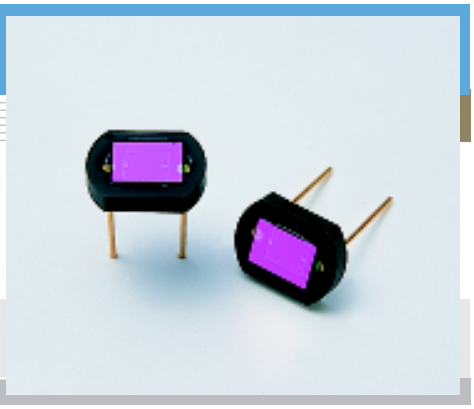
Si photodiode
S7686



Photodiode with sensitivity close to spectral luminous efficiency

S7686 is a Si photodiode having a spectral response characteristic that is more similar to the human eye sensitivity (spectral luminous efficiency) than our conventional visible-compensated sensors (S1133, etc.).

Features

- Spectral response analogous to CIE spectral luminous efficiency
  Spectral response range: 480 to 660 nm
  Peak sensitivity wavelength: 550 nm
- Ceramic package for reliability
- Active area: 2.4 × 2.8 mm
- High-speed response: 0.5 µs (V_R=0 V, R_L=1 kΩ)
- fs value: 8 % Typ. (vertical light input)

Applications

- Illuminometer
- Luminance meter

■ Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	Value	Unit
Reverse voltage	V_R Max.	10	V
Operating temperature	Topr	-10 to +60	°C
Storage temperature	Tstg	-20 to +70	°C

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	480 to 660	-	nm
Peak sensitivity wavelength	λp		-	550	-	nm
Photo sensitivity	S	λ=λp	-	0.38	-	A/W
Short circuit current	Isc	100 *lx*, 2856 K	-	0.45	-	µA
Dark current	I_D	V_R=1 V	-	2	20	pA
Rise time	tr	V_R=0 V, R_L=1 kΩ	-	0.5	-	µs
Terminal capacitance	Ct	V_R=0 V, f=10 kHz	-	200	-	pF

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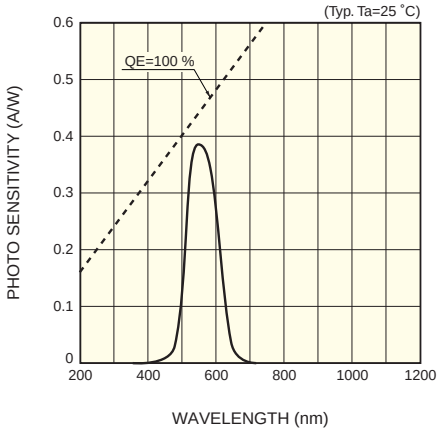
■ Spectral response



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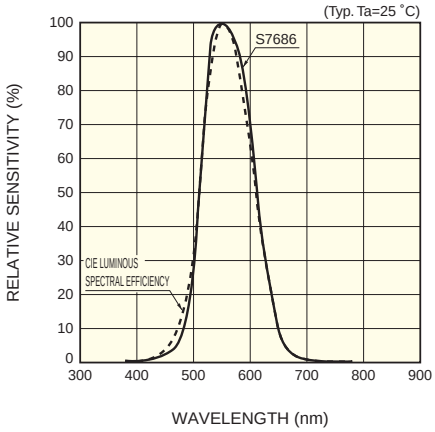
■ Spectral response (relative value)



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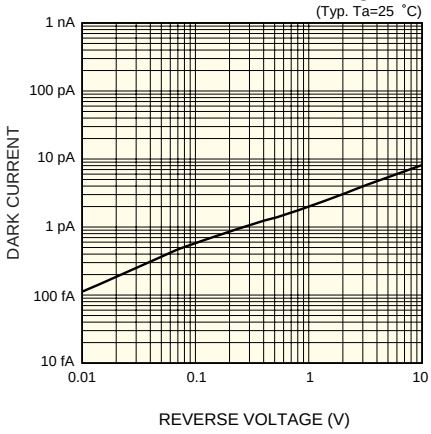
■ Dark current vs. reverse voltage



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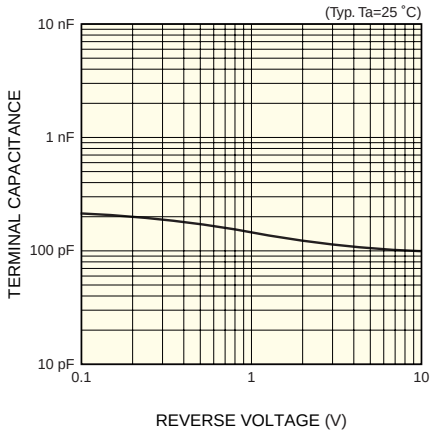
■ Terminal capacitance vs. reverse voltage



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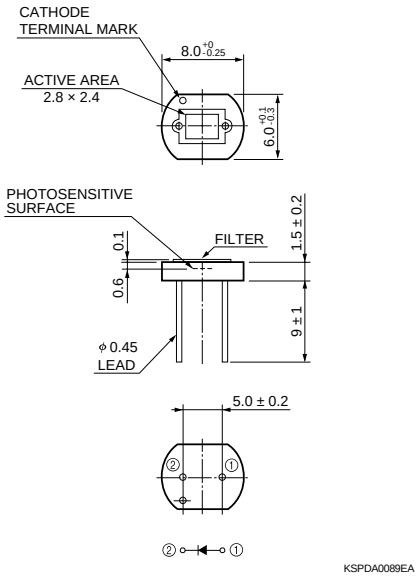
■ Dimensional outline (unit: mm, tolerance unless otherwise noted: ±0.15)



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