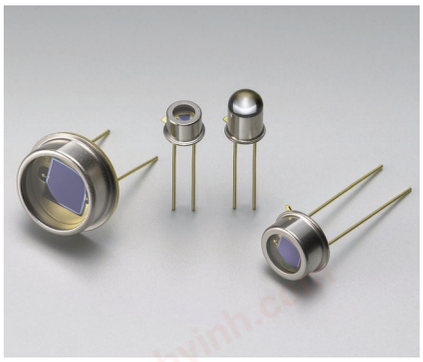
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HAMAMATSU
PHOTON IS OUR BUSINESS



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.

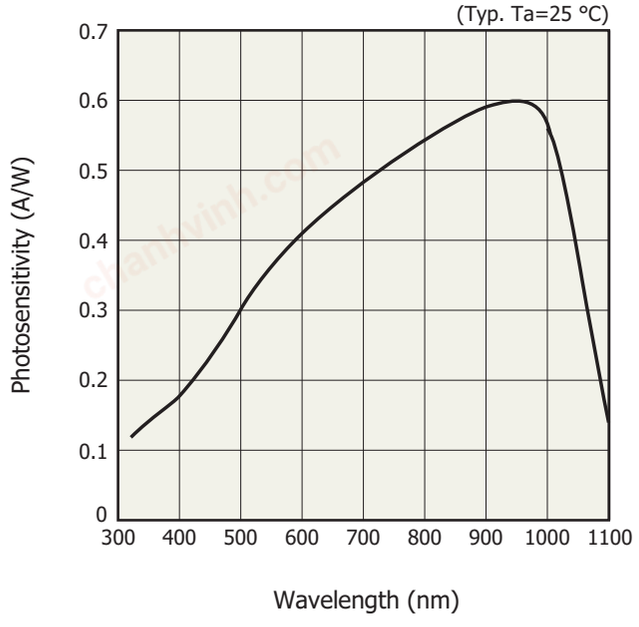
* Window material K=borosilicate glass, L=lens type borosilicate glass

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}

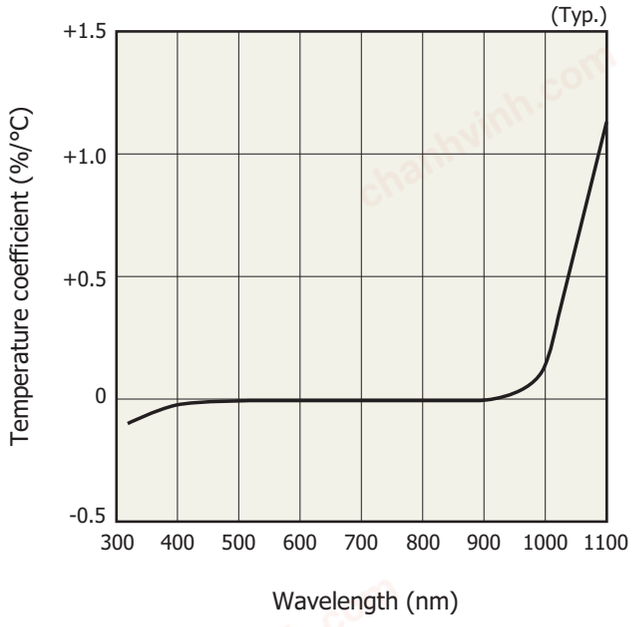
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Spectral response



