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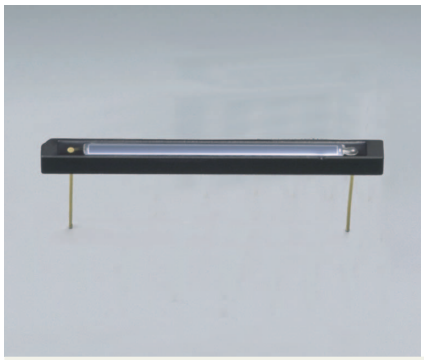
PHOTON IS OUR BUSINESS

Si photodiode



S2551

For visible to infrared precision photometry

S2551 is a Si photodiode having a long active area of 1.2 × 29.1 mm, designed for visible to infrared precision photometry.

Features

- **Long, narrow active area: 1.2 × 29.1 mm**
- **High sensitivity**
- **Low capacitance**

Applications

- **Analytical instruments**
- **Optical measurement equipment**

Absolute maximum ratings

Parameter	Symbol	Value	Unit
Reverse voltage	V_R Max.	30	V
Operating temperature	Topr	-20 to +60	°C
Storage temperature	Tstg	-20 to +80	°C

Note: Absolute maximum ratings are the values that must not be exceeded at any time. If even one of the absolute maximum ratings is exceeded even for a moment, the product quality may be impaired. Always be sure to use the product within the absolute maximum ratings.

Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	340 to 1060	-	nm
Peak sensitivity wavelength	λp		-	920	-	nm
Photo sensitivity	S	λ=λp	-	0.57	-	A/W
		λ=663 nm	-	0.37	-	A/W
Short circuit current	Isc	100 *lx*	24	30	-	μA
Dark current	I_D	V_R=10 mV	-	-	1	nA
Temperature coefficient of I_D	T_{CID}		-	1.15	-	times/°C
Rise time	tr	V_R=0 V, R_L=1 kΩ	-	1.4	-	μs
Terminal capacitance	Ct	V_R=0 V, f=10 kHz	-	350	-	pF
Shunt resistance	Rsh	V_R=10 mV	0.01	0.03	-	GΩ
Noise equivalent power	NEP	V_R=0 V, λ=λp	-	3.9×10^{-14}	-	$W/Hz^{1/2}$

Spectral response

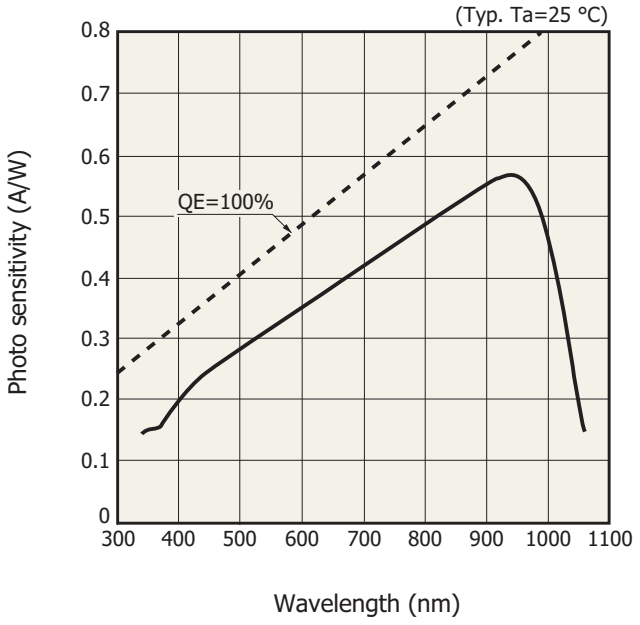


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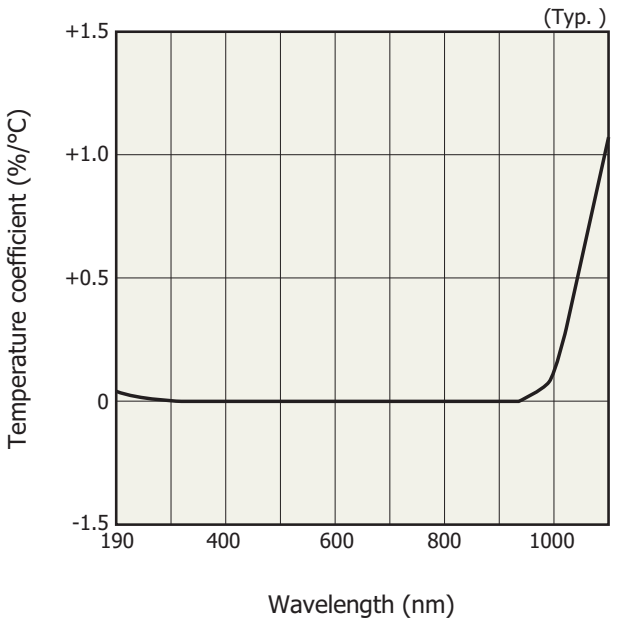
Photo sensitivity temperature characteristic



