

# Si photodiode

## S8265

Visible sensitivity photodiode with high humidity resistance



### Features

- High humidity resistance (85 °C, 85 %, 1000 h)
- Visible-compensation filter
- Ceramic package (6 × 8 mm)
- Active area: 2.8 × 2.4 mm

### Applications

- Light dimmer in locations at high humidity or for outdoor use

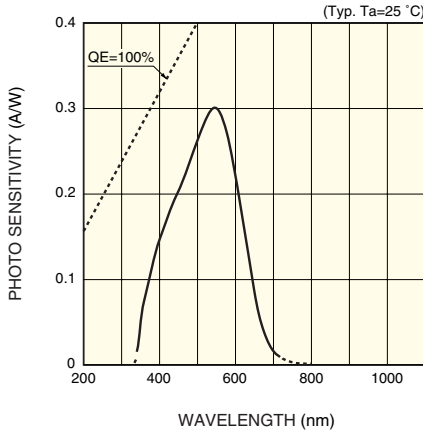
#### ■ Absolute maximum ratings (Ta=25 °C)

| Parameter             | Symbol              | Value      | Unit |
|-----------------------|---------------------|------------|------|
| Reverse voltage       | V <sub>R</sub> Max. | 10         | V    |
| Operating temperature | T <sub>opr</sub>    | -25 to +85 | °C   |
| Storage temperature   | T <sub>stg</sub>    | -40 to +85 | °C   |

#### ■ Electrical and optical characteristics (Ta=25 °C)

| Parameter                   | Symbol          | Condition                                 | Min. | Typ.       | Max. | Unit |
|-----------------------------|-----------------|---|------|------------|------|------|
| Spectral response range     | $\lambda$       |   | -    | 340 to 720 | -    | nm   |
| Peak sensitivity wavelength | $\lambda_p$     |   | -    | 540        | -    | nm   |
| Photo sensitivity           | S               | $\lambda = \lambda_p$                     | -    | 0.3        | -    | A/W  |
| Short circuit current       | I <sub>sc</sub> | 100 lx, 2856 K                            | 0.40 | 0.52       | -    | μA   |
| Dark current                | I <sub>D</sub>  | V <sub>R</sub> =1 V                       | -    | 3          | 20   | pA   |
| Rise time                   | t <sub>r</sub>  | V <sub>R</sub> =0 V, R <sub>L</sub> =1 kΩ | -    | 0.5        | -    | μs   |
| Terminal capacitance        | C <sub>t</sub>  | V <sub>R</sub> =0 V, f=10 kHz             | -    | 230        | -    | pF   |

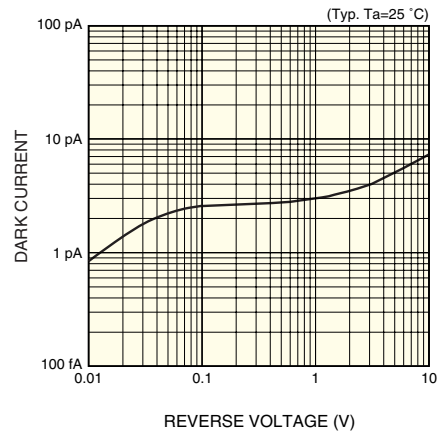
■ Spectral response



Almost no decrease in photo sensitivity even after 1000 hours of operation at 85 °C and RH 85 %

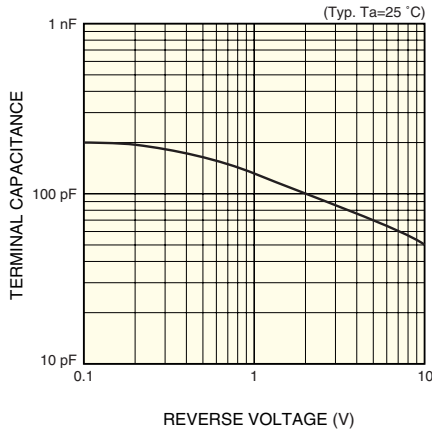
KSPDB0164EA

■ Dark current vs. reverse voltage



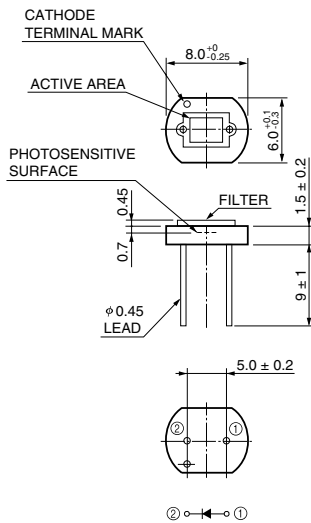
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■ Terminal capacitance vs. reverse voltage



KSPDB0171EA

■ Dimensional outline (unit: mm)



KSPDA0127EA

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