

Position Sensitive Diodes

KODENSHI

SD - 402

The SD - 402 is position sensors for automatic focusing of camera. It has 22 millimeter area.

FEATURES

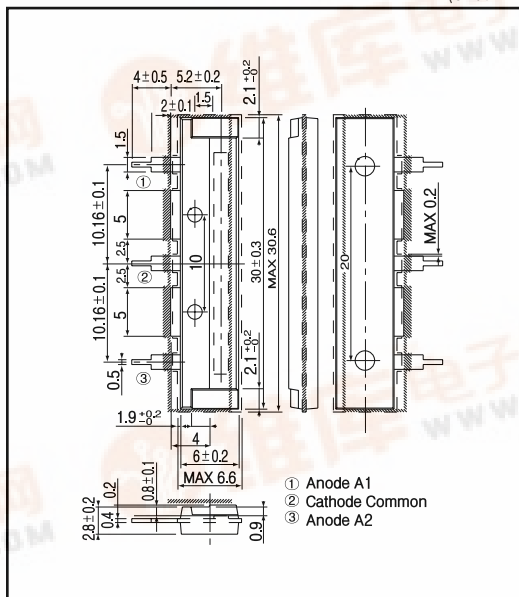
- Laser beam focusing/positioning is best performed
- High performance

APPLICATIONS

- Optical disk

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Rating	Unit
Reverse voltage	V_R	15	V
Power dissipation	P_o	30	mW
Operating temp.	Topr.	-20~+85	°C
Storage temp.	Tstg.	-25~+90	°C

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Reverse voltage	V_R	$I_R=10\mu A$	15			V
Dark current	I_d	$V_R=1V$			10	nA
Light current	I_L	$V_R=1V, E_s=1000lx^5$	100	120		μA
Spectral sensitivity	λ			700~1,100		nm
Peak wavelength	λ_p			940		nm
Capacitance	C_t	$V_R=1V, f=1MHz$		30		pF
Resistance	R_s^{-2}	$V_R=1V, V_a=0.5V$	140	200	260	$K\Omega$
Signal slope	α^3	$V_R=1V$		0.036		-
Light current difference	$\Delta I_L/I_L^{-4}$				±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. $I_L=I_1+I_2$

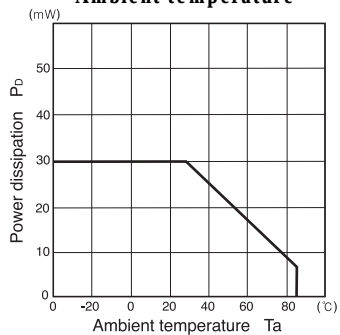
*5. Color temp.=2856K standard Tungsten lamp



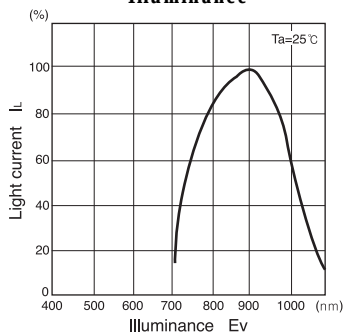
Position Sensitive Diode

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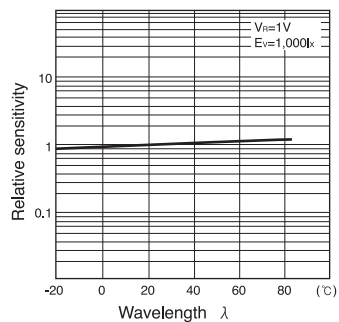
Power dissipation Vs. Ambient temperature



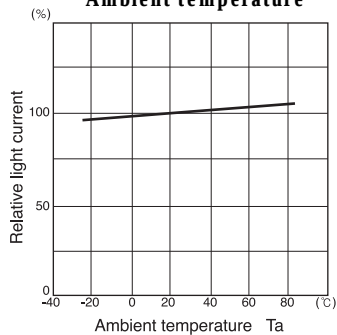
Light current Vs. Illuminance



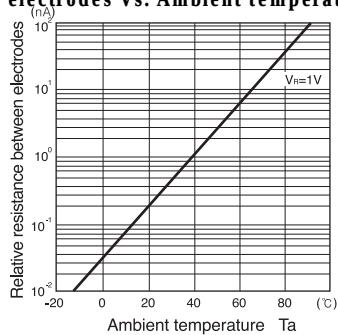
Relative sensitivity Vs. Wavelength



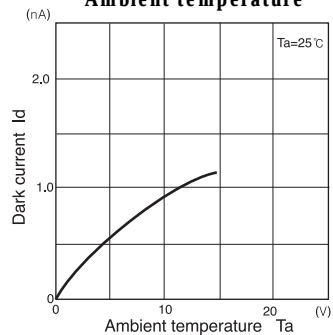
Relative light current Vs. Ambient temperature



Relative resistance between electrodes Vs. Ambient temperature



Dark current Vs. Ambient temperature



Relative light current Vs. Position

