

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) | Effective photosensitive 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 | (4)/K | | 3.6 × 3.6 | 13 | | | |
| S2386-45K | (5)/K | | 3.9 × 4.6 | 17.9 | | | |
| S2386-8K | (6)/K | TO-8 | 5.8 × 5.8 | 33 | | | |

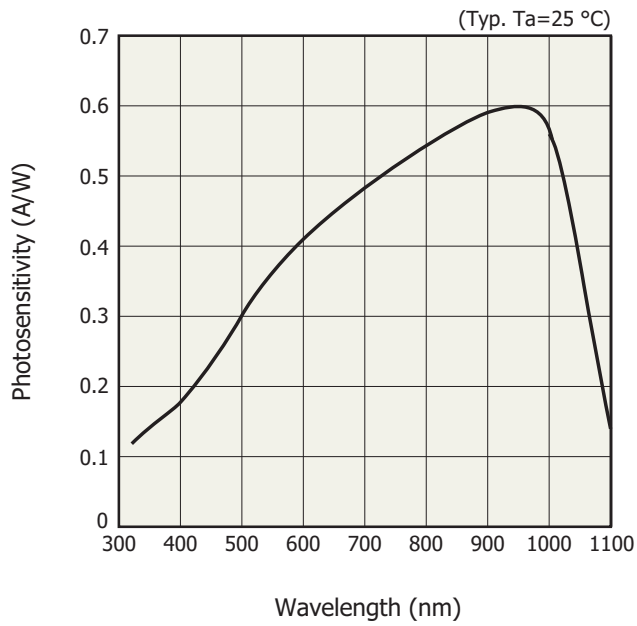
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

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

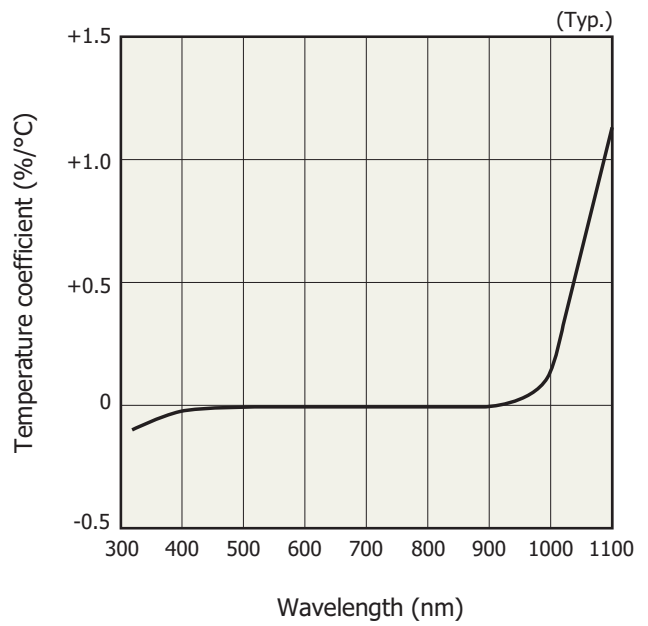
Electrical and optical characteristics (Typ. T_a=25 °C, unless otherwise noted)

| Type no. | Spectral response range λ (nm) | Peak sensitivity wavelength λ _p (nm) | Photosensitivity 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 | | Noise equivalent power NEP V _R =0 V λ=λ _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 | | | | 25 | 9.6 × 10 ⁻¹⁶ | |
| S2386-44K | | | | | | | 9.6 | 12 | 20 | | | | | | |
| S2386-45K | | | | | | | 12 | 17 | 30 | | | | 10 | 2.1 × 10 ⁻¹⁵ | |
| S2386-8K | | | | | | | 26 | 33 | 50 | | | | | | |

