BS520

Photodiode for Visible Light

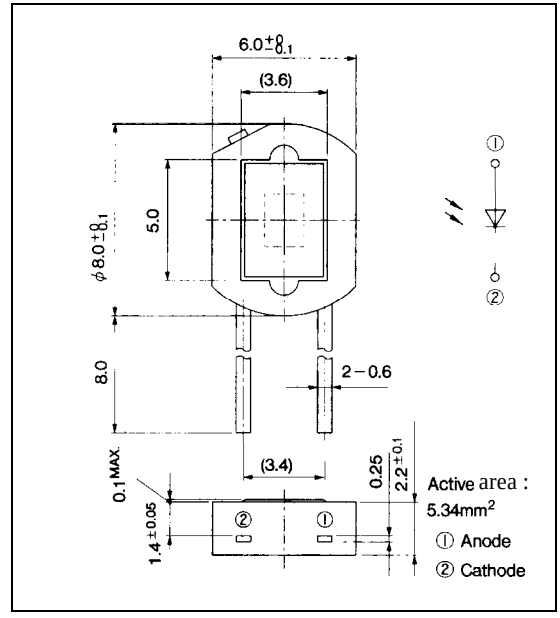
■ Features

1. Spectral sensitivity characteristics akin to that of human eye
2. Compact flat package
3. Low dark current
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°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
*1Soldering temperature	T_{sol}	260	°C

*1 For 5 seconds

■ Electro-optical Characteristics (Ta = 25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
*2Short circuit current	I_{SC}	E_V = 100lx	0.40	0.55	0.65	μA
*2Short circuit current temperature coefficient	β_T	Ev = 1001x	−	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	1000	pF
Peak sensitivity wavelength	λ_p		500	560	600	nm
*3Spectral sensitivity infrared radiation ratio	AIR		−	5	10	%

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

*3 $\triangle I_R = I_{SC}$(entire wavelength) / I_{SC}(λ ≥ 700nm) × 100%

Fig. 1 Short Circuit Current vs. Illuminance

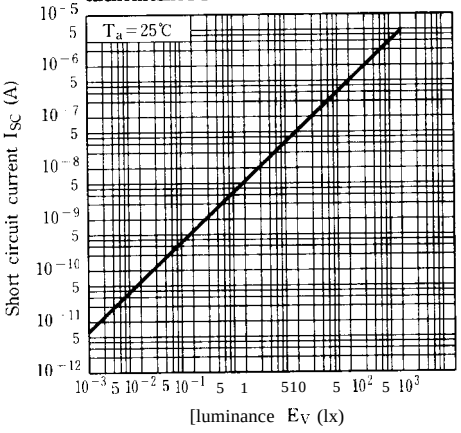


Fig. 2 Relative Short Circuit Current vs. Ambient Temperature

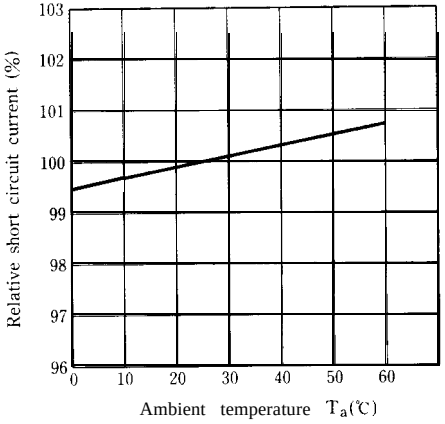


Fig. 3 Dark current vs. Reverse Voltage

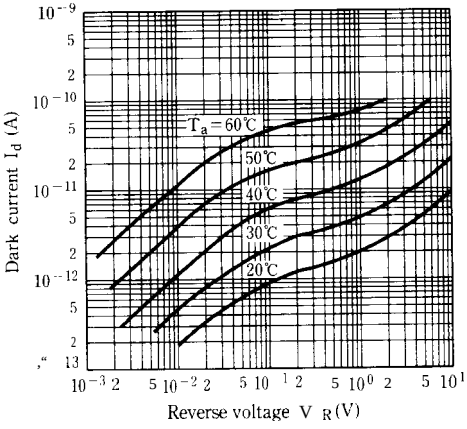


Fig. 4 Spectral Sensitivity

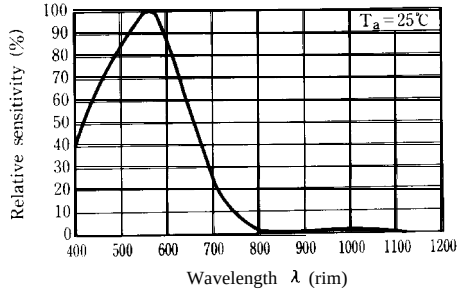
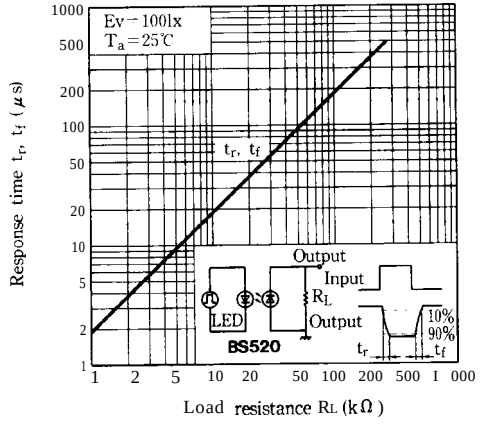


Fig. 5 Response Time vs. Load Resistance



● Please refer to the chapter "Precautions for Use." (Page 78 to 93)