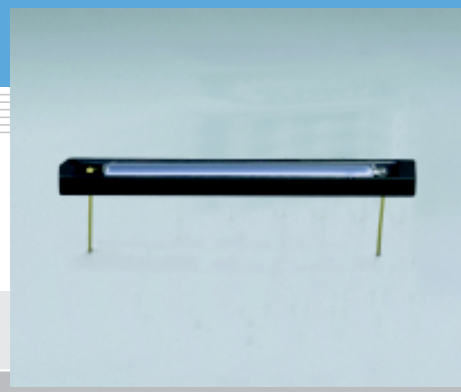


Si photodiode S2551

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

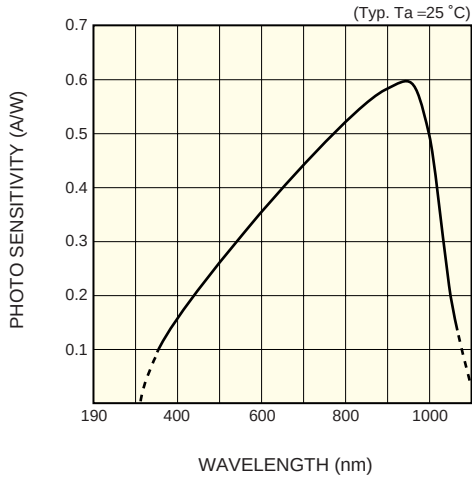
■ Absolute maximum ratings

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

■ Electrical and optical characteristics ($T_a = 25$ °C)

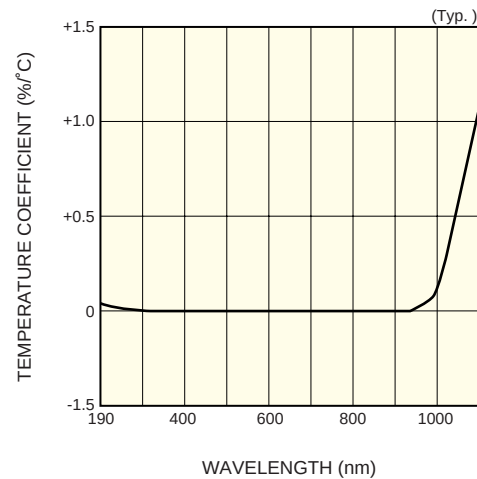
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	320 to 1060	-	nm
Peak sensitivity wavelength	λ_p		-	920	-	nm
Photo sensitivity	S	$\lambda = \lambda_p$	-	0.6	-	A/W
		$\lambda = 663$ nm	-	0.37	-	A/W
Short circuit current	I_{sc}	100 lx	24	30	-	μA
Dark current	I_D	$V_R = 10$ mV	-	-	1	nA
Temperature coefficient of I_D	TC_{ID}		-	1.15	-	times/°C
Rise time	t_r	$V_R = 0$ V, $R_L = 1$ kΩ	-	1.4	-	μs
Terminal capacitance	C_t	$V_R = 0$ V, $f = 10$ kHz	-	350	-	pF
Shunt resistance	R_{sh}	$V_R = 10$ mV	0.01	0.03	-	GΩ
Noise equivalent power	NEP	$V_R = 0$ V, $\lambda = \lambda_p$	-	3.9×10^{-14}	-	W/Hz ^{1/2}

■ Spectral response



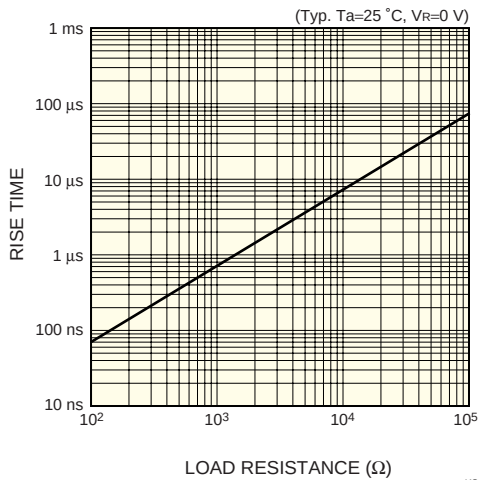
KSPDB0173EA

■ Photo sensitivity temperature characteristic



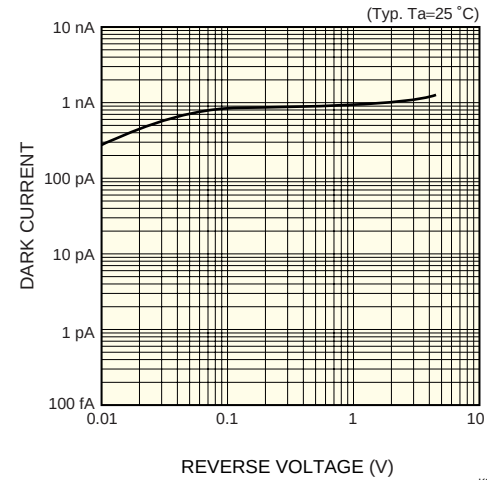
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■ Rise time vs. load resistance



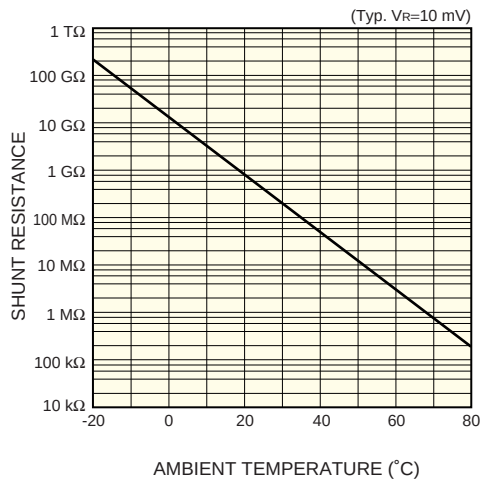
KSPDB0174EA

■ Dark current vs. reverse voltage



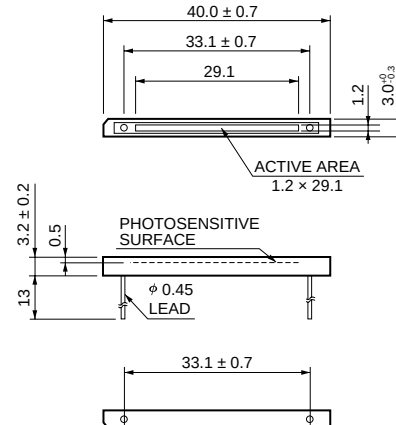
KSPDB0175EA

■ Shunt resistance vs. ambient temperature



KSPDB0176EA

■ Dimensional outline (unit: mm)



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

KSPDA0116EA

HAMAMATSU

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