(Unit:mm)

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

6.0^{+0}_{-01} (3.6) 0.0 5.0 8.0+ -0 8.0 2-0.6 0.1^{MAX.} 0.25 (3.4) 2.2 Active area : 5.34mm² 0.05 2 1 $\tilde{\Box}$ (1) Anode 4 (2) Cathode

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	VR	10	V				
Operating temperature	Topr	- 20 to + 60	°C				
Storage temperature	T _{stg}	- 30 to + 80	°C				

T_{sol}

*1 For 5 seconds

*1 Soldering temperature

Electro-optical Characteristics

						/
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*2 Short circuit current	Isc	$E_{v} = 100 lx$	0.40	0.55	0.65	μA
*2 Short circuit current temperature coefficient	βт	$E_V = 100 lx$	-	0.02	0.06	% /°C
Dark current	Id	$V_R = 1V$	-	3 x 10 ⁻¹²	10 - 11	A
Dark current temperature coefficient	α _T	$V_R = 1V$	-	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	%

260

°C

*2 E v: Illuminance by CIE standard light source A(tungsten lamp)

 $I_{SC}(\mu >=700nm)$ $*3 \Delta I_R = I_{SC}$ (entire wavelength) x 100%

> 1 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."

(Ta= 25°C)

Outline Dimensions

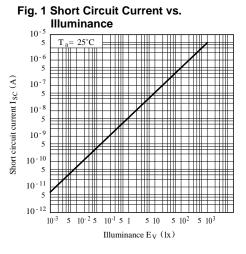


Fig. 3 Dark Current vs. Reverse Voltage

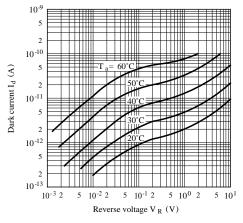
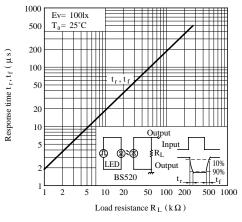


Fig. 5 Response Time vs. Load Resistance



Please refer to the chapter "Precautions for Use."

Fig. 2 Relative Short Circuit Current vs. Ambient Temperature

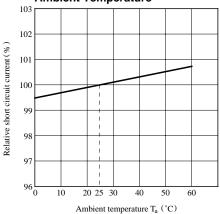
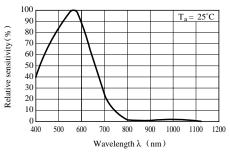


Fig. 4 Spectral Sensitivity



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 - Office automation equipment
 - Telecommunication equipment [terminal]
 - Test and measurement equipment
 - Industrial control
 - Audio visual equipment
 - Consumer electronics

(ii)Measures such as fail-safe function and redundant design should be taken to ensure reliability and safety when SHARP devices are used for or in connection with equipment that requires higher reliability such as:

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- Traffic signals
- Gas leakage sensor breakers
- Alarm equipment
- Various safety devices, etc.

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