

# Si PIN photodiode

S17348

## Si PIN photodiode for visible to infrared photometry

The S17348 is a Si PIN photodiode developed for YAG lasers (1060 nm). High photosensitivity of 0.37 A/W at 1060 nm and high-speed response of 120 MHz are realized.

### Features

- High sensitivity in infrared region: 0.37 A/W ( $\lambda=1060$  nm)
- High-speed response:  $f_c=120$  MHz ( $V_R=100$  V)
- Low capacitance:  $C_t=6.5$  pF ( $V_R=100$  V)
- Large photosensitive area:  $\phi 3$  mm
- High reliability: TO-5 metal package

### Applications

- Fiber laser detection
- YAG laser detection
- Analytical instrument, etc.

### Structure

Parameter	Symbol	Specification	Unit
Photosensitive area	-	$\phi 3$	mm
Package	-	TO-5	-
Window material	-	Borosilicate glass	-

### Absolute maximum ratings ( $T_a=25$ °C)

Parameter	Symbol	Condition	Value	Unit
Reverse voltage	$V_R$		150	V
Operating temperature	$T_{opr}$	No dew condensation*1	-40 to +100	°C
Storage temperature	$T_{stg}$	No dew condensation*1	-55 to +125	°C

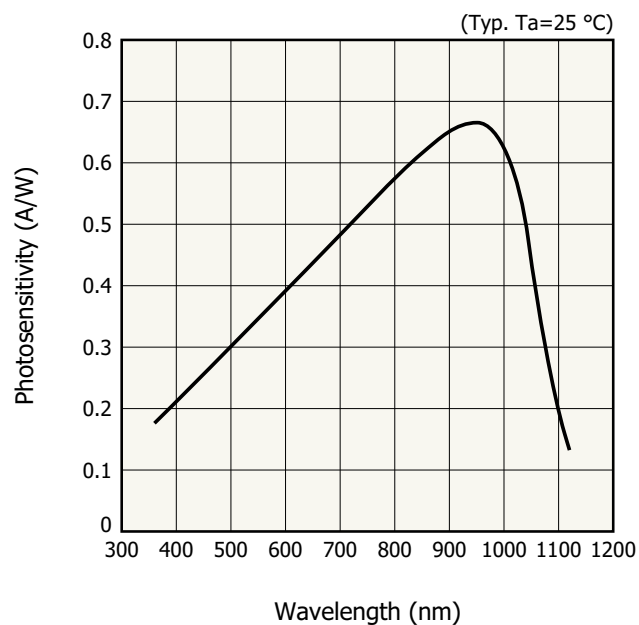
\*1: When there is a temperature difference between a product and the surrounding area in high humidity environments, dew condensation may occur on the product surface. Dew condensation on the product may cause deterioration in characteristics and reliability.

Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

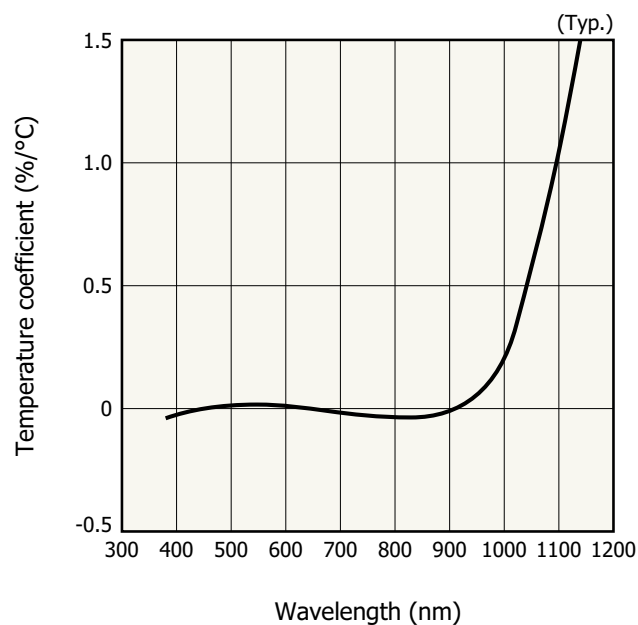
### Electrical and optical characteristics ( $T_a=25$ °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	$\lambda$		-	360 to 1120	-	nm
Peak sensitivity wavelength	$\lambda_p$		-	940	-	nm
Photosensitivity	$S$	$\lambda=1060$ nm	0.32	0.37	-	A/W
Short circuit current	$I_{sc}$	2856 K, 100 lx	6.9	7.6	-	$\mu$ A
Dark current	$I_D$	$V_R=100$ V	-	0.3	10	nA
Cutoff frequency	$f_c$	$V_R=100$ V, $R_L=50$ $\Omega$ $\lambda=1060$ nm	-	120	-	MHz
Terminal capacitance	$C_t$	$V_R=100$ V, $f=10$ kHz	-	6.5	-	pF

