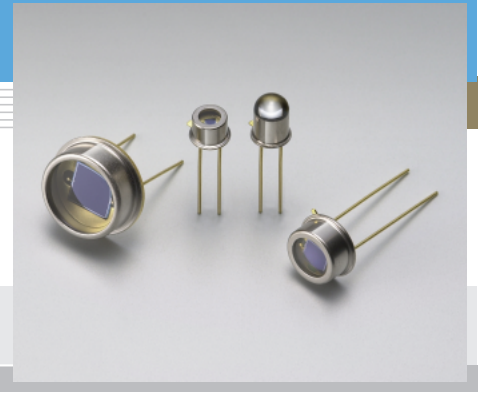


Si photodiode S2386 series

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

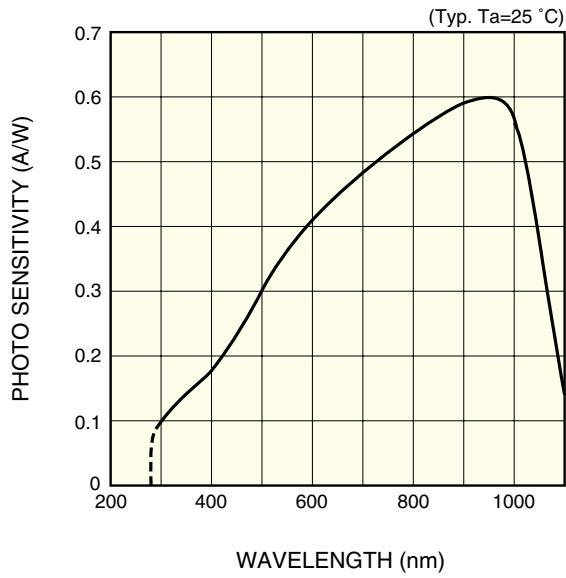
| Type No. | Dimensional outline/ Window material * | Package (mm) | Active area size (mm) | Effective active area (mm ²) | Absolute maximum ratings | | |
|-----------|---|-----------------|--------------------------|---|---|---|---|
| | | | | | Reverse voltage V _R Max. (V) | Operating temperature T _{opr} (°C) | Storage temperature T _{stg} (°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_a=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 I _{sc} 100 lx | | Dark current I _D V _R =10 mV Max. (pA) | Temp. coefficient of I _D T _{CID} (times/°C) | Rise time t _r V _R =0 V R _L =1 kΩ (μs) | Terminal capacitance C _t V _R =0 V f=10 kHz (pF) | Shunt resistance R _{sh} V _R =10 mV | | NEP (W/Hz ^{1/2}) | | | |
|-----------|--------------------------------------|---|------------------------------|-------------------|-----------------------|--------------------|---|--------------|--|---|---|--|---|------|-------------------------------|------|-------------------------|-------------------------|
| | | | λ _p | 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 ⁻¹⁶ | | | |
| S2386-18L | | | | | | | 4 | 5.7 | | | | | 2 | | | | | |
| S2386-5K | | | | | | | 4.4 | 6.0 | | | | | 5 | 2 | | 50 | 9.6 × 10 ⁻¹⁶ | |
| S2386-44K | | | | | | | 9.6 | 12 | | | | | 20 | 0.5 | | 25 | | |
| S2386-45K | | | | | | | 12 | 17 | | | | | 30 | 0.3 | | 25 | | 1.4 × 10 ⁻¹⁵ |
| S2386-8K | | | | | | | 26 | 33 | | | | | 50 | 0.2 | | 10 | | |

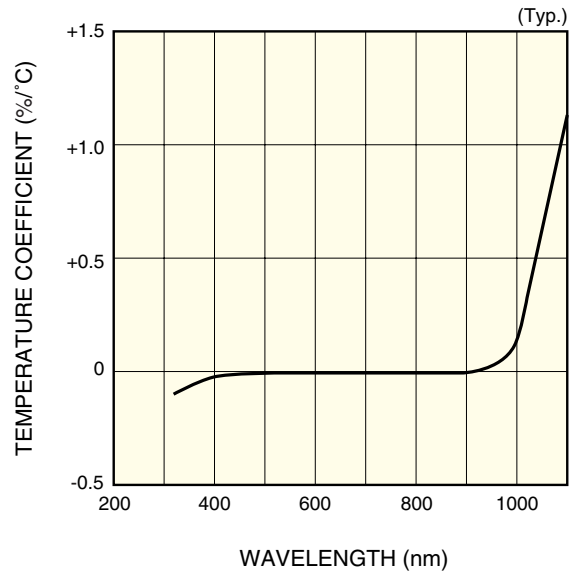
* Window material K: borosilicate glass, L: lens type borosilicate glass

