

Position Sensitive Diodes

KODENSHI

SD - 112S · SD - 112F2

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

FEATURES

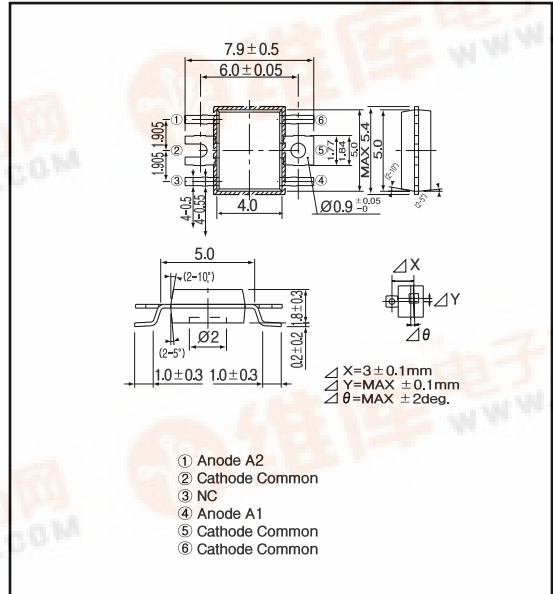
- Visible ray cut off flat package
- Laser beam focusing/positioning is best performed
- With alignment hole

APPLICATIONS

- Automatic focusing of camera

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

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)

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	$V_R = 1V, E = 1000 I_x^2$	9	11		μA
Spectral sensitivity				700 ~ 1100		nm
Peak wavelength	ρ			920		nm
Switching speeds	t_r, t_f	$V_R = 1V, R_L = 1K$		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
Signal slope	τ	$V_R = 1V$	100	0.100		-
Light current difference	I_1/I_2				± 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. $\tau = (t_1 - t_2) / (I_1 - I_2)$

*4. $E = I_1 \cdot I_2$

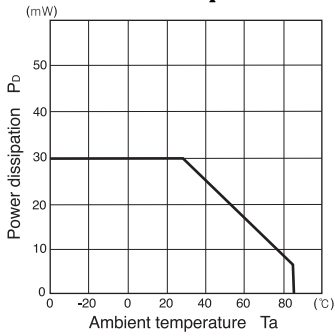
*5. Color temp. = 2856K standard Tungsten lamp



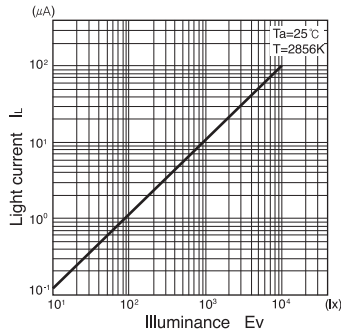
Position Sensitive Diode

SD - 112S · SD - 112F2

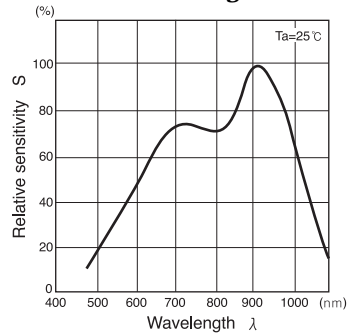
Power dissipation Vs. Ambient temperature



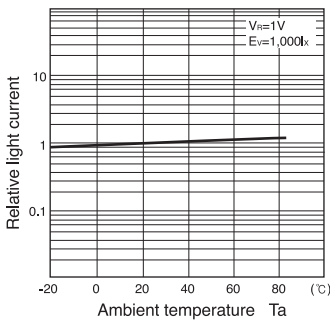
Light current Vs. Illuminance



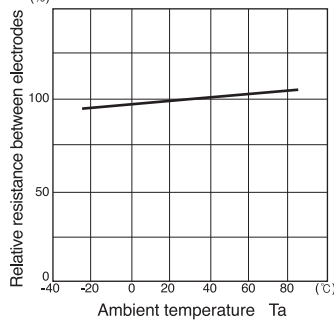
Relative sensitivity Vs. Wavelength



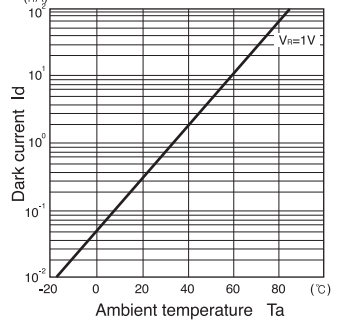
Relative light current Vs. Ambient temperature



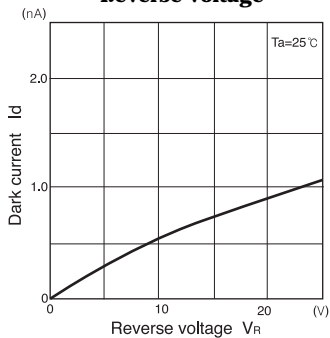
Relative resistance between electrodes Vs. Ambient temperature



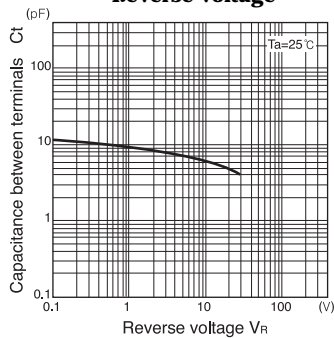
Dark current Vs. Ambient temperature



Dark current Vs. Reverse voltage



Capacitance between terminals Vs. Reverse voltage



Relative light current Vs. Position

