BS520

Photodiode for Visible Light

■ Features

1. Spectral sensitivity characteristics akin to that of human eye

2. Compact flat package

3. Low dark current (Id: MAX. 10⁻¹¹A at V_R=1V)

4. Infrared light cut-off type

■ Applications

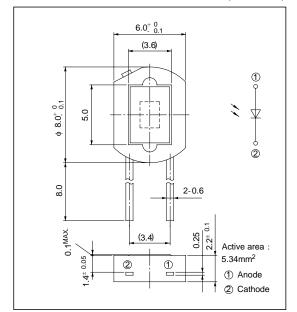
1. AE (automatic exposure) system and ES (electronic shutter) system for cameras

2. Stroboscopes

3. Precise optical instruments

■ Outline Dimensions

(Unit:mm)



■ Absolute Maximum Ratings $(Ta=25^{\circ}C)$

Parameter	Symbol	Rating	Unit
Reverse voltage	V _R	10	V
Operating temperature	Topr	- 20 to + 60	°C
Storage temperature	T _{stg}	- 30 to + 80	°C
*1 Soldering temperature	T _{sol}	260	°C

^{*1} For 5 seconds

■ Electro-optical Characteristics

 $(Ta= 25^{\circ}C)$

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*2 Short circuit current	Isc	E _v = 100lx	0.40	0.55	0.65	μA
*2 Short circuit current temperature coefficient	βт	E _V = 100lx	-	0.02	0.06	% /°C
Dark current	I_d	$V_R = 1V$	-	3 x 10 -12	10 -11	A
Dark current temperature coefficient	αт	V _R = 1V	-	4.0	5.0	times/ 10°C
Terminal capacitance	Ct	V _R = 0, f= 100kHz	-	600	1 000	pF
Peak sensitivity wavelength	λp	-	500	560	600	nm
*3 Spectral sensitivity infrared radiation ratio	ΔI_R	-	-	5	10	%

^{*2} E _V: Illuminance by CIE standard light source A(tungsten lamp)

*3 Δ I _R= $\frac{1_{SC} (\mu >=/0.0\text{nm})}{I_{SC} (\text{entire wavelength})} \times 100\%$

 $I_{SC}(\mu > = 700 \text{nm})$

Fig. 1 Short Circuit Current vs.

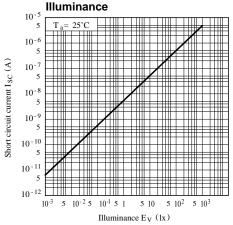


Fig. 3 Dark Current vs. Reverse Voltage

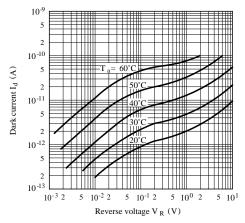
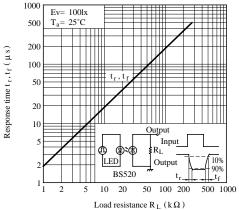


Fig. 5 Response Time vs. Load Resistance



• Please refer to the chapter "Precautions for Use."

Fig. 2 Relative Short Circuit Current vs. Ambient Temperature

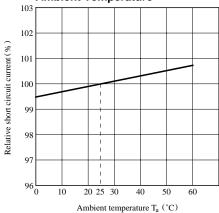
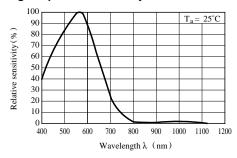


Fig. 4 Spectral Sensitivity



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