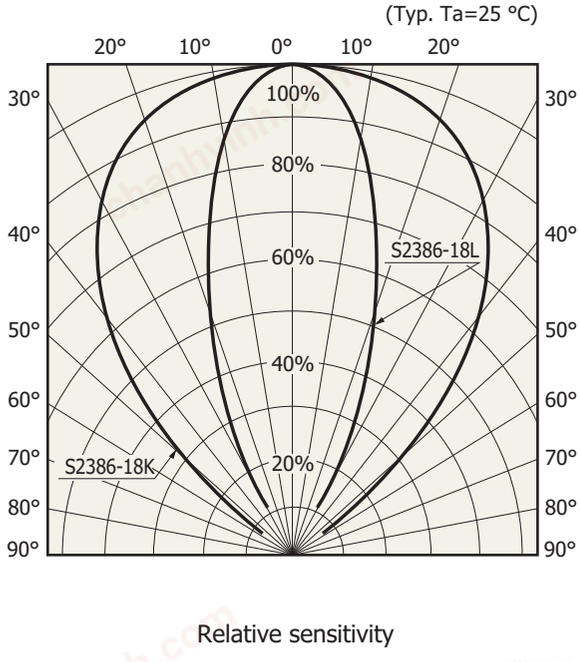
KSPDB0110EB

Photosensitivity temperature characteristic



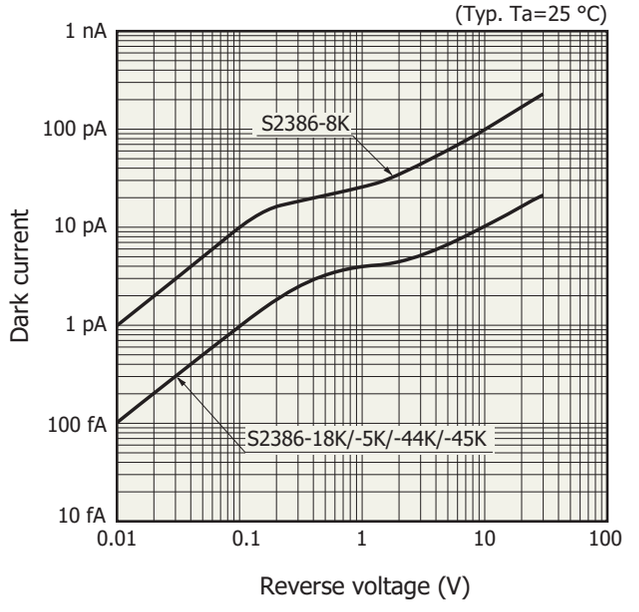
KSPDB0058EC

Directivity



KSPDB0111EA

Dark current vs. reverse voltage

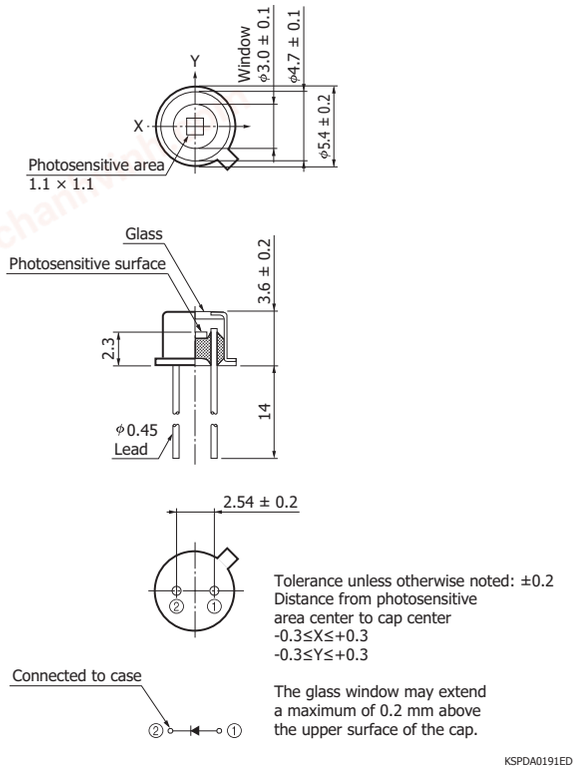


KSPDB0113ED

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Dimensional outlines (unit: mm)

