SD - 101 · SD - 102 · SD - 103

The SD - 101,102,103 are position sensors for automatic focusing of camera.

FEATURES

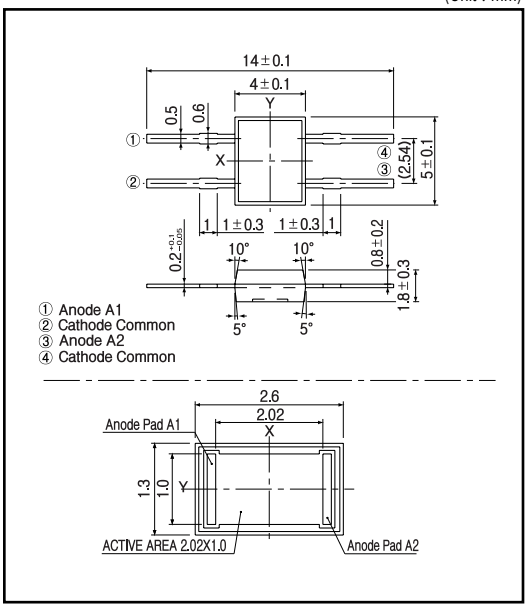
- Laser beam focusing/positioning is best performed
- High performance
- High reliability in demanding environments

APPLICATIONS

- Automatic focusing of camera

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25℃)

Item	Symbol	Rating	Unit
Reverse voltage	V_R	30	V
Power dissipation	P_D	30	mW
Operating temp.	Topr.	- 25 ~ + 85	℃
Storage temp.	Tstg.	- 30 ~ + 100	℃

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25℃)

Item	Symbol	Conditions	SD - 101			SD - 102			SD - 103			Unit.
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Reverse voltage	V_R	I_R=10μA	30			30			30			V
Dark current	Id	V_R=1V			5			5			5	nA
Light current	I_L *1	V_R=1V, E_V=1000lx *5		18		9	11		8	10		μA
Spectral sensitivity	λ		400~1100			700~1100			720~1100			nm
Peak wavelength	λp			900			920			940		nm
Switching speeds	tr, tf	V_R=1V, R_L=1KΩ		2			2			2		μsec.
Capacitance	Ct	V_R=1V, f=1MHz		10			10			10		pF
Resistance	R_S *2	V_R=1V, Va=0.5V	100	150	200	100	150	200	100	150	200	KΩ
Signal slope	α *3	V_R=1V		0.100			0.100			0.100		-
Light current difference	$\Delta I_L/I_L$ *4				±2			±2			±2	%

*1. $I_L = I_{L1} + I_{L2}$ (I_{L1}=Light current of A1, I_{L2}=Light current of A2)

*2. Va=Voltage of Anode A1,A2

*3. $\alpha = 1(I_{L1} - I_{L2})/(I_{L1} + I_{L2})1$

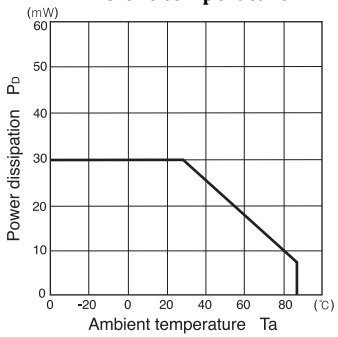
*4. $\Delta L = I_{L1} - I_{L2}$

*5. Color temp.=2856K standard Tungsten lamp

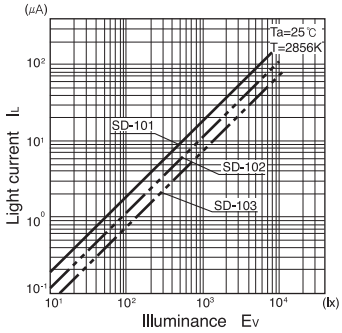
Position Sensitive Diode

SD - 101 · SD - 102 · SD - 103

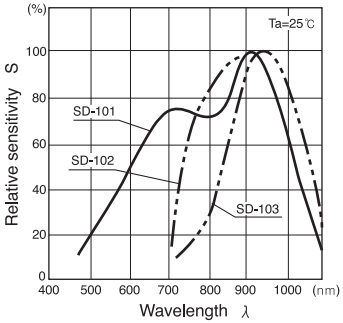
Power dissipation Vs. Ambient temperature



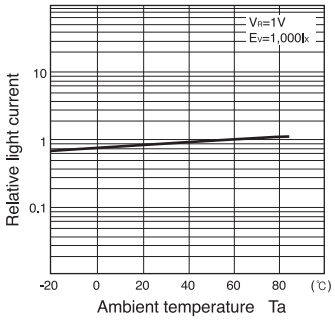
Light current Vs. Illuminance



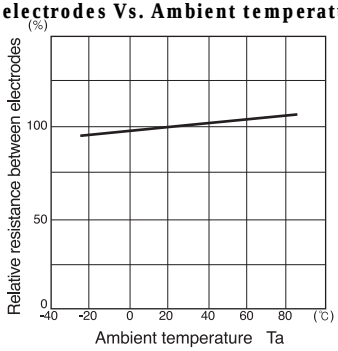
Relative sensitivity Vs. Wavelength



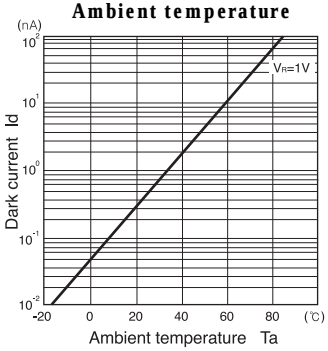
Relative light current Vs. Ambient temperature



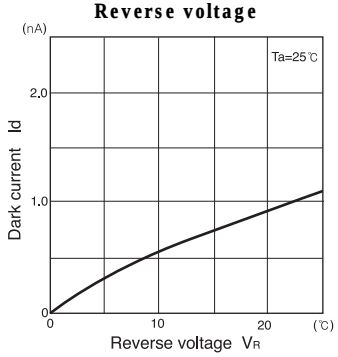
Relative resistance between electrodes Vs. Ambient temperature



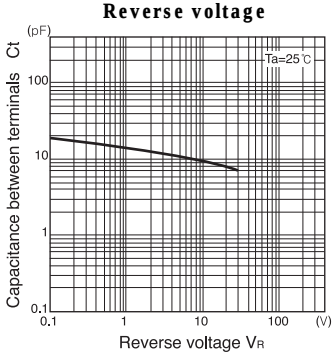
Dark current Vs. Ambient temperature



Dark current Vs. Reverse voltage



Capacitance between terminals Vs. Reverse voltage



Relative light current Vs. Position

