

Si PIN photodiode



S12109-32

Multimode optical fiber compatible, receptacle type

This high-speed photosensor was developed for optical fiber communication in the 0.85 μm band. This receptacle type Si PIN photodiode is compatible with GI-50 multimode optical fiber.

Features

- High-speed response: 1 GHz typ.
- GI-50 multimode optical fiber compatible

Applications

- Optical fiber communications
- Optical measurement

Absolute maximum ratings

Parameter	Symbol	Condition	Value	Unit
Reverse voltage	V_R max	$T_a=25\text{ }^\circ\text{C}$	20	V
Operating temperature	T_{opr}	No dew condensation*1	-20 to +70	$^\circ\text{C}$
Storage temperature	T_{stg}	No dew condensation*1	-40 to +85	$^\circ\text{C}$

*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.

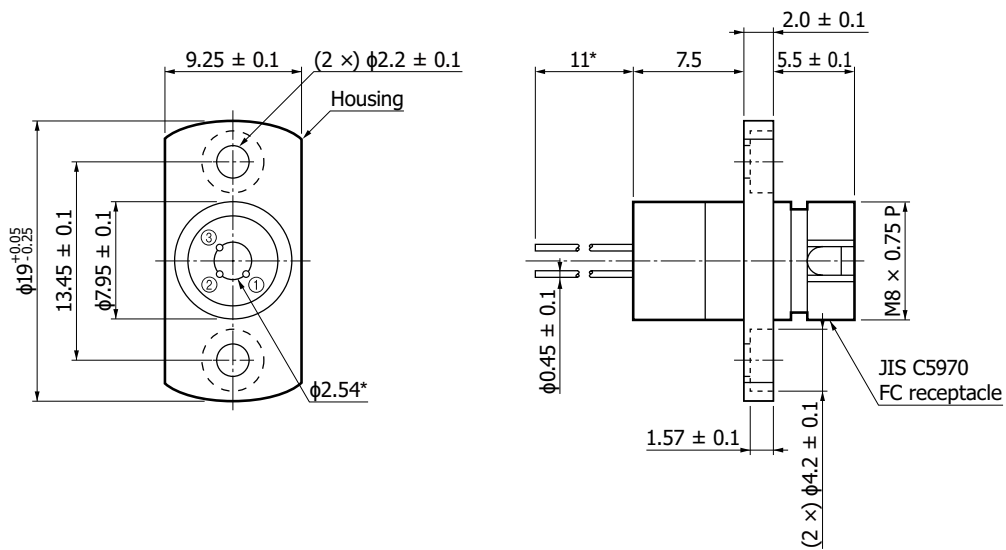
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

Electrical and optical characteristics ($T_a=25\text{ }^\circ\text{C}$, unless otherwise noted)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ			320 to 1000		nm
Peak sensitivity wavelength	λ_p		-	760	-	nm
Photosensitivity*2	S	$\lambda=850\text{ nm}$, $V_R=3.3\text{ V}$	0.25	0.42	-	A/W
Dark current	I_D	Dark state, $V_R=3.3\text{ V}$	-	1	100	pA
Cutoff frequency	f_c	$V_R=3.3\text{ V}$, $R_L=50\ \Omega$ $\lambda=850\text{ nm}$, -3 dB	-	1	-	GHz
Terminal capacitance	C_t	$V_R=3.3\text{ V}$, $f=1\text{ MHz}$ Case: GND	-	1.6	-	pF

*2: Using a GI-50 multimode optical fiber

Dimensional outline (unit: mm)



Tolerance unless otherwise noted: ± 0.2

* Reference values

KPINA0129EA

Pin connections

Pin no.	Connection
①	Cathode
②	Case*3
③	Anode

*3: It is not connected to the housing.

Recommended soldering conditions

Soldering temperature: 260 °C (within 10 seconds)

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

■ Precautions

- Disclaimer
- Safety consideration
- Metal, ceramic, plastic package products

■ Technical note

- Si photodiodes

The content of this document is current as of May 2022.

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