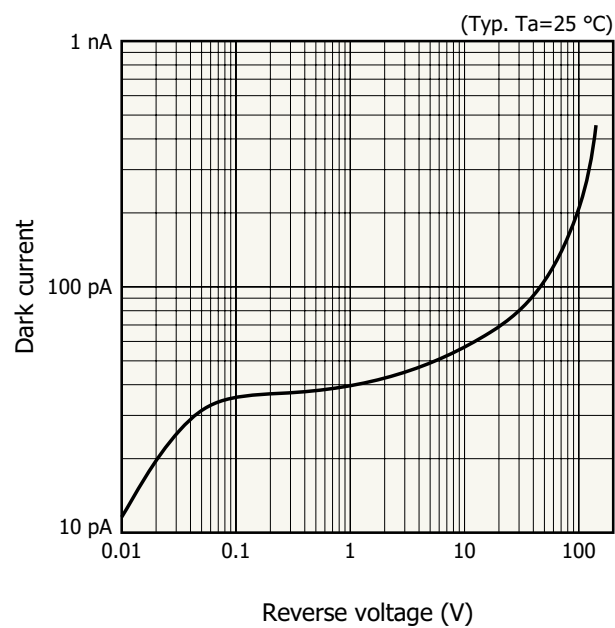
## Spectral response



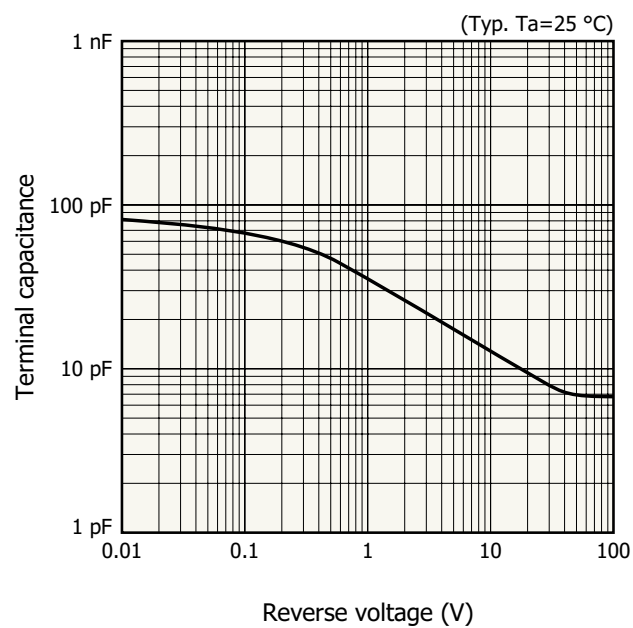
## Sensitivity temperature characteristics



