

# InGaAs PIN photodiode G8195 series

Pigtail type, 1.3/1.55  $\mu\text{m}$ , 2 GHz



G8195 series are high-speed receivers specifically developed for 1.3/1.55  $\mu\text{m}$  band optical fiber communications. These devices incorporate a high-speed, high-sensitivity InGaAs PIN photodiode integrated in a pig-tail module. Packages are available with various connectors and mounting styles.

### Features

- High-speed response: 2 GHz Typ.
- Low dark current: 20 pA Typ.
- High sensitivity: 0.9 A/W Typ. ( $\lambda=1.31 \mu\text{m}$ )
- Low capacitance: 1 pF Typ.

### Applications

- Optical fiber communications
- Fiber channel
- Gigabit ethernet
- SDH
- WDM

### ■ Absolute maximum ratings ( $T_a=25 \text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Reverse voltage	$V_R \text{ Max.}$	20	V
Operating temperature	$T_{opr}$	-20 to +70	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-40 to +85	$^\circ\text{C}$

### ■ Electrical and optical characteristics ( $T_a=25 \text{ }^\circ\text{C}$ )

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	$\lambda$		-	0.9 to 1.7	-	$\mu\text{m}$
Peak sensitivity wavelength	$\lambda_p$		-	1.55	-	$\mu\text{m}$
Photo sensitivity	S	$\lambda=1.3 \mu\text{m}$	-	0.9	-	A/W
		$\lambda=1.55 \mu\text{m}$	-	0.95	-	A/W
Dark current	$I_D$	$V_R=5 \text{ V}$	-	0.02	0.4	nA
Cut-off frequency	$f_c$	$V_R=5 \text{ V}, R_L=50 \Omega$ $\lambda=1.3 \mu\text{m}, -3\text{dB}$	-	2	-	GHz
Terminal capacitance	$C_t$	$V_R=5 \text{ V}, f=1 \text{ MHz}$	-	1	1.5	pF

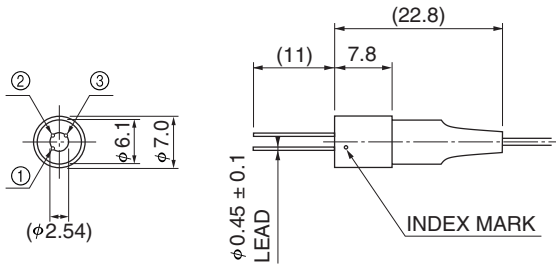
### ■ Package lineup

Configuration		G8195					
		-11	-12	-21	-22	-31	-32
Module	Mounting style	Coaxial		Board		Panel	
	Dimensional outline	①		②		③	
Fiber	Type	SM (9.5/125) $\phi 0.9$					
	Length	1 m +20 cm/-0 cm					
Connector	Type	SC	FC	SC	FC	SC	FC
	Dimensional outline	④	⑤	④	⑤	④	⑤

■ Dimensional outline (unit: mm, tolerance unless otherwise noted:  $\pm 0.2$ )

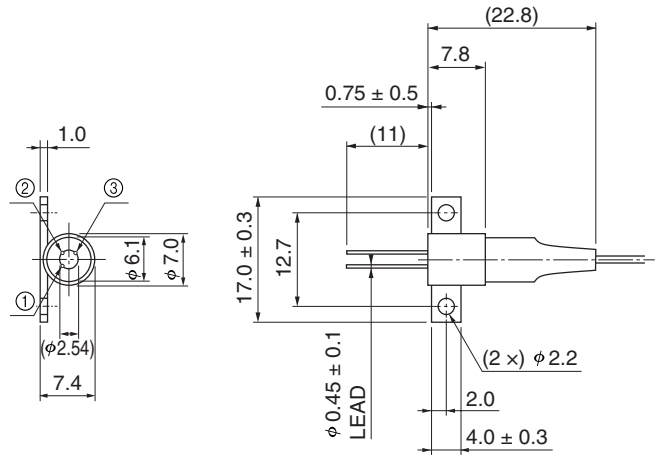
## Mounting type

### ① Coaxial



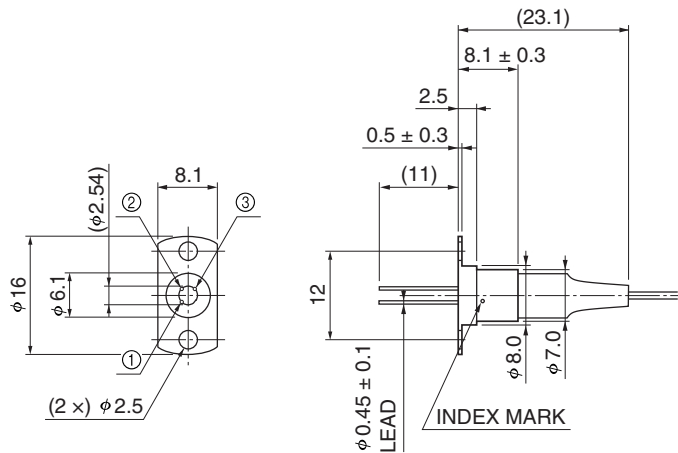
KIRDA0112EA

### ② Board



KIRDA0113EA

### ③ Panel



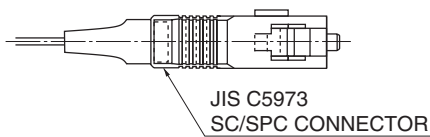
KIRDA0114EA

### ■ Pin connection

Pin No.	G8195 series
①	Anode
②	Cathode
③	Case

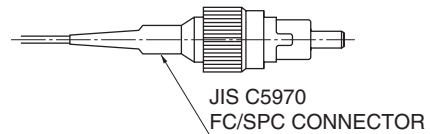
## Connector

### ④ SC



KIRDA0102EA

### ⑤ FC



KIRDA0103EA

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