HAMAMATSU
PHOTON IS OUR BUSINESS

InGaAs PIN photodiodes

G8195 series

Pigtail type, 1.3/1.55 µm, 2 GHz

The G8195 series are high-speed receivers specifically developed for 1.3/1.55 µm band power monitor in optical fiber communications. These devices incorporate a high-speed, high-sensitivity InGaAs PIN photodiode integrated in a pigtail module.

Features

- **High-speed response: 2 GHz typ.**
- **Low dark current: 20 pA typ.**
- **High sensitivity: 0.9 A/W typ. (λ=1.31 µm)**
- **Low capacitance: 1 pF typ.**

Applications

- **Power monitor in optical fiber communications**

Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	Value	Unit
Reverse voltage	V_R max	20	V
Operating temperature	Topr	-20 to +70	°C
Storage temperature	Tstg	-40 to +85	°C

Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	0.9 to 1.7	-	µm
Peak sensitivity wavelength	λp		-	1.55	-	µm
Photo sensitivity	S*	λ=1.3 µm	0.75	0.9	-	A/W
		λ=1.55 µm	0.8	0.95	-	A/W
Dark current	I_D	V_R=5 V	-	0.02	0.4	nA
Cutoff frequency	fc	V_R=5 V, R_L=50 Ω λ=1.3 µm, -3 dB	-	2	-	GHz
Terminal capacitance	Ct	V_R=5 V, f=1 MHz	-	1	1.5	pF
Noise equivalent power	NEP	V_R=5 V, λ=1.55 µm	-	3×10^{-15}	-	$W/Hz^{1/2}$

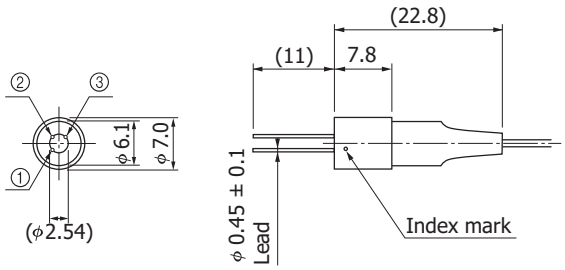
* Using a single mode opticul fiber with a master plug

Package lineup

Configuration	G8195-11	G8195-12
Mount type	Coaxial	
Fiber	SM (9.5/125) ϕ0.9 mm, 1 m +20 cm/-0 cm	
Connector	SC	FC

Dimensional outline (unit: mm, tolerance unless otherwise noted: ±0.2)

Mount type



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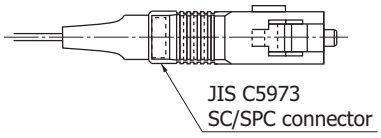
Pin connections

Pin no.	G8195 series
①	Anode
②	Cathode
③	Case

Connector

(1) SC



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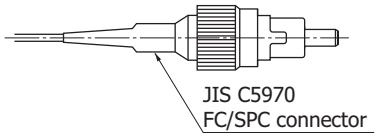
(2) FC



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Information described in this material is current as of November, 2011.
Product specifications are subject to change without prior notice due to improvements or other reasons. Before assembly into final products, please contact us for the delivery specification sheet to check the latest information.

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