

PHOTODIODE

Si photodiode
S2386 series

For visible to IR, general-purpose photometry



Features

- High sensitivity
- Low dark current
- High reliability
- High linearity

Applications

- Analytical equipment
- Optical measurement equipment

■ General ratings / Absolute maximum ratings

Type No.	Dimensional outline/ Window material *	Package (mm)	Active area size (mm)	Effective active area (mm ²)	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	1.2	30	-40 to +100	-55 to +125
S2386-18L	②/L						
S2386-5K	③/K	TO-5	2.4 × 2.4	5.7			
S2386-44K			3.6 × 3.6	13			
S2386-45K			3.9 × 4.6	17.9			
S2386-8K	⑤/K	TO-8	5.8 × 5.8	33			

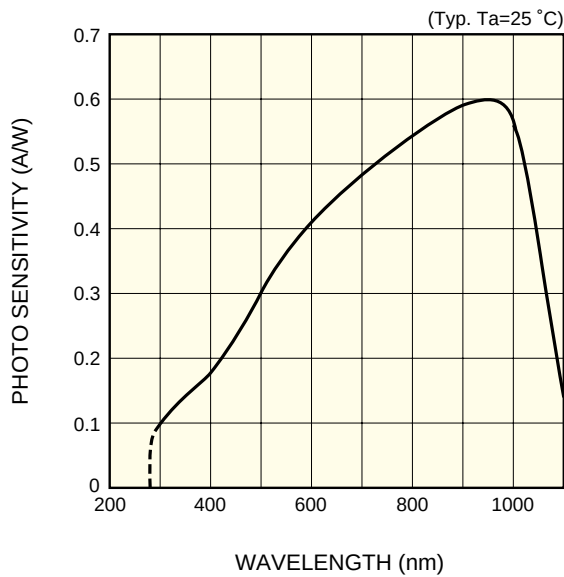
■ Electrical and optical characteristics (Typ. Ta=25 °C, unless otherwise noted)

Type No.	Spectral response range λ (nm)	Peak sensitivity wavelength λ_p (nm)	Photo sensitivity 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		NEP VR=0 V $\lambda=\lambda_p$ (W/Hz ^{1/2})			
			λ_p	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	5.7										
S2386-5K							4.4	6.0								5		
S2386-44K							9.6	12									20	
S2386-45K							12	17										30
S2386-8K							26	33										