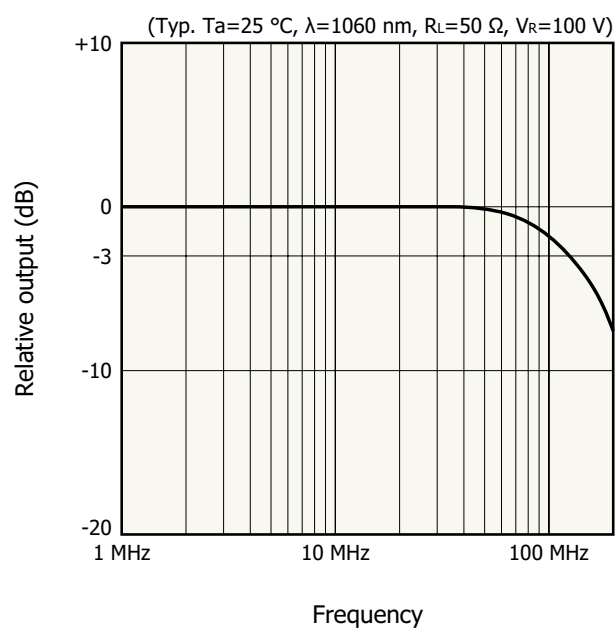
## Dark current vs. reverse voltage



## Terminal capacitance vs. reverse voltage

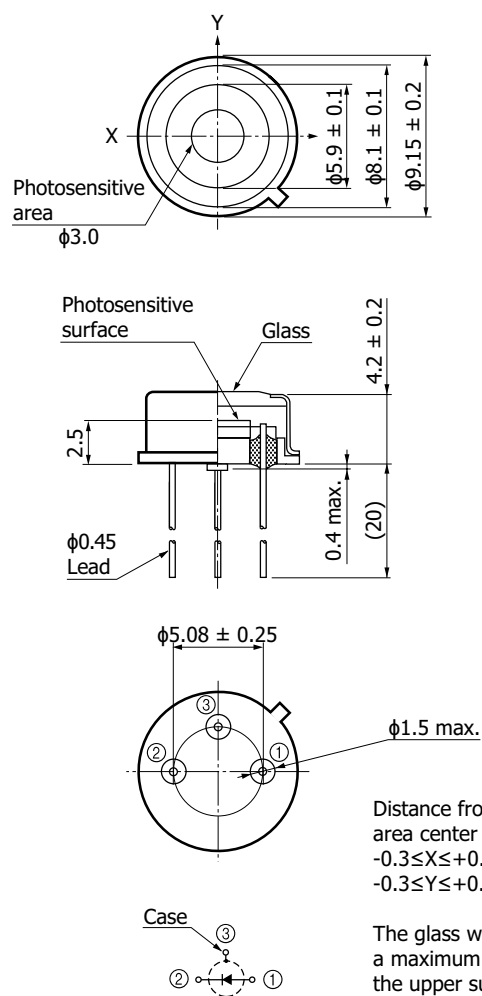


### Frequency characteristics



KPINB0475EA

### Dimensional outline (unit: mm)



KPINA0131EA

### Recommended soldering condition

- Solder temperature: 260  $^{\circ}\text{C}$  max. (10 s or less, once)

Note: When you set soldering conditions, check that problems do not occur in the product by testing out the conditions in advance.

## Related information

[www.hamamatsu.com/sp/ssd/doc\\_en.html](http://www.hamamatsu.com/sp/ssd/doc_en.html)

### ■ Precautions

- Notice
- Precautions / Metal, ceramic, plastic package products

### ■ Catalogs

- Technical note / Si photodiodes

Information described in this material is current as of April 2025.

Product specifications are subject to change without prior notice due to improvements or other reasons. This document has been carefully prepared and the information contained is believed to be accurate. In rare cases, however, there may be inaccuracies such as text errors. Before using these products, always contact us for the delivery specification sheet to check the latest specifications.

The product warranty is valid for one year after delivery and is limited to product repair or replacement for defects discovered and reported to us within that one year period. However, even if within the warranty period we accept absolutely no liability for any loss caused by natural disasters or improper product use. Copying or reprinting the contents described in this material in whole or in part is prohibited without our prior permission.

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