■ Spectral response



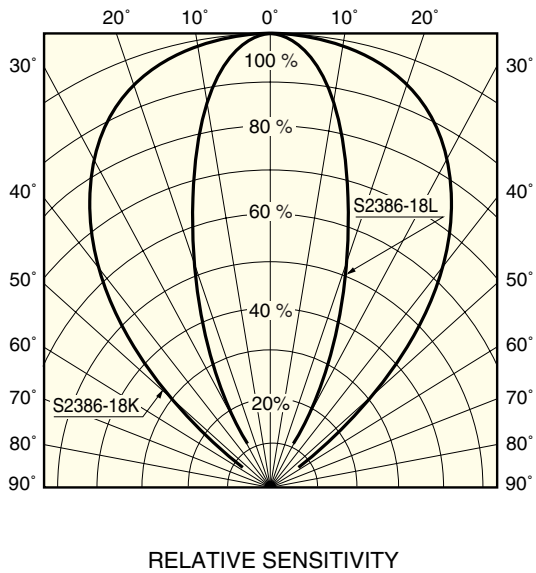
KSPDB0110EA

■ Photo sensitivity temperature characteristic



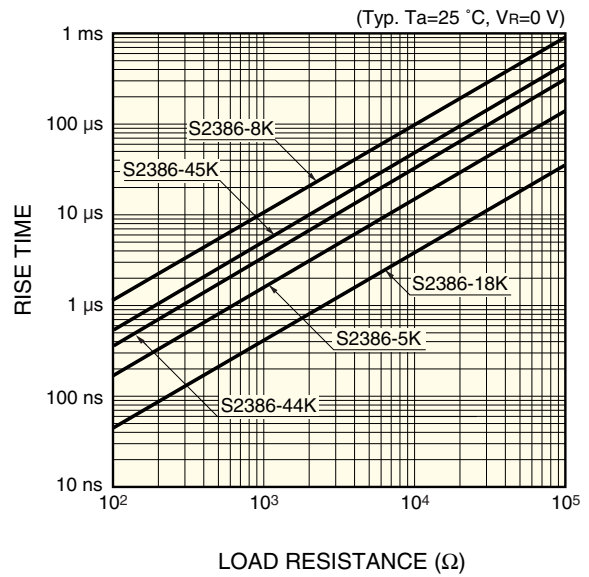
KSPDB0068EB

■ Directivity



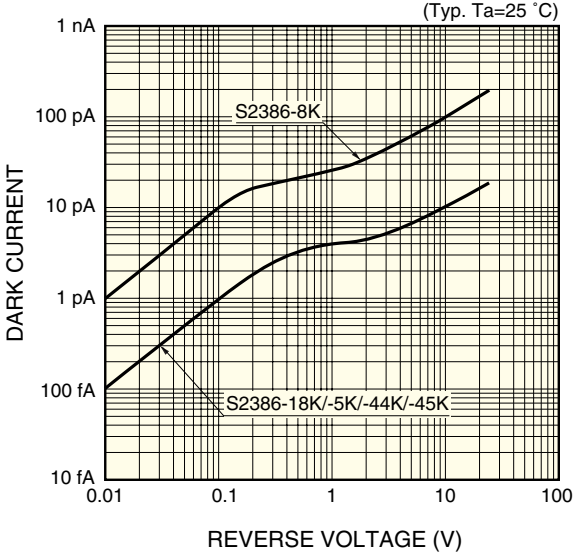
KSPDB0111EA

■ Rise time vs. load resistance



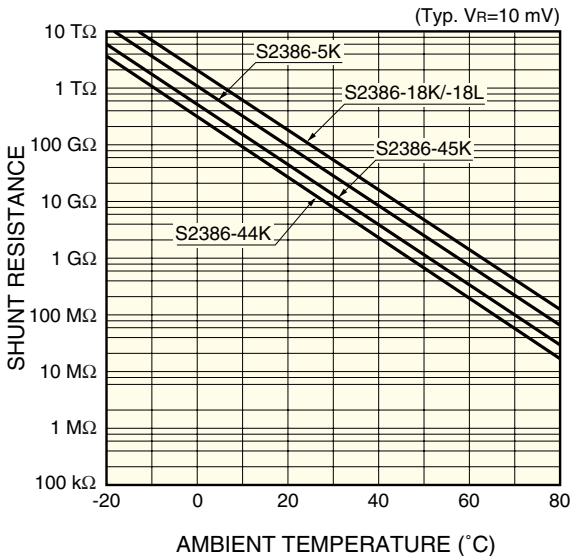
KSPDB0112EA

■ Dark current vs. reverse voltage



KSPDB0113EA

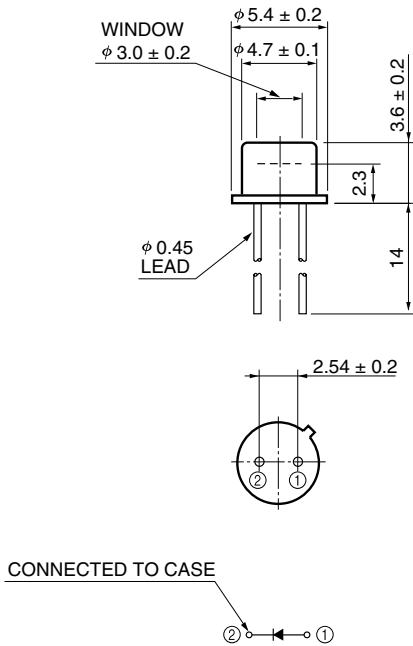
