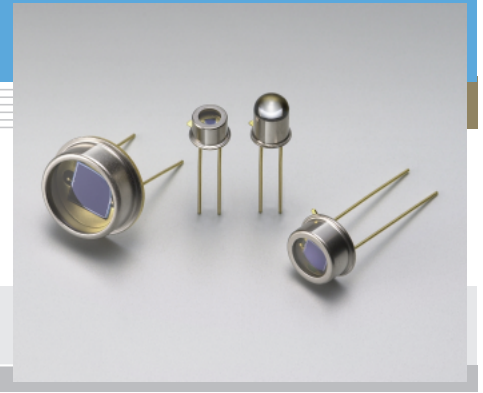


# Si photodiode S2386 series

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

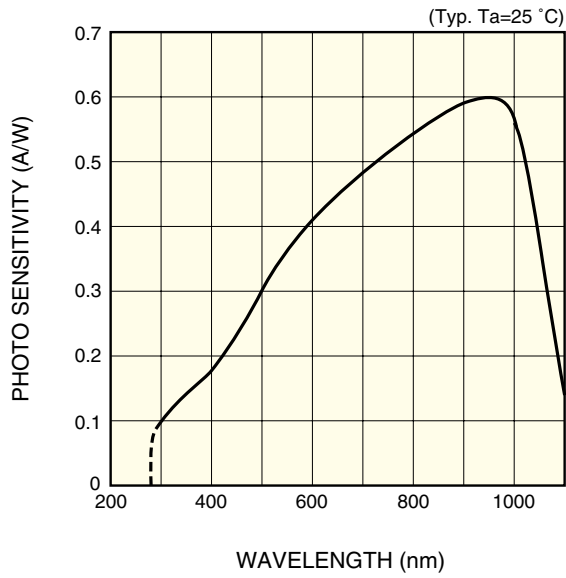
Type No.	Dimensional outline/ Window material *	Package (mm)	Active area size (mm)	Effective active area (mm <sup>2</sup> )	Absolute maximum ratings		
					Reverse voltage V <sub>R</sub> Max. (V)	Operating temperature T <sub>opr</sub> (°C)	Storage temperature T <sub>stg</sub> (°C)
S2386-18K	①/K	TO-18	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	④/L	TO-8	5.8 × 5.8	33			

### ■ 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)	Photo sensitivity 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		NEP (W/Hz <sup>1/2</sup> )			
			λ <sub>p</sub>	GaP LED 560 nm	He-Ne laser 633 nm	GaAs LED 930 nm	Min. (μA)	Typ. (μA)					Min.	Typ.				
																(GΩ)	(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 <sup>-16</sup>			
S2386-18L							4	5.7					2					
S2386-5K							4.4	6.0					5	2		50	9.6 × 10 <sup>-16</sup>	
S2386-44K							9.6	12					20	0.5		25		
S2386-45K							12	17					30	0.3		25		1.4 × 10 <sup>-15</sup>
S2386-8K							26	33					50	0.2		10		

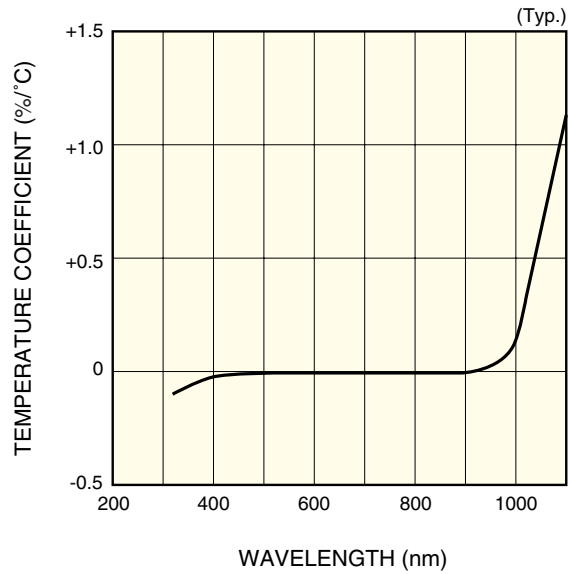
\* Window material K: borosilicate glass, L: lens type borosilicate glass

■ Spectral response



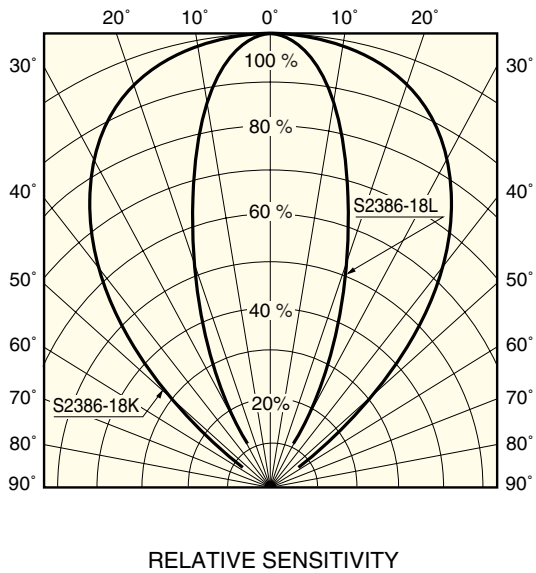
KSPDB0110EA

■ Photo sensitivity temperature characteristic



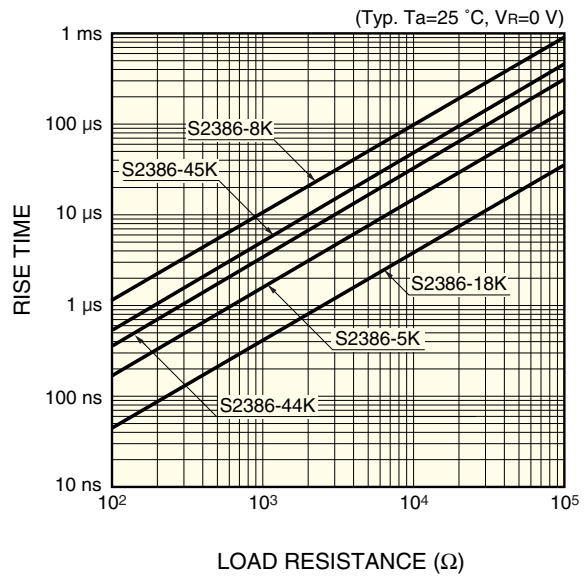
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■ Directivity