(1) S2386-18K

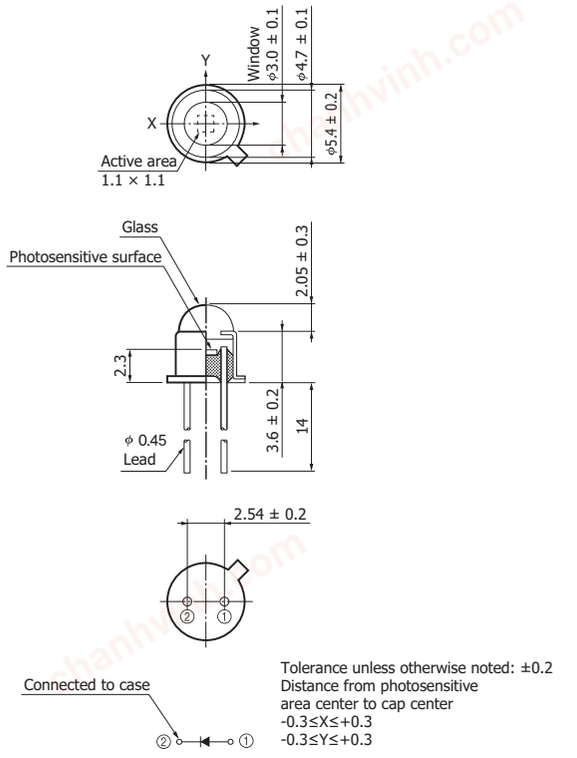


Tolerance unless otherwise noted: ±0.2
Distance from photosensitive area center to cap center
-0.3≤X≤+0.3
-0.3≤Y≤+0.3

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

KSPDA0191ED

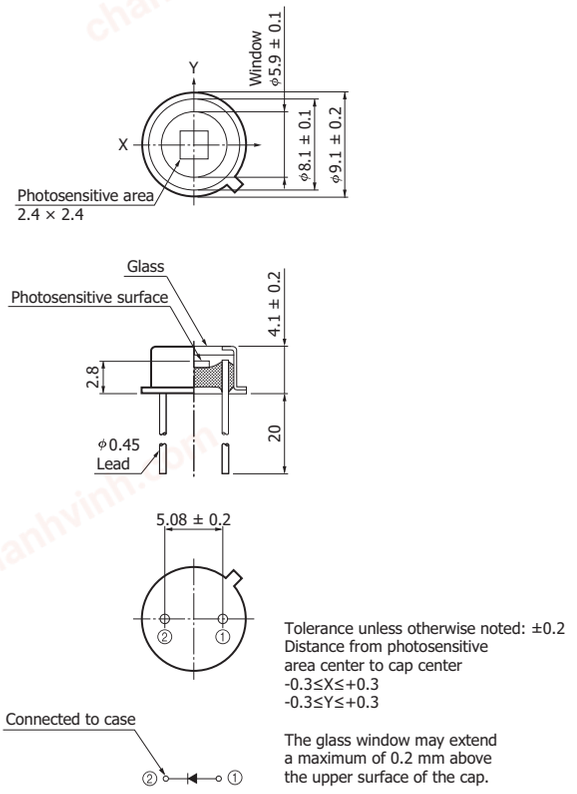
(2) S2386-18L



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

KSPDA0048EF

(3) S2386-5K

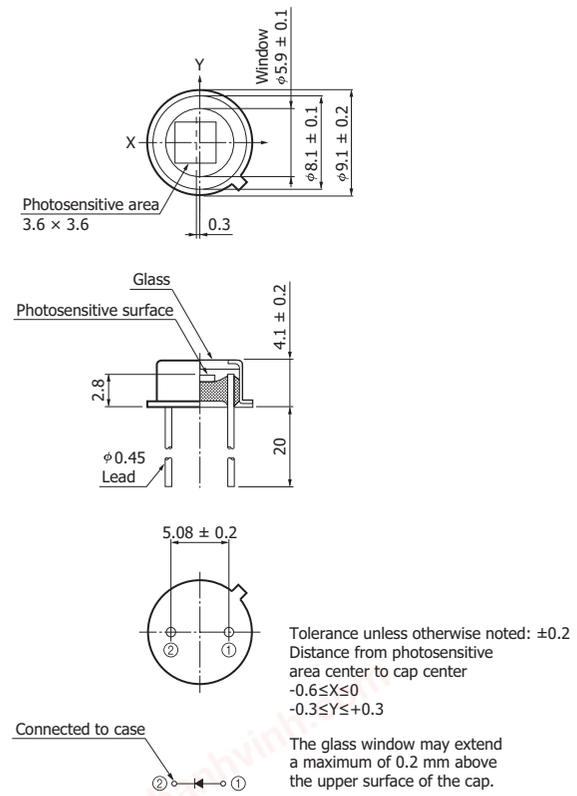


Tolerance unless otherwise noted: ±0.2
Distance from photosensitive area center to cap center
-0.3≤X≤+0.3
-0.3≤Y≤+0.3

