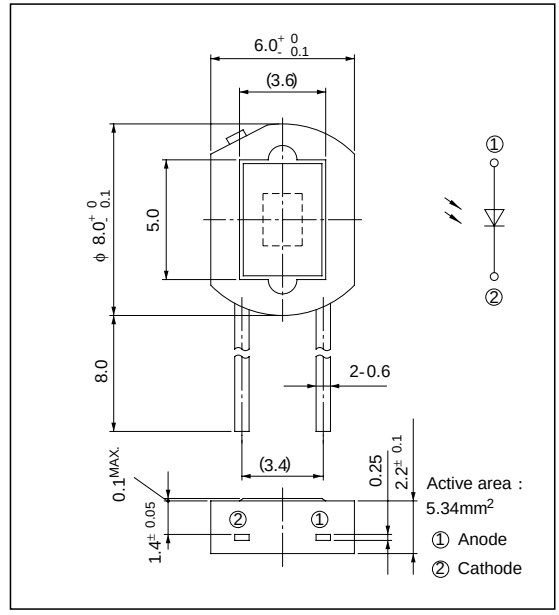
BS520

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^{-11}A at V_R=1V)
4. Infrared light cut-off type

■ Outline Dimensions (Unit:mm)



■ Applications

1. AE (automatic exposure) system and ES (electronic shutter) system for cameras
2. Stroboscopes
3. Precise optical instruments

■ Absolute Maximum Ratings (Ta= 25˚C)

Parameter	Symbol	Rating	Unit
Reverse voltage	V_R	10	V
Operating temperature	T_{opr}	-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˚C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*2 Short circuit current	I_{SC}	E_V= 100lx	0.40	0.55	0.65	μA
*2 Short circuit current temperature coefficient	β_T	E_V= 100lx	-	0.02	0.06	%/˚C
Dark current	I_d	V_R= 1V	-	3×10^{-12}	10^{-11}	A
Dark current temperature coefficient	α_T	V_R= 1V	-	4.0	5.0	times/10˚C
Terminal capacitance	C_t	V_R= 0, f= 100kHz	-	600	1 000	pF
Peak sensitivity wavelength	λ_p	-	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 $\Delta I_R = \frac{I_{SC}(\lambda >= 700nm)}{I_{SC}(\text{entire wavelength})} \times 100\%$

" In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that occur in equipment using any of SHARP's devices, shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest version of the device specification sheets before using any SHARP's device. "

Fig. 1 Short Circuit Current vs. Illuminance

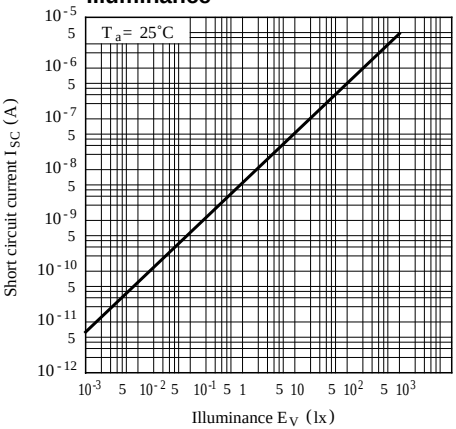


Fig. 2 Relative Short Circuit Current vs. Ambient Temperature

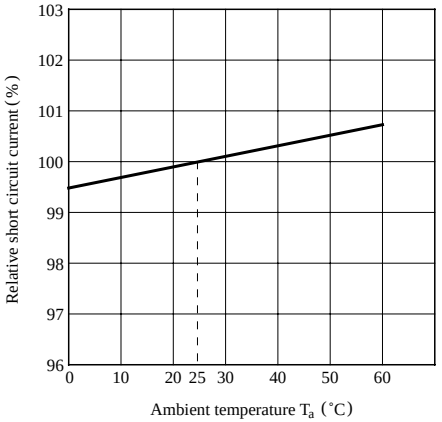


Fig. 3 Dark Current vs. Reverse Voltage

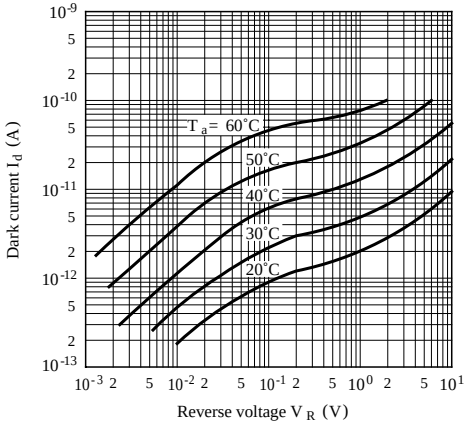


Fig. 4 Spectral Sensitivity

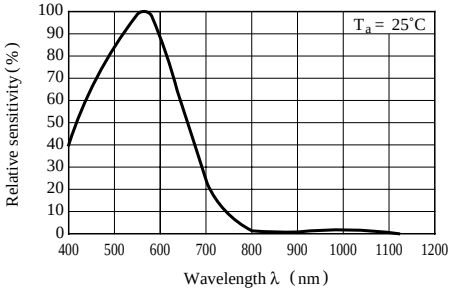
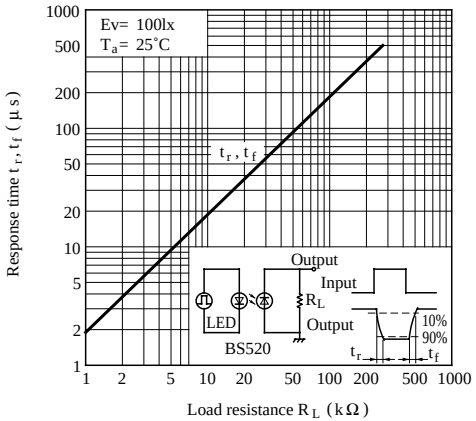


Fig. 5 Response Time vs. Load Resistance



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

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