Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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BS500A/BS501A Wide Wavelength Band Type Photodiode T-41-31

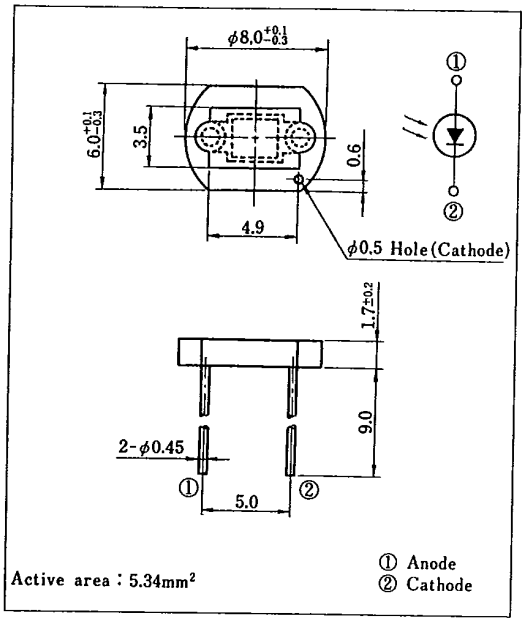
■ Features

1. High sensitivity (I_{SC}: MIN. 3.3μA at E_V= 100 ℓx)
2. Wide dynamic range
3. A wide range of sensitivity wavelength

■ 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	BS500A	BS501A	Unit
Reverse voltage	V_R	10	10	V
Operating temperature	T_{opr}	−10～+60	−10～+60	°C
Storage temperature	T_{stg}	−20～+80	−20～+80	°C
*1Soldering temperature	T_{sol}	260	260	°C

*1 For 5 seconds

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

Parameter	Symbol	Conditions	BS500A			BS501A			Unit
			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
*2Short circuit current	I_{SC}	E_V=100ℓx	3.3	—	5.5	3.3	—	5.5	μA
*2Short circuit current temperature coefficient	β_T	E_V=100ℓx	—	0.2	—	—	0.2	—	%/°C
Dark current	I_d	V_R=2V	—	10^{-11}	2×10^{-9}	—	3×10^{-12}	5×10^{-12}	A
Terminal capacitance	C_t	V_R=0, f=1MHz	—	600	—	—	600	—	pF
Peak sensitivity wavelength	λ_p		800	850	900	800	850	900	nm

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

T-41-51

Fig. 1 Short Circuit Current vs. Illuminance

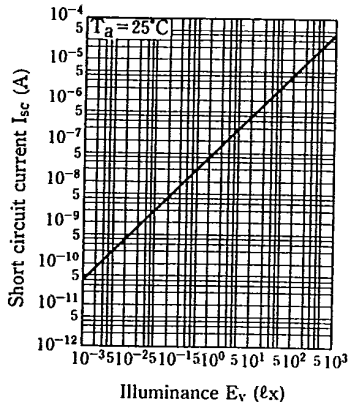


Fig. 2 Relative Short Circuit Current vs. Ambient Temperature

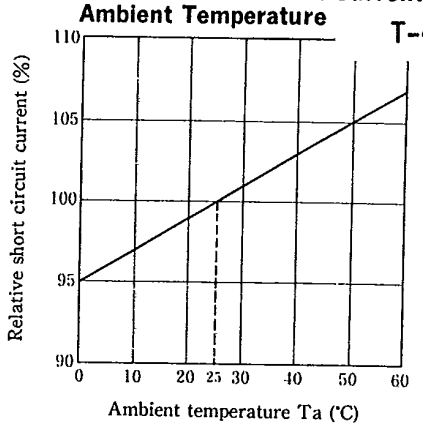


Fig. 3 Dark Current vs. Reverse Voltage

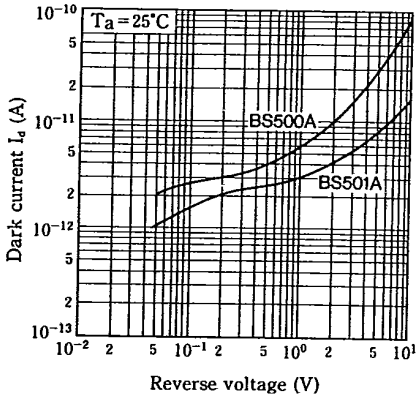


Fig. 4 Spectral Sensitivity

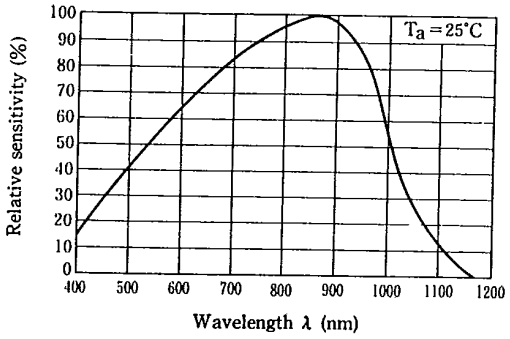


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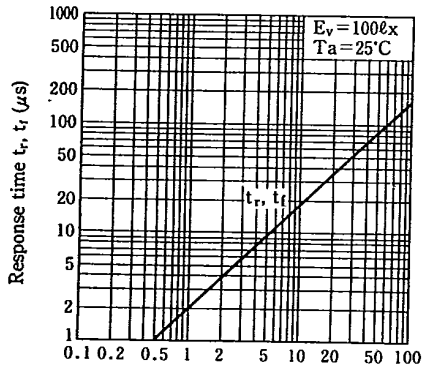
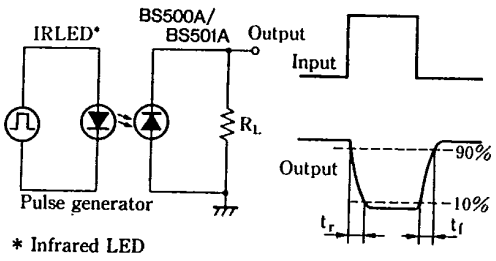
Fig. 5 Response Time vs. Load Resistance



Test Circuit for Response Time



* Infrared LED