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

KSPDA0192ED

(4) S2386-44K



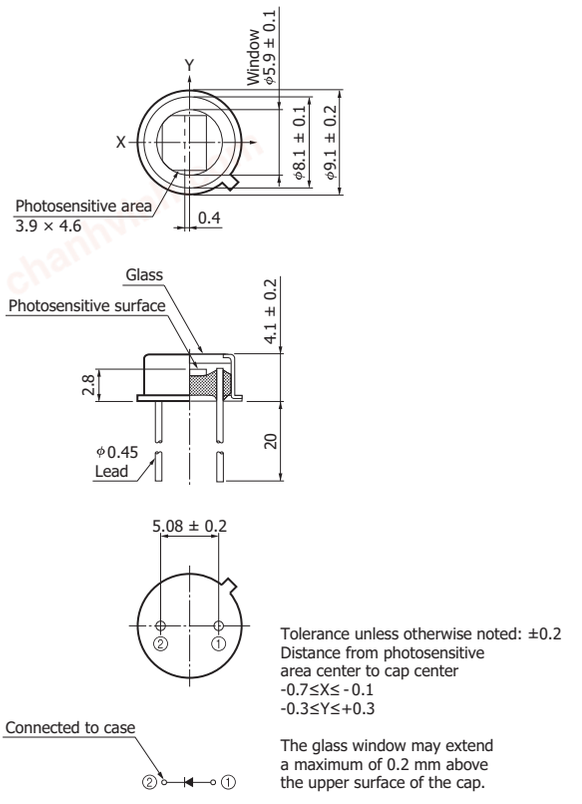
Tolerance unless otherwise noted: ±0.2
Distance from photosensitive area center to cap center
-0.6≤X≤0
-0.3≤Y≤+0.3

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

KSPDA0193ED

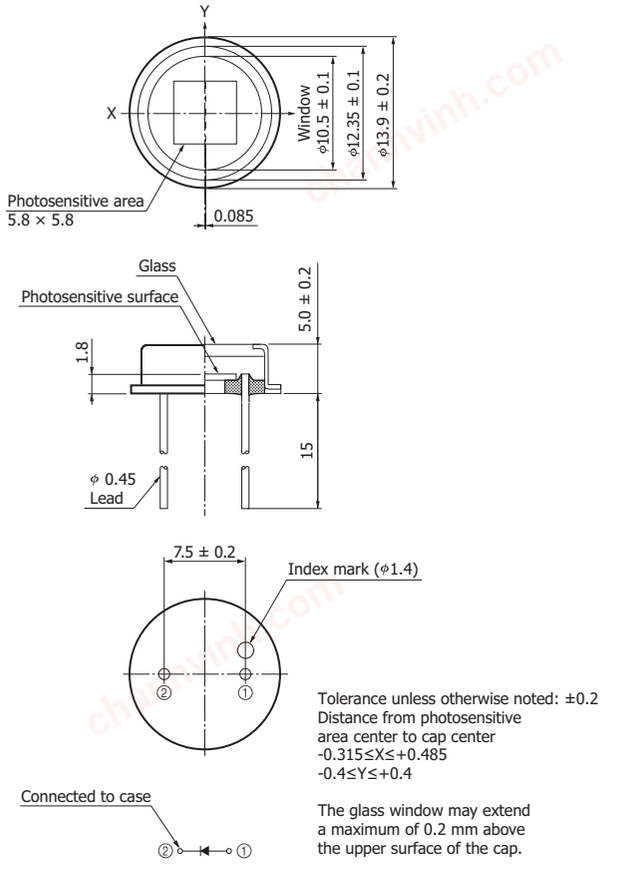
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(5) S2386-45K



KSPDA0178EF

(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

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.
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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