

# SD - 402

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

## FEATURES

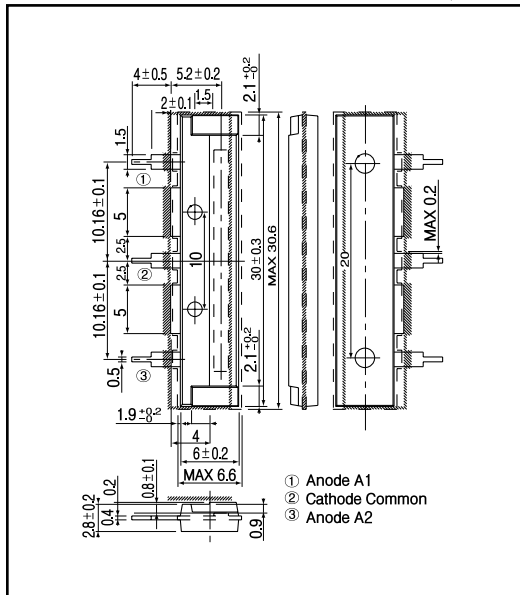
- Laser beam focusing/positioning is best performed
- High performance

## APPLICATIONS

- Optical disk

## DIMENSIONS

(Unit : mm)



## MAXIMUM RATINGS

(Ta=25 )

Item	Symbol	Rating	Unit
Reverse voltage	$V_R$	15	V
Power dissipation	$P_D$	30	mW
Operating temp.	$T_{opr.}$	- 20 ~ + 85	
Storage temp.	$T_{stg.}$	- 25 ~ + 90	

## 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	$I_d$	$V_R=1V$			10	nA
Light current	$I_L$ <sup>*1</sup>	$V_R=1V, E=1000lx^*$	100	120		$\mu A$
Spectral sensitivity				700 ~ 1,100		nm
Peak wavelength	$\lambda_p$			940		nm
Capacitance	$C_t$	$V_R=1V, f=1MHz$		30		pF
Resistance	$R_s$ <sup>*2</sup>	$V_R=1V, V_a=0.5V$	140	200	260	K
Signal slope	$\alpha$ <sup>*3</sup>	$V_R=1V$		0.036		-
Light current difference	$I_1/I_2$ <sup>*4</sup>				± 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.  $\alpha = (I_1 - I_2) / (I_1 + I_2)$

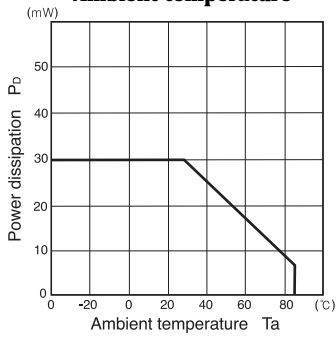
\*4.  $L = I_1 - I_2$

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

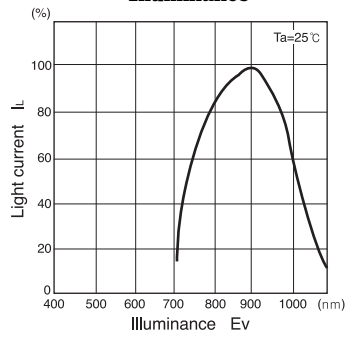
**Position Sensitive Diode**

**SD - 402**

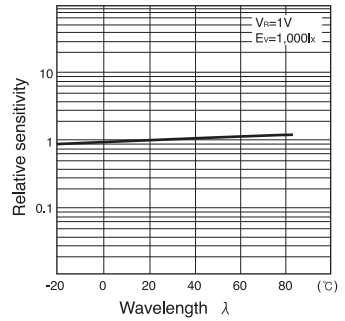
**Power dissipation Vs. Ambient temperature**



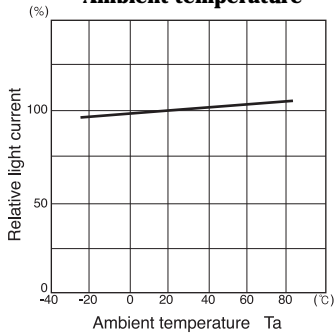
**Light current Vs. Illuminance**



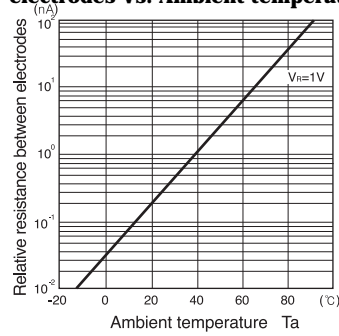
**Relative sensitivity Vs. Wavelength**



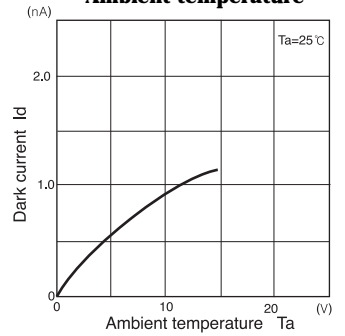
**Relative light current Vs. Ambient temperature**



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



**Dark current Vs. Ambient temperature**



**Relative light current Vs. Position**