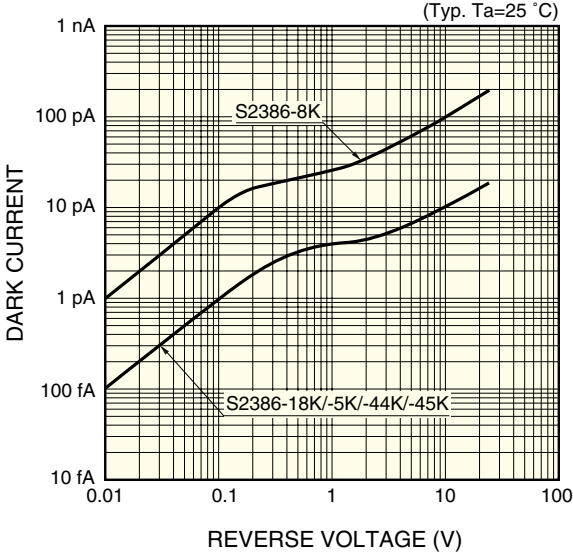
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■ Rise time vs. load resistance



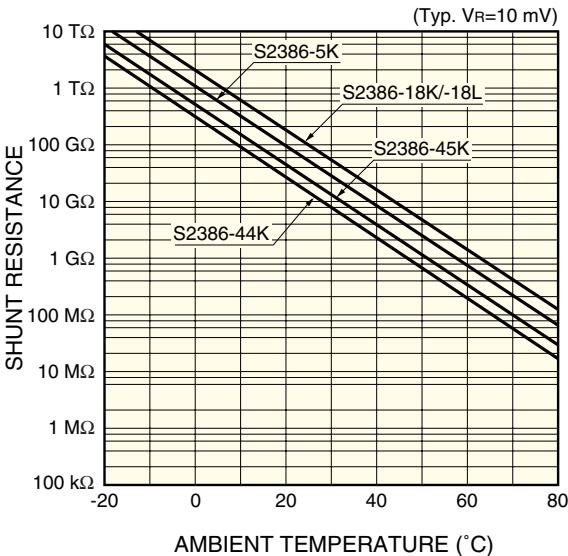
KSPDB0112EA

■ Dark current vs. reverse voltage



KSPDB0113EA

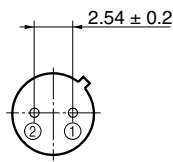
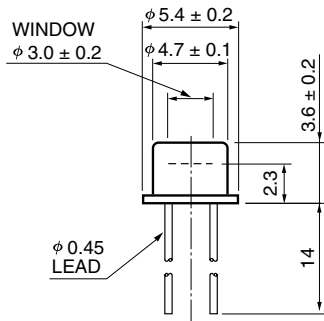
■ Shunt resistance vs. ambient temperature



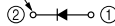
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## Dimensional outlines (unit: mm)

① S2386-18K

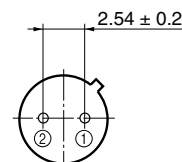
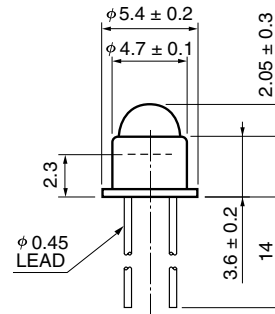


CONNECTED TO CASE



KSPDA0102EB

② S2386-18L

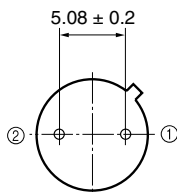
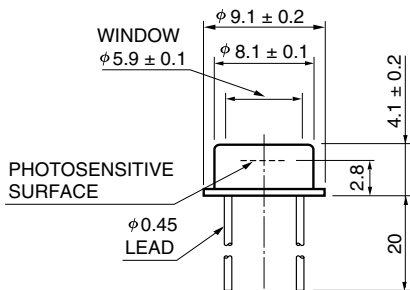


CONNECTED TO CASE

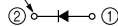


KSPDA0048EB

③ S2386-5K/-44K/-45K



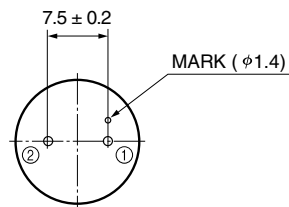
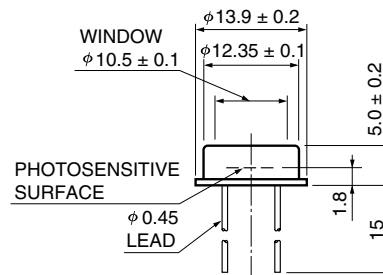
CONNECTED TO CASE



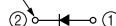
The K type borosilicate glass window may extend a maximum of 0.2 mm above the upper surface of the cap.

KSPDA0103EA

④ S2386-8K



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

# HAMAMATSU

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