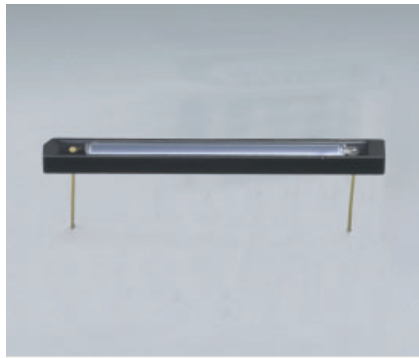


Si photodiode



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	T_{opr}	-20 to +60	°C
Storage temperature	T_{stg}	-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 ($T_a=25$ °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	340 to 1060	-	nm
Peak sensitivity wavelength	λ_p		-	920	-	nm
Photo sensitivity	S	$\lambda=\lambda_p$	-	0.6	-	A/W
		$\lambda=663$ nm	-	0.37	-	A/W
Short circuit current	I_{sc}	100 lx	24	30	-	μ A
Dark current	I_D	$V_R=10$ mV	-	-	1	nA
Temperature coefficient of I_D	T_{CID}		-	1.15	-	times/°C
Rise time	t_r	$V_R=0$ V, $R_L=1$ k Ω	-	1.4	-	μ s
Terminal capacitance	C_t	$V_R=0$ V, $f=10$ kHz	-	350	-	pF
Shunt resistance	Rsh	$V_R=10$ mV	0.01	0.03	-	G Ω
Noise equivalent power	NEP	$V_R=0$ V, $\lambda=\lambda_p$	-	3.9×10^{-14}	-	W/Hz ^{1/2}

Spectral response

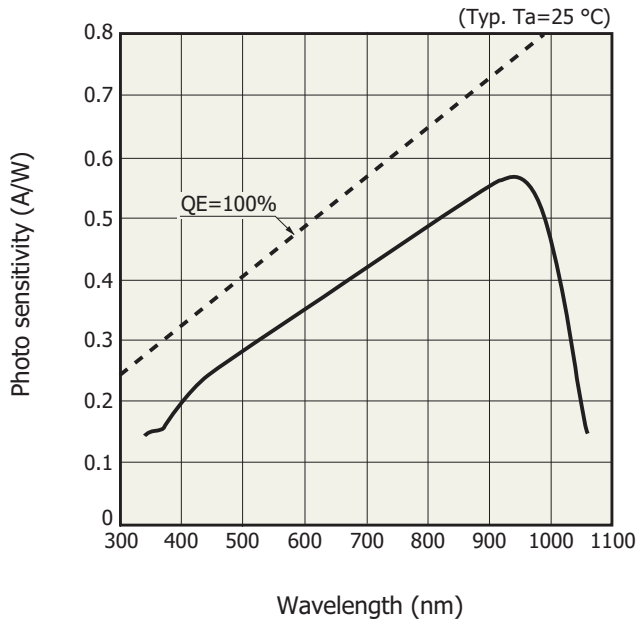
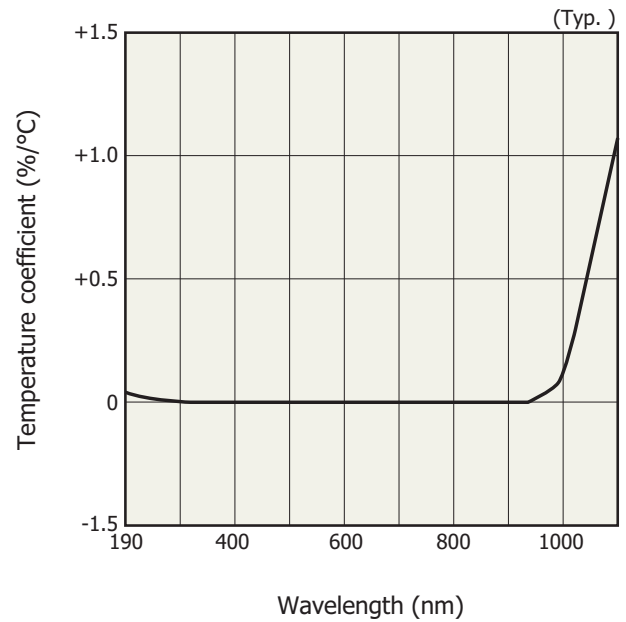
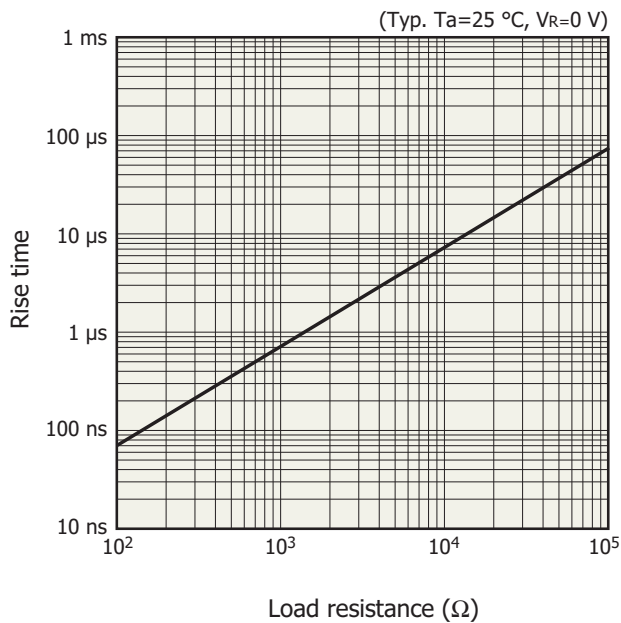