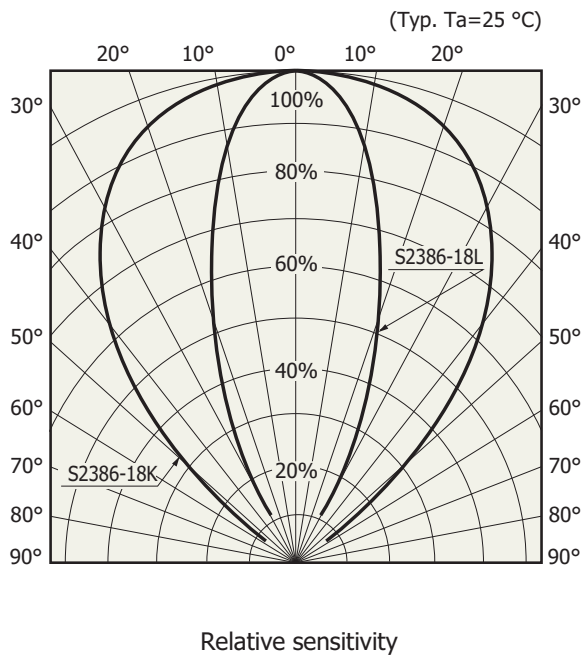
Spectral response



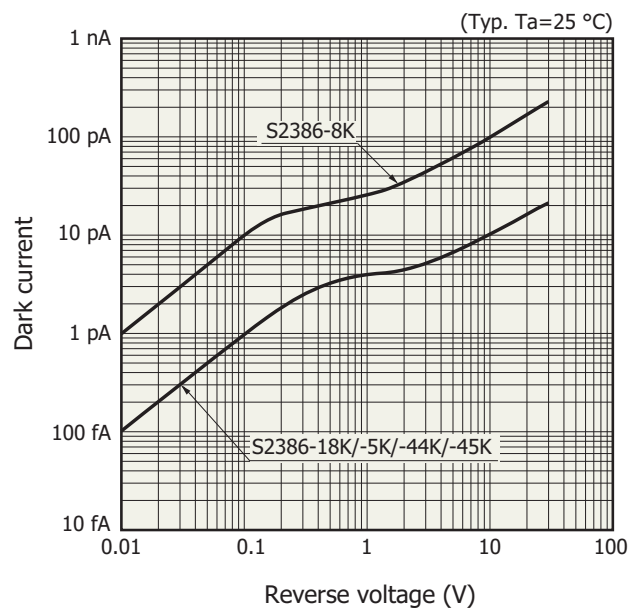
Photosensitivity temperature characteristic



Directivity

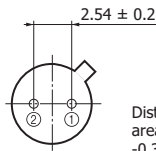
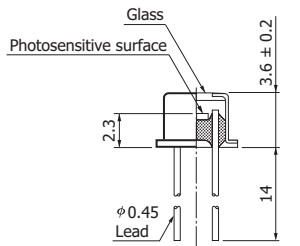
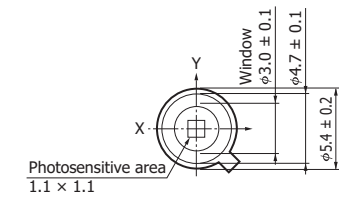


Dark current vs. reverse voltage

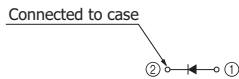


Dimensional outlines (unit: mm)

(1) S2386-18K



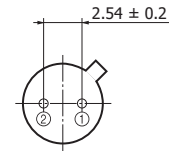
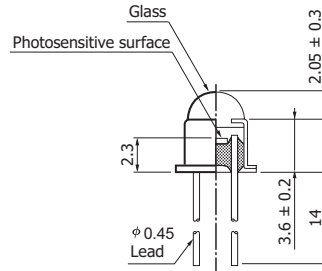
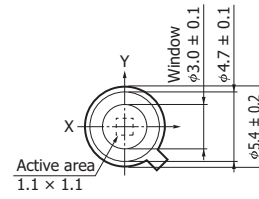
Distance from photosensitive area center to cap center
 $-0.3 \leq X \leq +0.3$
 $-0.3 \leq Y \leq +0.3$



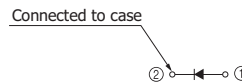
The glass window may extend a maximum of 0.2 mm above the upper surface of the cap.

