

SD - 503

The SD - 503 is position sensors for automatic focusing of camera.

FEATURES

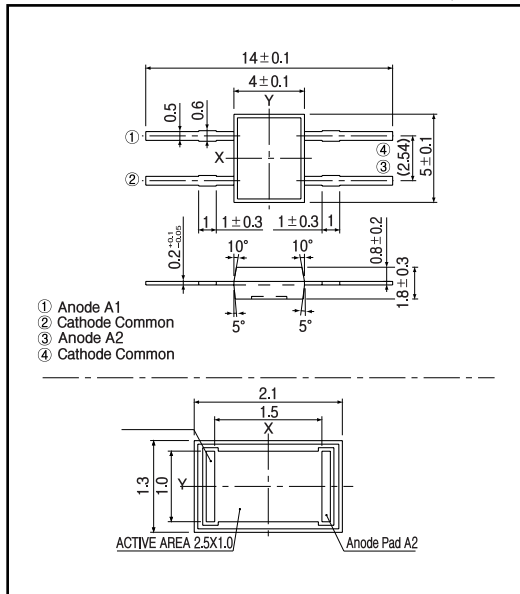
- Laser beam focusing/positioning is best performed
- High performance.
- High reliability in demanding environments.

APPLICATIONS

- Automatic focusing of camera.

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
Reverse voltage	V_R	15	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	Min.	Typ.	Max.	Unit.
Reverse voltage	V_R	$I_R = 10 \mu A$	15			V
Dark current	I_d	$V_R = 1V$			5	nA
Light current	I_L^{*1}	$V_R = 1V, E = 1000lx^5$	6	9		μA
Spectral sensitivity				700 ~ 1,100		nm
Peak wavelength	λ_p			940		nm
Switching speeds	tr, tf	$V_R = 1V, R_L = 1K$		2		$\mu sec.$
Capacitance	Ct	$V_R = 1V, f = 1MHz$		5		pF
Resistance	R_S^{*2}	$V_R = 1V, V_a = 0.5V$	100	150	200	K
Signal slope	τ^3	$V_R = 1V$		0.134		-
Light current difference	I_1/I_2^{*4}				± 2	%

*1. $I_1 = I_1 + I_2$ (I_1 = Light current of A1, I_2 = Light current of A2)

*2. V_a = Voltage of Anode A1, A2

*3. $\tau = 1/(I_1 - I_2) / (I_1 + I_2) \tau$

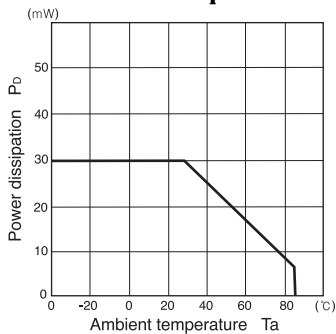
*4. $L = I_1 - I_2$

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

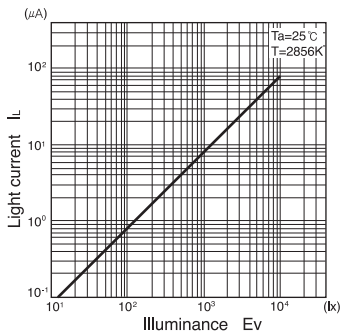
Position Sensitive Diode

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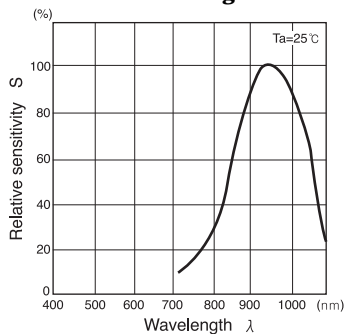
Power dissipation Vs. Ambient temperature



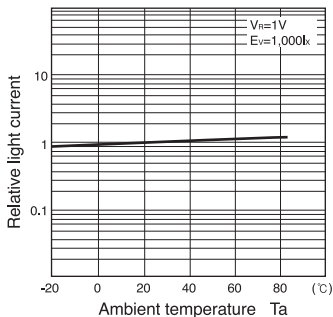
Light current Vs. Illuminance



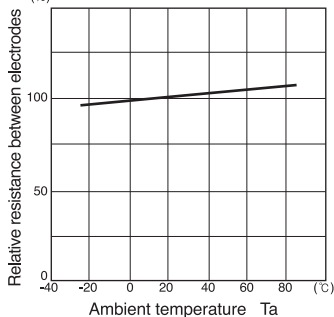
Relative sensitivity Vs. Wavelength



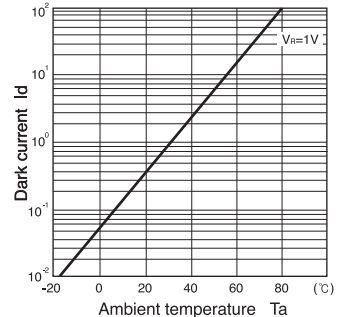
Relative light current Vs. Ambient temperature



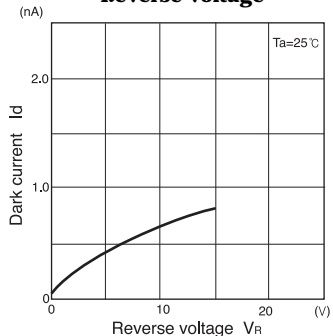
Relative resistance between electrodes Vs. Ambient temperature



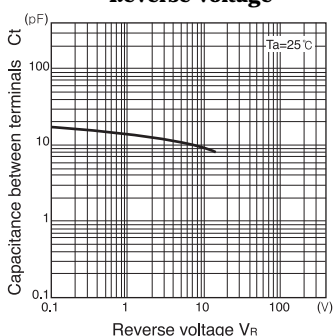
Dark current Vs. Ambient temperature



Dark current Vs. Reverse voltage



Capacitance between terminals Vs. Reverse voltage



Relative light current Vs. Position

