

PIN Photodiode

KODENSHI

HPI - 146A64S

The HPI - 146A64S is a silicon PIN photodiode has two active areas (photodiodes) integrated in one chip.

FEATURES

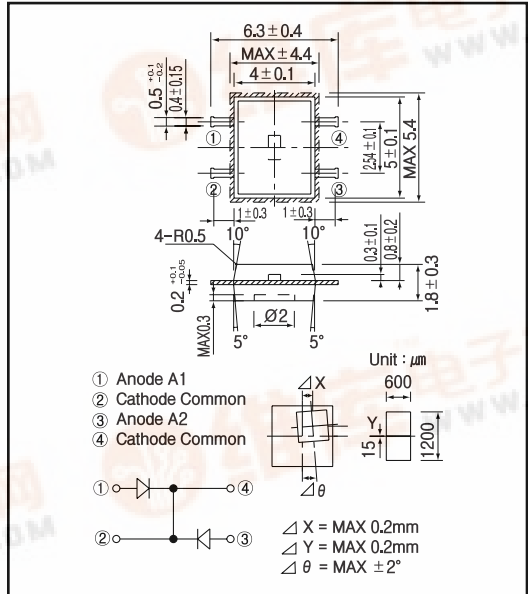
- Two segmented photodiodes/Flat plastic package
- High speed response

APPLICATIONS

- Auto focus

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25 )

| Item               | Symbol     | Rating     | Unit |
|--------------------|------------|------------|------|
| Reverse voltage    | $V_R$      | 30         | V    |
| Power dissipation  | $P_o$      | 30         | mW   |
| Operating temp.    | $T_{opr.}$ | - 25 + 85  |      |
| Storage temp.      | $T_{stg.}$ | - 40 + 100 |      |
| Soldering temp. *1 | $T_{sol.}$ | 260        |      |

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

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25 )

| Item                 | Symbol | Conditions               | Min. | Typ.     | Max. | Unit.   |
|----------------------|--------|--------------------------|------|----------|------|---------|
| Light current        | $I_L$  | $V_R=10V, E=1000lx^{-2}$ | 3.0  |          |      | $\mu A$ |
| Sensitivity          | S      | $V_R=10V, p=680nm$       | 0.43 | 0.48     |      | A/W     |
| Dark current         | $I_d$  | $V_R=10V$                |      |          | 10   | nA      |
| Capacitance          | $C_t$  | $V_R=10V, f=1MHz$        |      | 2.0      |      | pF      |
| Spectral sensitivity |        |                          |      | 450 1050 |      | nm      |
| Peak wavelength      | $p$    |                          |      | 800      |      | nm      |
| Half angle           |        |                          |      | $\pm 65$ |      | deg.    |
| Rise time            | $t_r$  | $V_R=10V, R=1k$          |      | 10       |      | ns      |
| Fall time            | $t_f$  | $p=780 800nm$            |      | 10       |      | ns      |

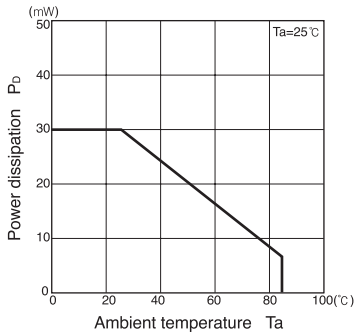
\*2. Color temp. =2856K standard Tungsten lamp



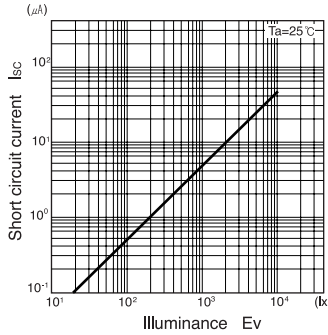
# PIN Photodiode

## HPI - 146A64S

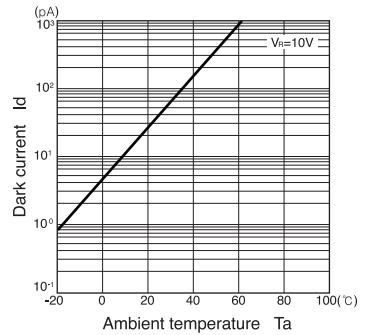
### Power dissipation Vs. Ambient temperature



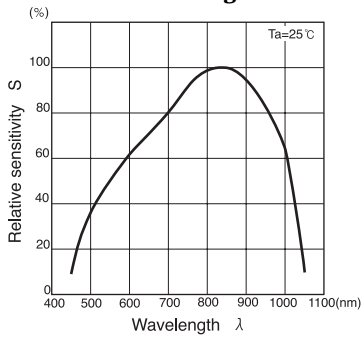
### Short circuit current Vs. Illuminance



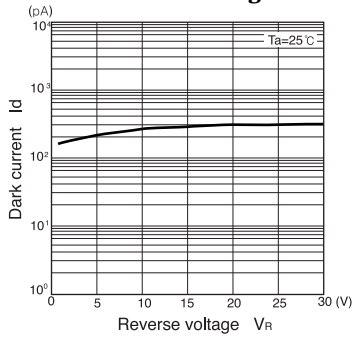
### Dark current Vs. Ambient temperature



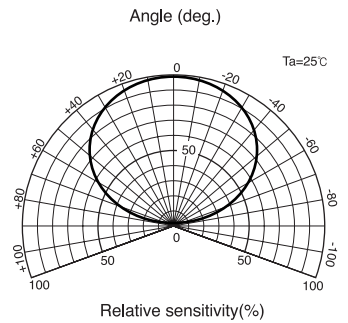
### Relative sensitivity Vs. Wavelength



### Dark current Vs. Reverse voltage



### Radiant Pattern



### Capacitance between terminals Vs. Reverse voltage