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

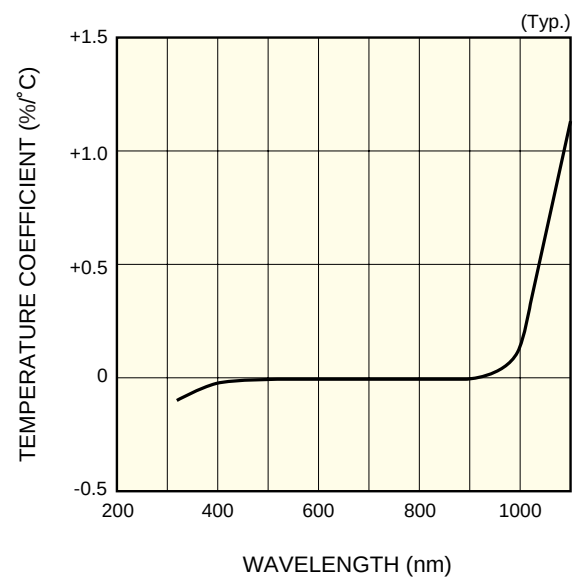
Si photodiode **S2386 series**

■ Spectral response



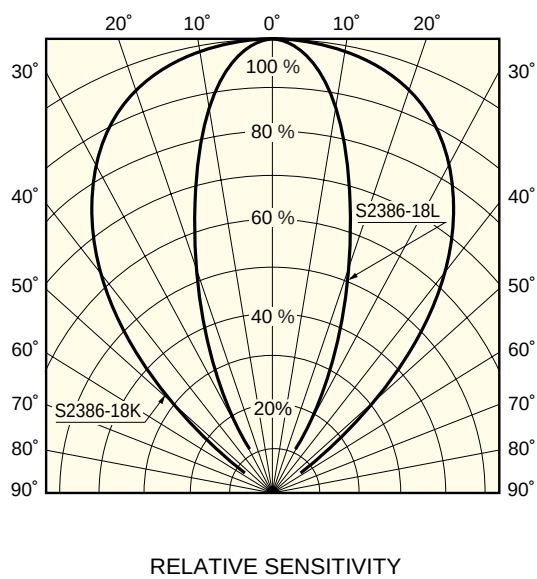
KSPDB0110EA

■ Photo sensitivity temperature characteristic



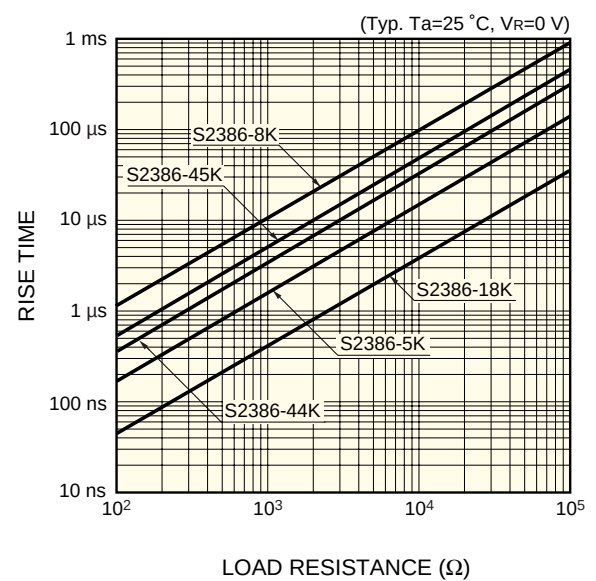
KSPDB0058EB

■ Directivity



KSPDB0111EA

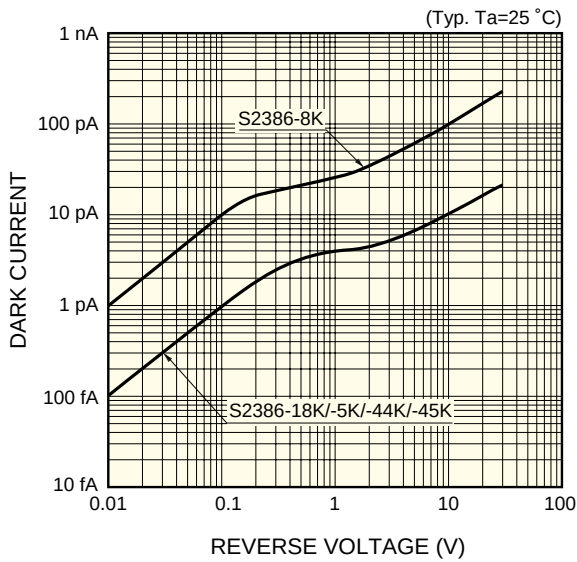
■ Rise time vs. load resistance



KSPDB0112EA

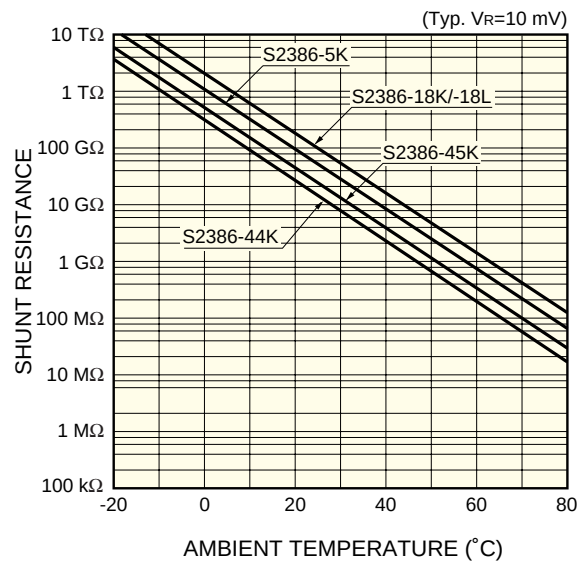
Si photodiode **S2386 series**

■ Dark current vs. reverse voltage



KSPDB0113EB

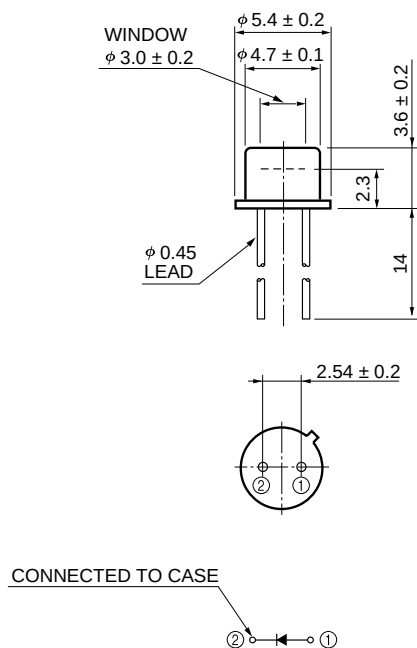
■ Shunt resistance vs. ambient temperature



KSPDB0114EA

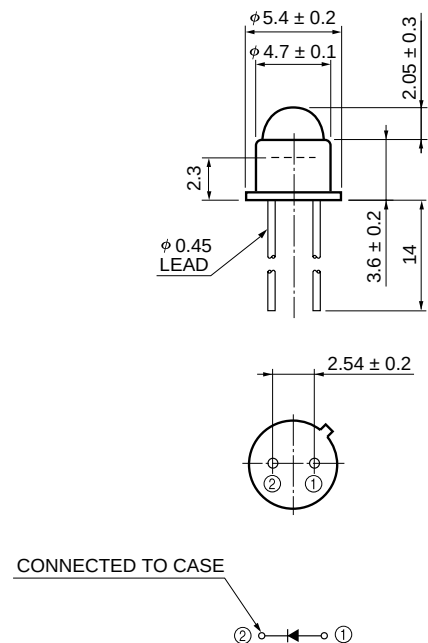
■ Dimensional outlines (unit: mm)

① S2386-18K



KSPDA0102EB