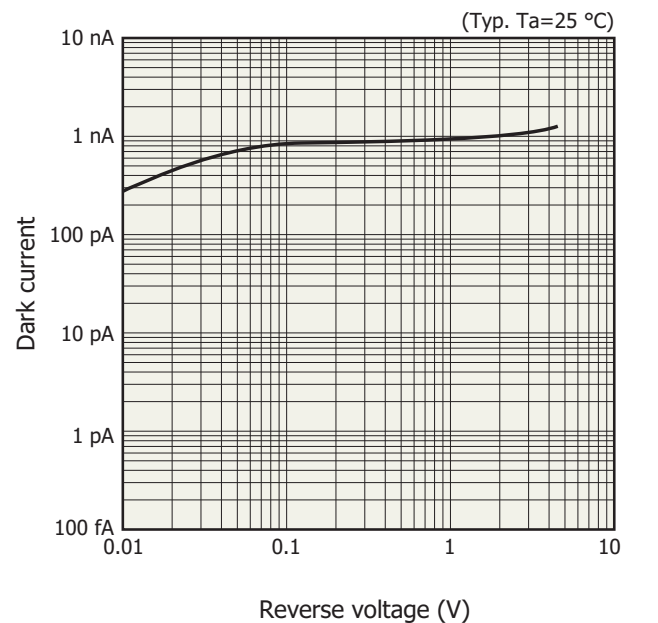
Photo sensitivity temperature characteristic



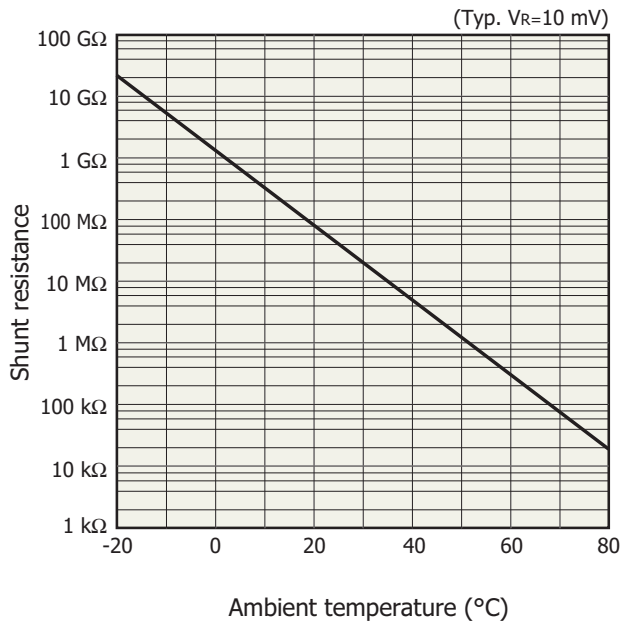
Rise time vs. load resistance



Dark current vs. reverse voltage

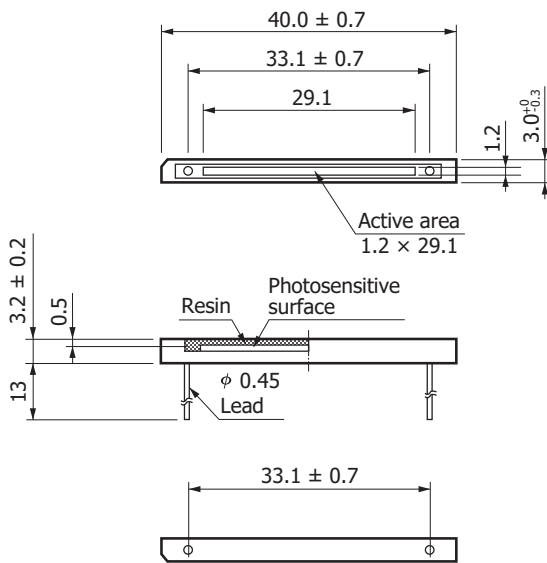


Shunt resistance vs. ambient temperature



KSPD80176EB

Dimensional outline (unit: mm)



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

KSPDA0116EB

Information described in this material is current as of October, 2011.

Product specifications are subject to change without prior notice due to improvements or other reasons. Before assembly into final products, please contact us for the delivery specification sheet to check the latest information.

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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HAMAMATSUwww.hamamatsu.com

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

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) 8152-375-0, Fax: (49) 8152-265-8

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

Italy: Hamamatsu Photonics Italia S.R.L.: Strada della Moia, 1 int. 6, 20020 Arese, (Milano), Italy, Telephone: (39) 02-935-81-733, Fax: (39) 02-935-81-741