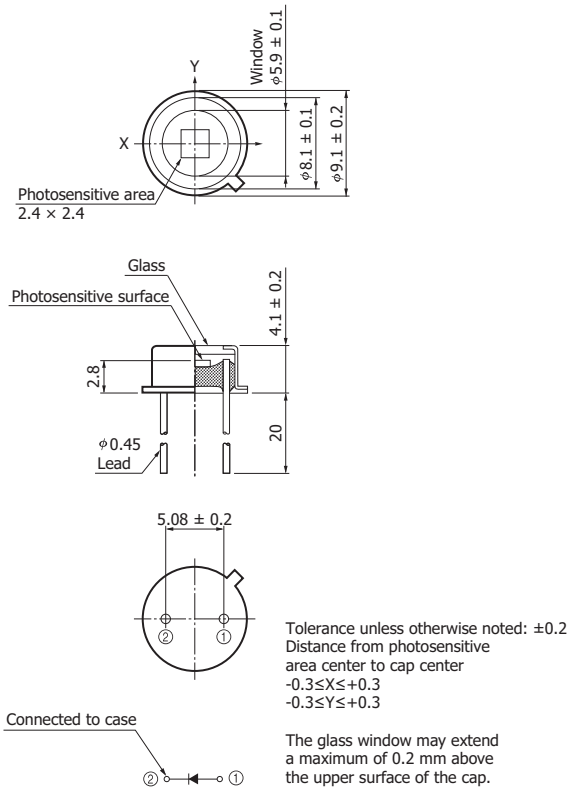
(3) S2386-5K



Tolerance unless otherwise noted: ±0.2
Distance from photosensitive area center to cap center
-0.3≤X≤+0.3
-0.3≤Y≤+0.3

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

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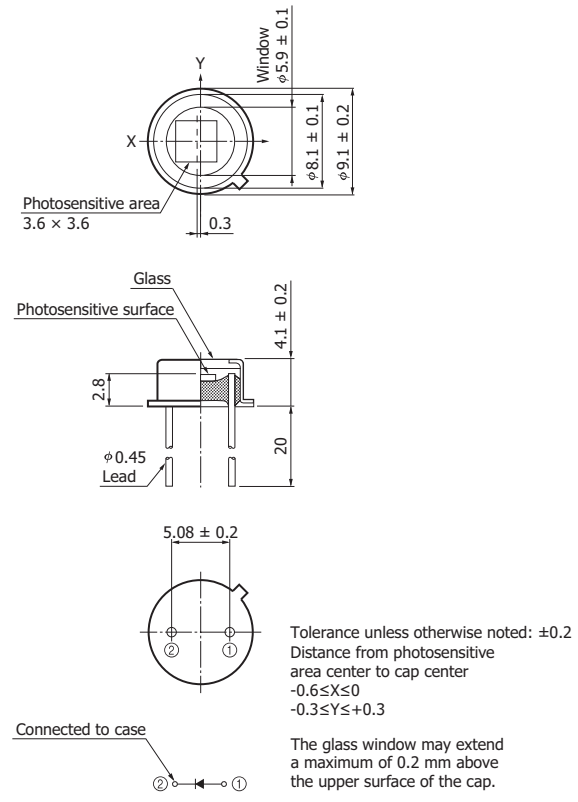
(4) S2386-44K



Tolerance unless otherwise noted: ±0.2
Distance from photosensitive area center to cap center
-0.6≤X≤0
-0.3≤Y≤+0.3

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

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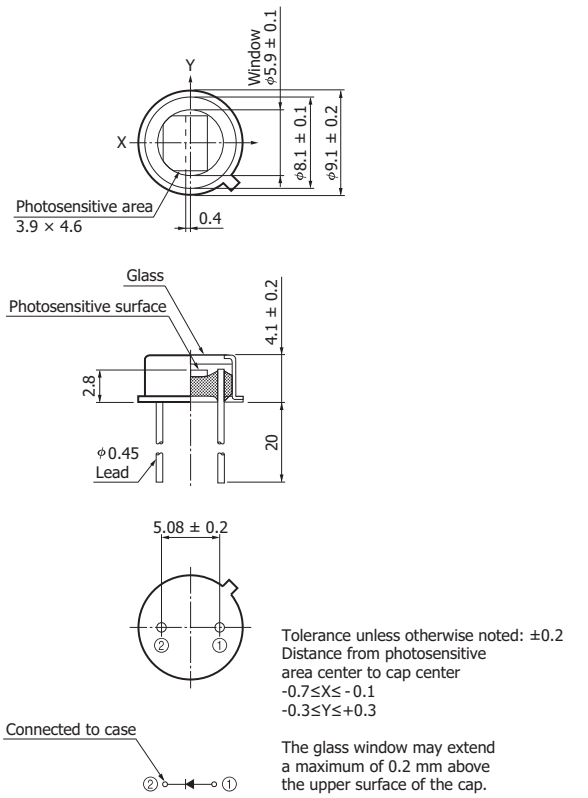
(5) S2386-45K



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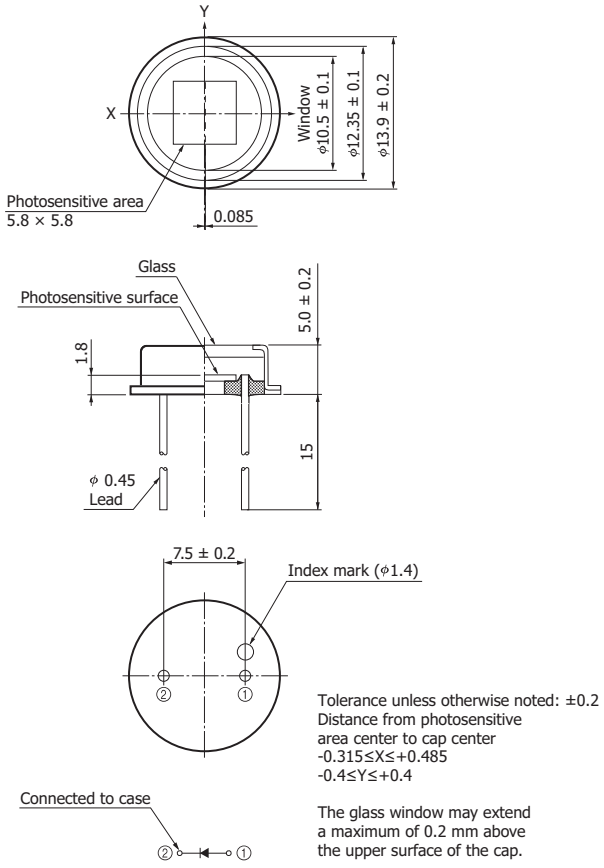
(6) S2386-8K



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

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