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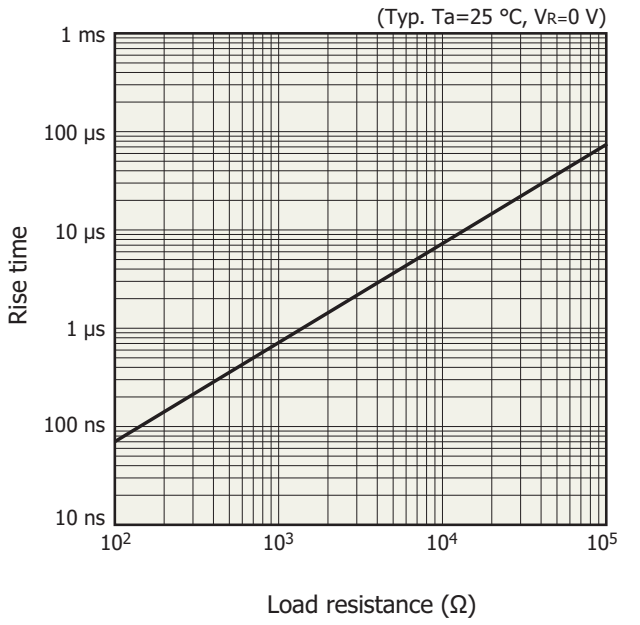
Rise time vs. load resistance



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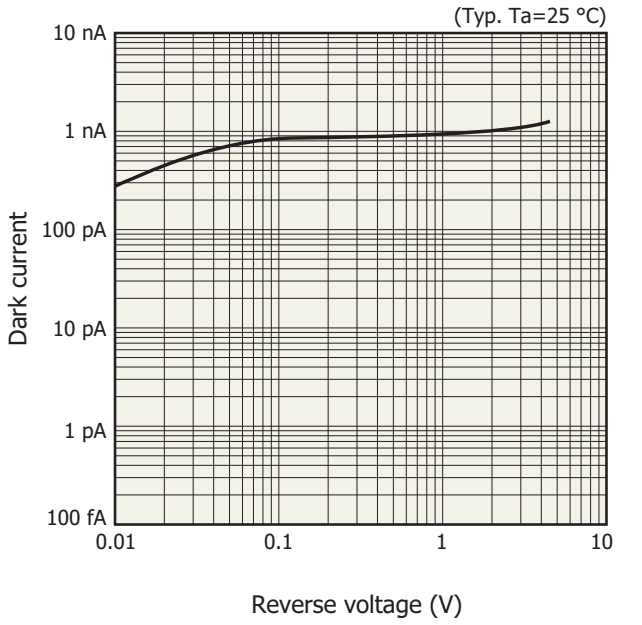
Dark current vs. reverse voltage



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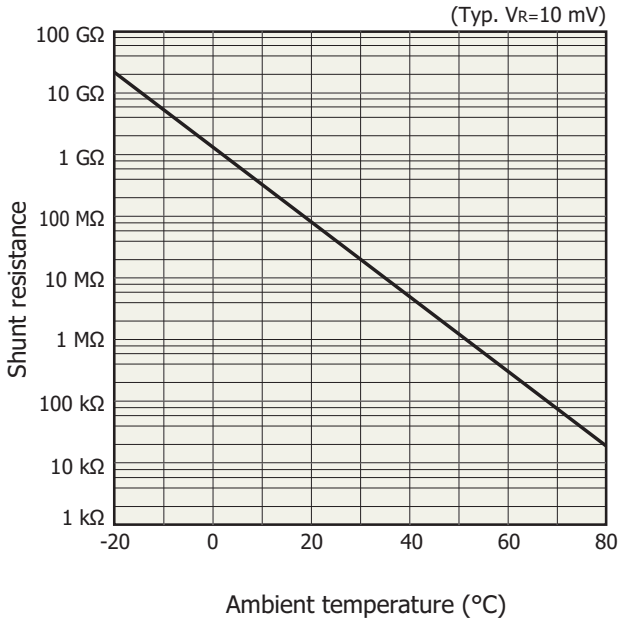
Shunt resistance vs. ambient temperature



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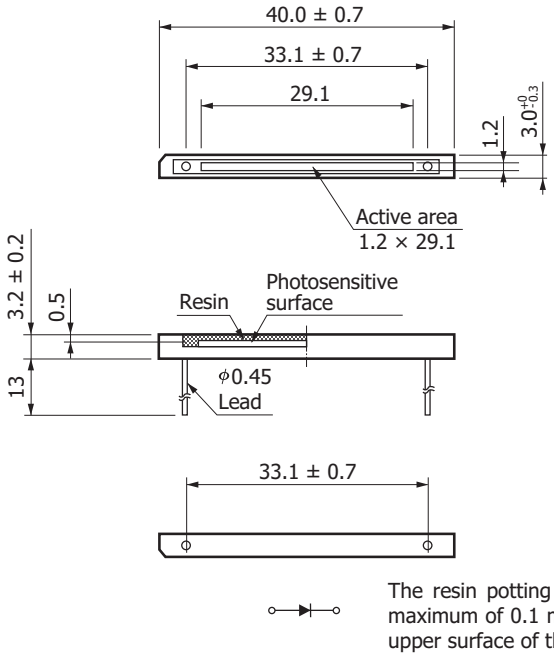
Dimensional outline (unit: mm)



The resin potting may extend a maximum of 0.1 mm beyond the upper surface of the package.

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