

SHARP

BS115

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Can Package Photodiode for Visible Light

■ Features

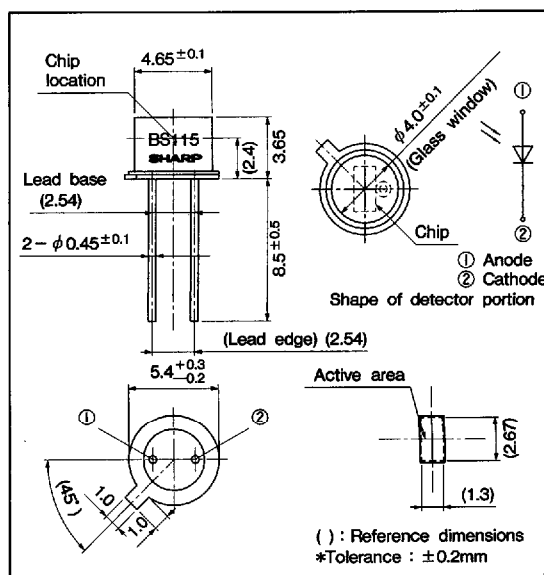
1. Spectral sensitivity characteristics akin to that of human eye
2. Wide operating temperature ($T_{opr} : -30$ to $+110^{\circ}\text{C}$)
3. High reliability (can package is adopted)
4. Low dark current ($I_d : \text{MAX. } 1\text{nA}$ at $V_R=5\text{V}$)

■ Applications

1. LCD backlight monitor
2. Exposure meter

■ Outline Dimensions

(Unit : mm)



■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse voltage	V_R	5	V
Operating temperature	T_{opr}	-30 to +110	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-40 to +125	$^{\circ}\text{C}$
Soldering temperature	T_{sol}	260	$^{\circ}\text{C}$

■ Electro-optical Characteristics

(Ta=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Short circuit current	I_{sc}	*1 $E_V=100\text{lX}$	1.4	1.7	2.1	μA
Short circuit current temperature coefficient	β_{TF}	*1 $E_V=100\text{lX}$	—	0.05	—	$\%/^{\circ}\text{C}$
Dark current	I_d	$V_R=5\text{V}$	—	—	1.0	nA
Open circuit voltage	V_{oc}	*1 $E_V=100\text{lX}$	370	470	—	mV
Peak sensitivity wavelength	λ_P		—	750	—	nm
Terminal capacitance	C_t	$V_R=0\text{V}$, $f=10\text{kHz}$	—	270	—	pF
Response time	t_r	$V_R=0$, $R_L=1\text{k}\Omega$	—	2.0	—	μs

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

Fig. 1 Spectral Sensitivity (Typical Value)

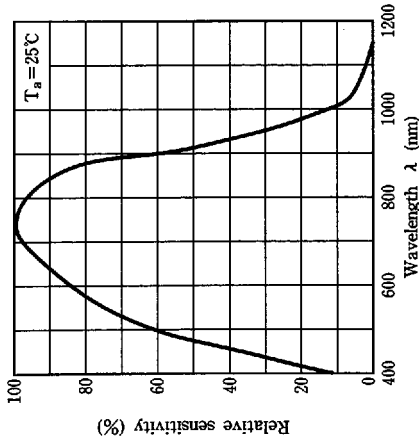
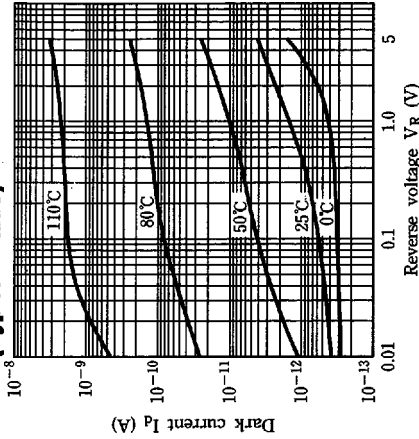


Fig. 2 Dark Current vs. Reverse Voltage (Typical Value)



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