■ Shunt resistance vs. ambient temperature



KSPDB0114EA

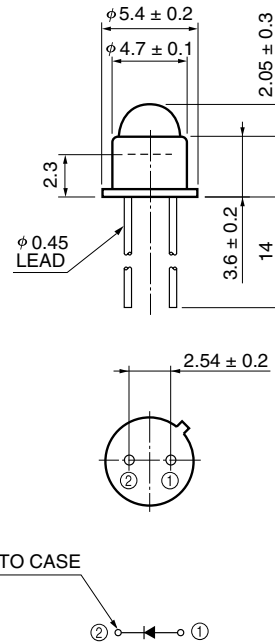
Dimensional outlines (unit: mm)

① S2386-18K



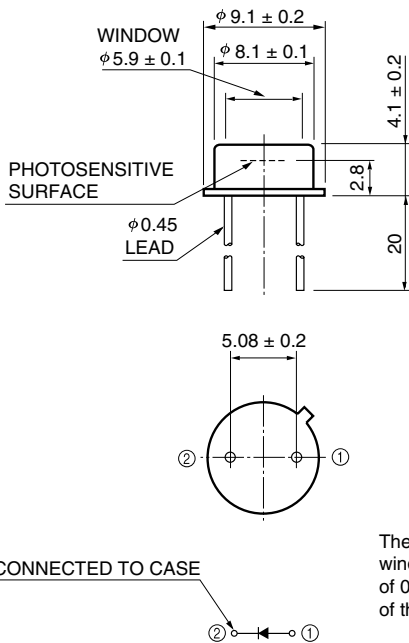
KSPDA0102EB

② S2386-18L



KSPDA0048EB

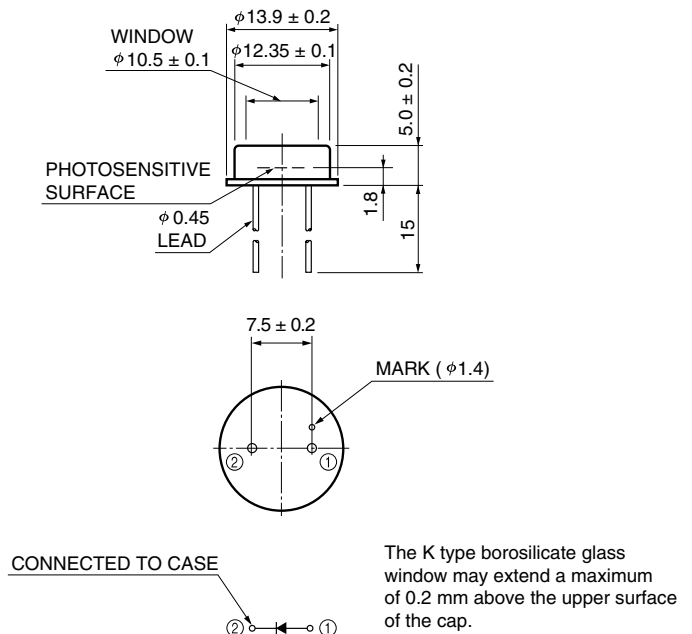
③ S2386-5K/-44K/-45K



KSPDA0103EA

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

④ S2386-8K



KSPDA0104EA

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