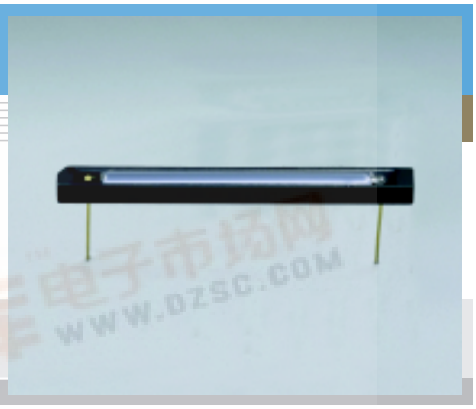
PHOTODIODE

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

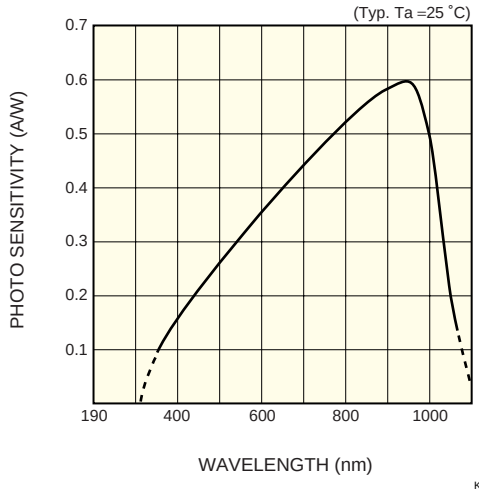
■ Absolute maximum ratings

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

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	320 to 1060	-	nm
Peak sensitivity wavelength	λp		-	920	-	nm
Photo sensitivity	S	λ=λp	-	0.6	-	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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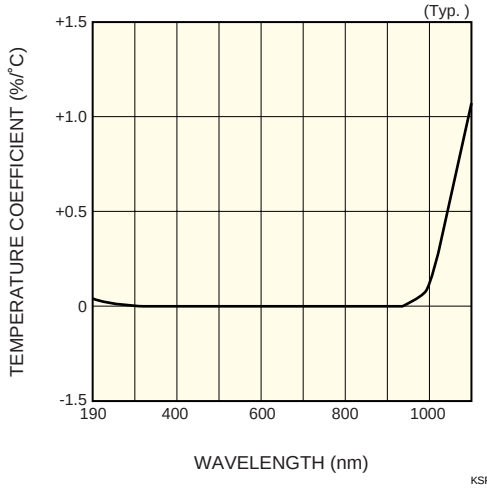
■ Photo sensitivity temperature characteristic



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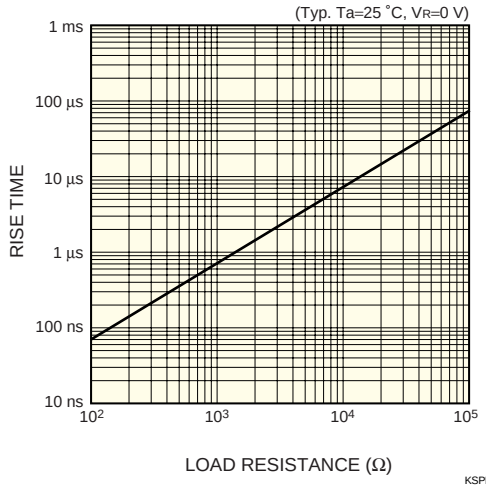
■ Rise time vs. load resistance



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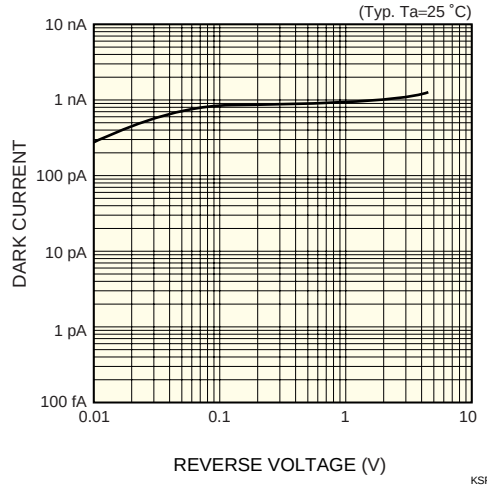
■ Dark current vs. reverse voltage



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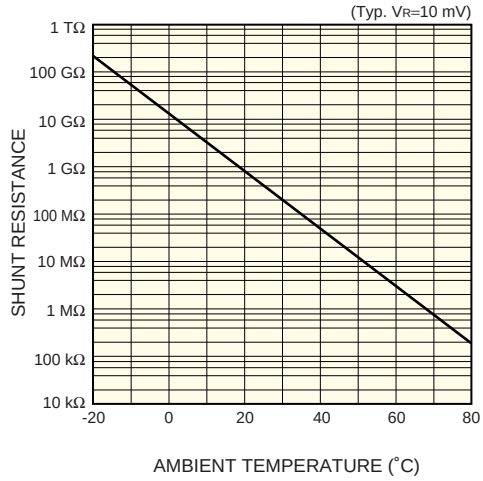
■ Shunt resistance vs. ambient temperature



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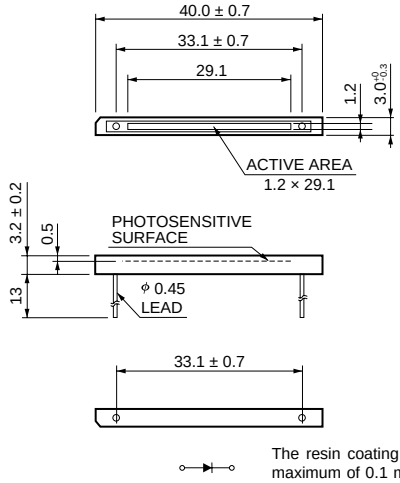
■ Dimensional outline (unit: mm)



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

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HAMAMATSU PHOTONICS K.K., Solid State Division
1126-1 Ichino-cho, Higashi-ku, Hamamatsu City, 435-8558 Japan, Telephone: (81) 53-434-3311, Fax: (81) 53-434-5184, www.hamamatsu.com
U.S.A.: Hamamatsu Corporation: 360 Foothill Road, P.O.Box 6910, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1) 908-231-0960, Fax: (1) 908-231-1218
Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49) 08152-3750, Fax: (49) 08152-2658
France: Hamamatsu Photonics France S.A.R.L.: 19, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: 33-(1) 69 53 71 00, Fax: 33-(1) 69 53 71 10
United Kingdom: Hamamatsu Photonics UK Limited: 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire AL7 1BW, United Kingdom, Telephone: (44) 1707-294888, Fax: (44) 1707-325777
North Europe: Hamamatsu Photonics Norden AB: Smidesvägen 12, SE-171 41 Solna, Sweden, Telephone: (46) 8-509 031 00, Fax: (46) 8-509 031 01