

Position Sensitive Diodes

The photodiode is position sensors for automatic focusing of camera.

FEATURES

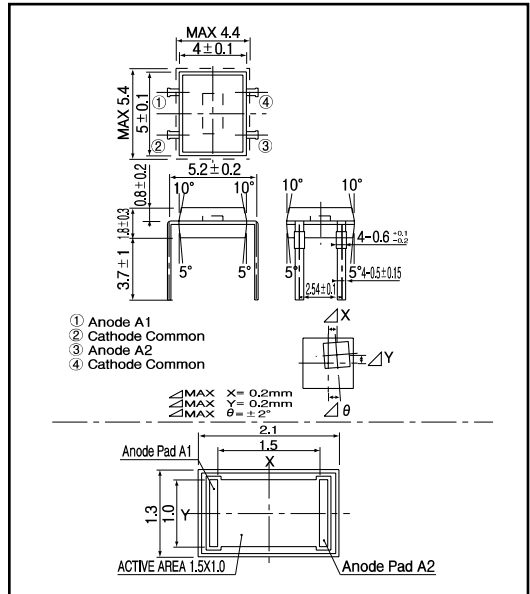
- Visible ray cut off flat package.
- Laser beam focusing/positioning is best performed.
- Lead forming type.

APPLICATIONS

- Automatic focusing of camera

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

($T_a = 25^\circ$)

| Item | Symbol | Rating | Unit |
|-------------------|------------|------------|------|
| Reverse voltage | V_R | 15 | V |
| Power dissipation | P_D | 30 | mW |
| Operating temp. | $T_{opr.}$ | - 25 + 85 | |
| Storage temp. | $T_{stg.}$ | - 30 + 100 | |
| Soldering temp.*1 | $T_{sol.}$ | 260 | |

*1. For MAX. 5 seconds at the position of 2mm from the package

ELECTRO-OPTICAL CHARACTERISTICS

($T_a = 25^\circ$)

| Item | Symbol | Conditions | Min. | Typ. | Max. | Unit. |
|----------------------------|-------------|--------------------------|------|----------|---------|------------|
| Collector dark current | I_d | $V_R = 1V$ | | 0.2 | 5 | nA |
| Light current*2 | I_L | $V_R = 1V, E = 1000lx^3$ | 6 | 8 | | μA |
| Spectral sensitivity | | | | 720 1100 | | nm |
| Peak wavelength | λ_p | | | 940 | | nm |
| Switching speeds | t_r, t_f | $V_R = 1V, R_L = 1K$ | | 2 | | $\mu sec.$ |
| Capacitance | C_t | $V_R = 1V, f = 1MHz$ | | 5 | | pF |
| Resistance*4 | R_s | $V_R = 1V, V_a = 0.5V$ | 260 | 330 | 400 | K |
| Signal slope*5 | | $V_R = 1V$ | | 0.134 | | |
| Light current difference*6 | I_1/I_2 | | | | ± 2 | % |

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

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

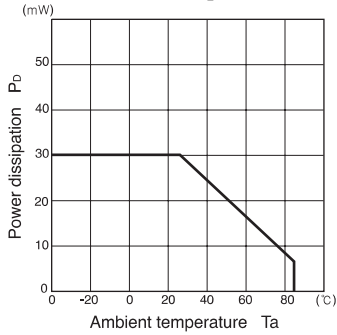
*4. V_a = Voltage of Anode A1, A2

*5. $= 1 / (1 - I_1) / (1 + I_2)$

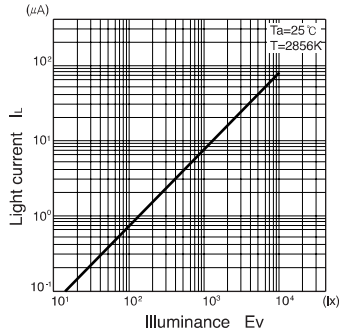
*6. $L = I_1 - I_2$

Position Sensitive Diode

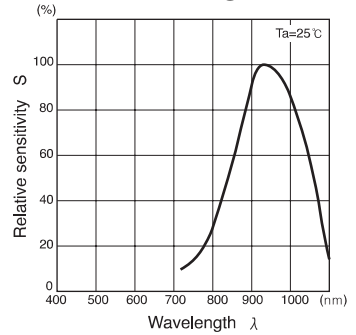
Power dissipation Vs. Ambient temperature



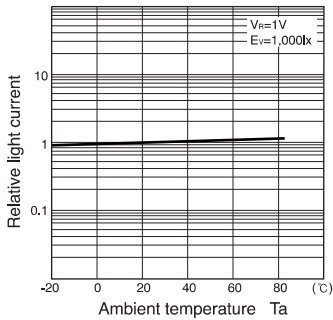
Light current Vs. Illuminance



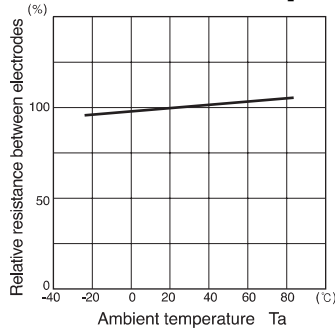
Relative sensitivity Vs. Wavelength



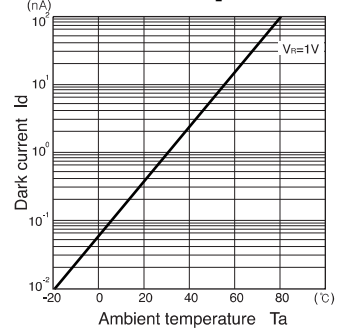
Relative light current Vs. Ambient temperature



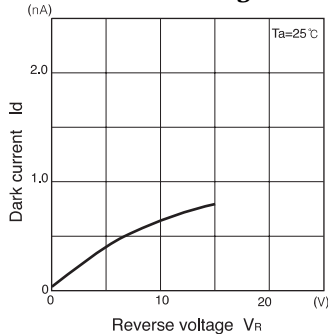
Relative resistance between electrodes Vs. Ambient temperature



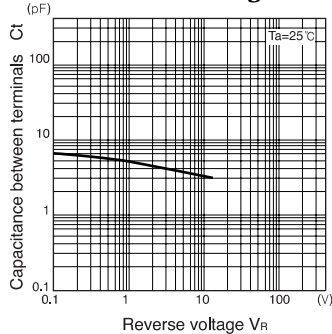
Dark current Vs. Ambient temperature



Dark current Vs. Reverse voltage



Capacitance between terminals Vs. Reverse voltage



Relative light current Vs. Position

