

SD - 112S · SD - 112F2

The SD - 112, 112F2 are position sensors for automatic focusing of camera.

FEATURES

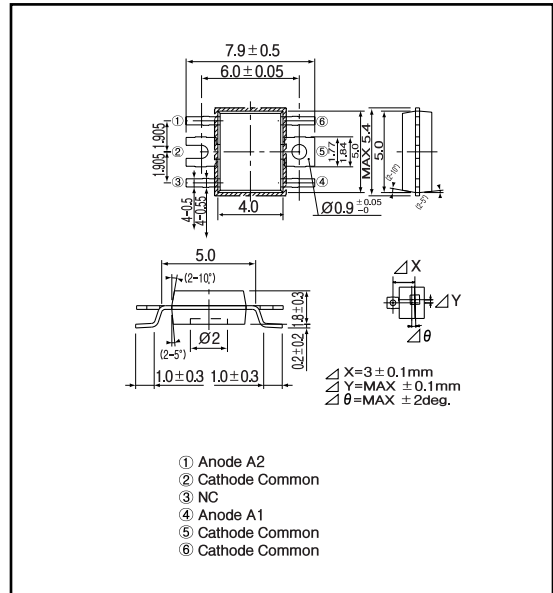
- Visible ray cut off flat package
- Laser beam focusing/positioning is best performed
- With alignment hole

APPLICATIONS

- Automatic focusing of camera

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25 °C)

Item	Symbol	Rating	Unit
Reverse voltage	V_R	30	V
Power dissipation	P_D	30	mW
Operating temp.	$T_{opr.}$	- 25 ~ +85	
Storage temp.	$T_{stg.}$	- 30 ~ +100	
Soldering temp.	$T_{sol.}$	260	

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25 °C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Reverse voltage	V_R	$I_R = 10 \mu A$	30			V
Dark current	I_d	$V_R = 1V$			5	nA
Light current	I_L	$V_R = 1V, E = 1000 \text{ lx}$	9	11		μA
Spectral sensitivity	λ			700 ~ 1100		nm
Peak wavelength	λ_p			920		nm
Switching speeds	t_r, t_f	$V_R = 1V, R_L = 1K\Omega$		2		$\mu sec.$
Capacitance	C_t	$V_R = 1V, f = 1MHz$		10		pF
Resistance	R_s	$V_R = 1V, V_a = 0.5V$		150	200	$K\Omega$
Signal slope	α^{*3}	$V_R = 1V$	100	0.100		-
Light current difference	$\Delta I_L / I_L$				± 2	%

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

*2. V_a = Voltage of Anode A1, A2

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

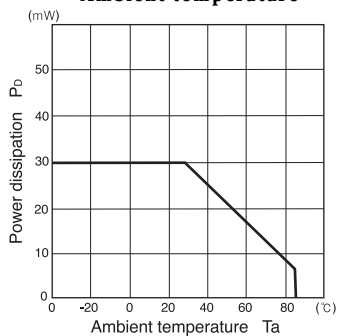
*4. $\Delta I_L = I_1 - I_2$

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

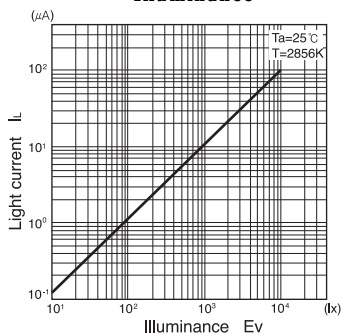
Position Sensitive Diode

SD - 112S · SD - 112F2

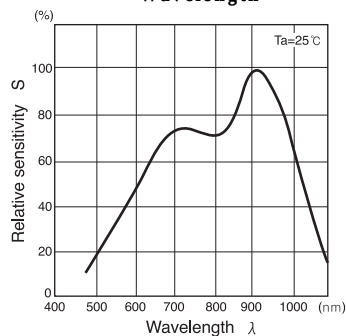
**Power dissipation Vs.
Ambient temperature**



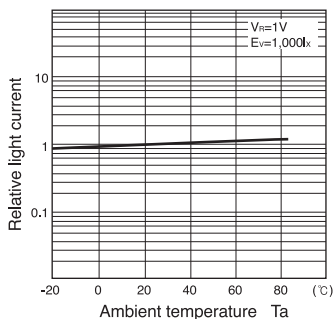
**Light current Vs.
Illuminance**



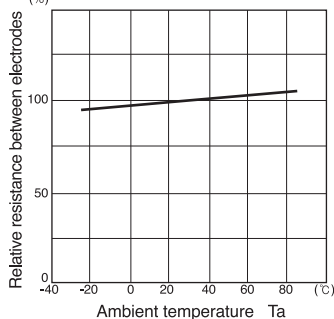
**Relative sensitivity Vs.
Wavelength**



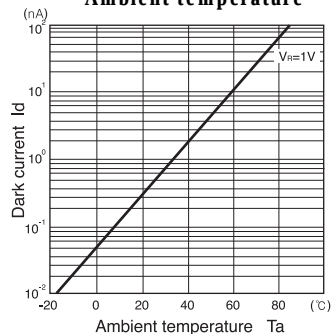
**Relative light current Vs.
Ambient temperature**



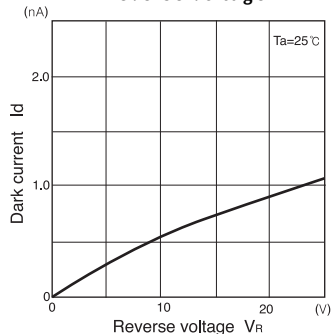
**Relative resistance between
electrodes Vs. Ambient temperature**



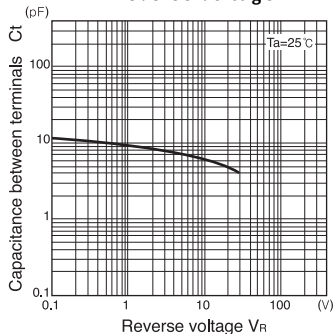
**Dark current Vs.
Ambient temperature**



**Dark current Vs.
Reverse voltage**



**Capacitance between terminals Vs.
Reverse voltage**



**Relative light current Vs.
Position**