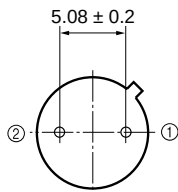
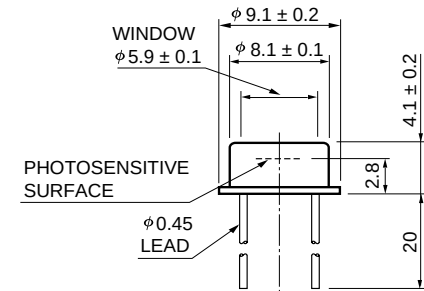
② S2386-18L



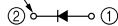
KSPDA0048EB

Si photodiode S2386 series

③ S2386-5K/-44K



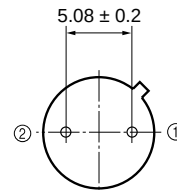
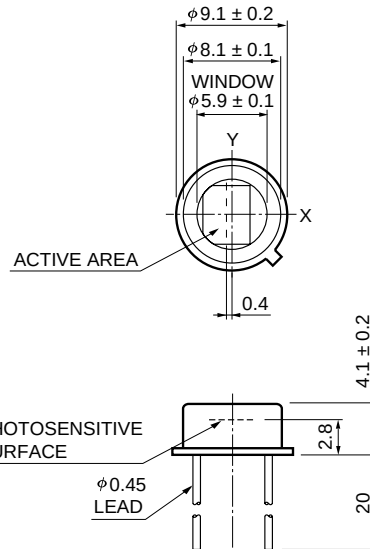
CONNECTED TO CASE



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

KSPDA0103EA

④ S2386-45K



CONNECTED TO CASE

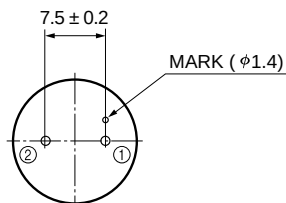
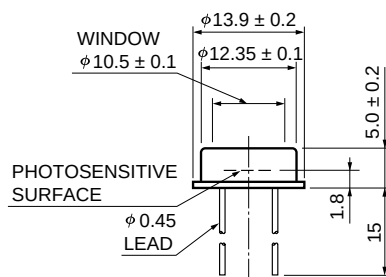


CHIP CENTER TO CAP CENTER
 $-0.7 \leq X \leq 0.1$
 $-0.3 \leq Y \leq 0.3$

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

KSPDA0178EA

⑤ S2386-8K



CONNECTED TO CASE



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

KSPDA0104EA

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