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(2) S2386-18L

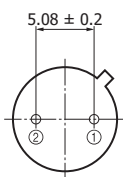
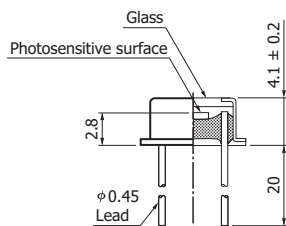
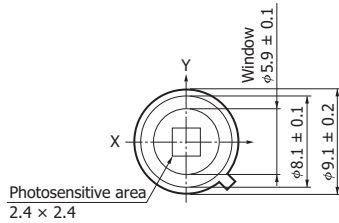


Distance from photosensitive area center to cap center
 $-0.3 \leq X \leq +0.3$
 $-0.3 \leq Y \leq +0.3$

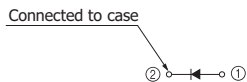


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(3) S2386-5K



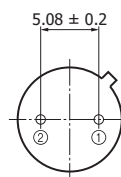
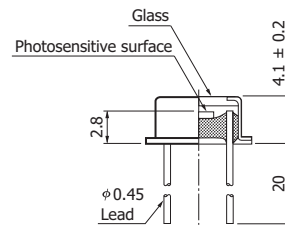
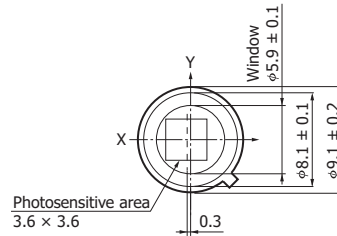
Distance from photosensitive area center to cap center
 $-0.3 \leq X \leq +0.3$
 $-0.3 \leq Y \leq +0.3$



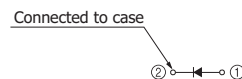
The glass window may extend a maximum of 0.2 mm above the upper surface of the cap.

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(4) S2386-44K



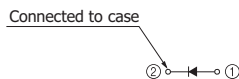
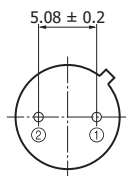
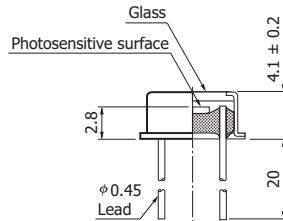
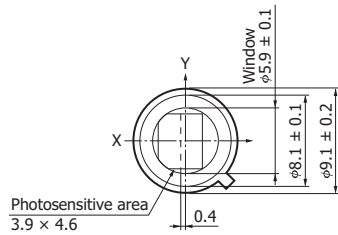
Distance from photosensitive area center to cap center
 $-0.6 \leq X \leq 0$
 $-0.3 \leq Y \leq +0.3$



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

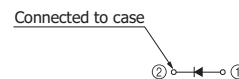
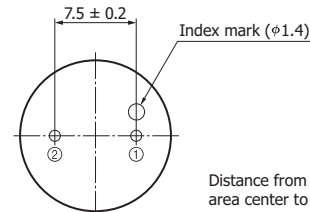
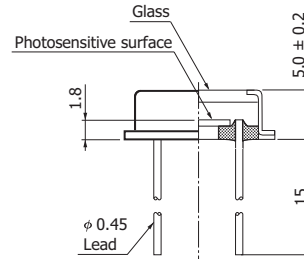
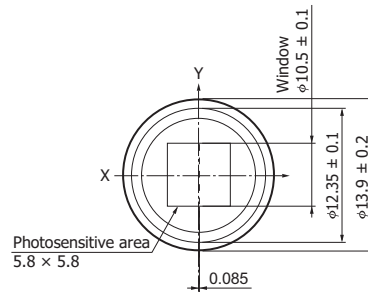


Distance from photosensitive area center to cap center
 $-0.7 \leq X \leq +0.1$
 $-0.3 \leq Y \leq +0.3$

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

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(6) S2386-8K



Distance from photosensitive area center to cap center
 $-0.315 \leq X \leq +0.485$
 $-0.4 \leq Y \leq +0.4$

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

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Information described in this material is current as of February, 2013.

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Type numbers of products listed in the delivery specification sheets or supplied as samples may have a suffix "(X)" which means preliminary specifications or a suffix "(Z)" which means developmental 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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