

InGaAs PIN Photodetector up to 70G

Key Features

Spectral range 850 ~ 1650nm

3dB bandwidth Max.>70GHz

Responsivity> 0.85A / W

Small size

Hermetically sealed

High reliability

SMA /2.92 /1.85mm output



Applications

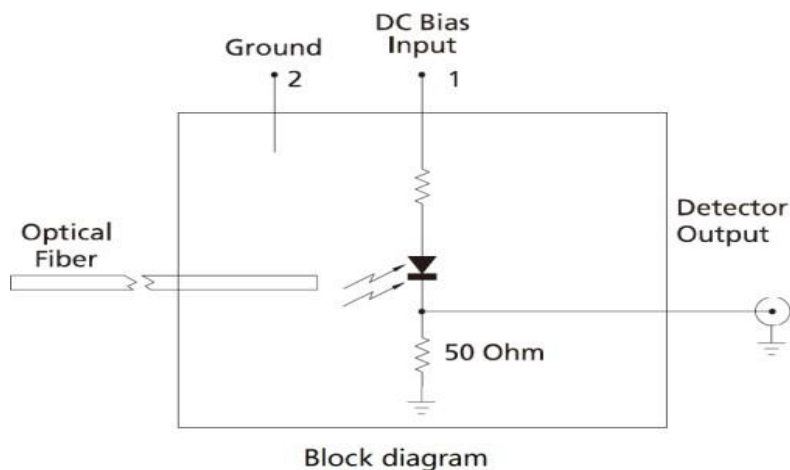
Radio over fiber

Optical fiber sensing system

High-speed transmission equipment

Description

This device with-speed photodetector use high-performance PIN detector, which has the characteristics of high bandwidth, high responsivity, flat gain, small size, etc. The power supply is DC 5V, and the fiber interface is FC / APC, SMA / K /1.85mm output port, mainly used in high-speed optical fiber transmission system, ROF, optical fiber sensing system.



Technical Parameters

Parameters		Symbol	Min.	Typ.	Max.	Unit
Spectral response*		λ	850		1650	nm
Dark current (VR=5V)		I_d		0.1	5	nA
Responsivity (VR=5V)	-10G/20G	R	0.85			A/W
	-40G		0.75	0.85		
	-70G		0.5	0.6		
Bandwidth		BW	10/20/40/70			GHz
Optical return loss		ORL	30			dB
Saturated optical power		P_s			10	dBm
Fiber			Smf-28e, MMF, PMF			
Fiber connector			FC/PC、FC/APC or user specified			
Electrical return loss		S_{11}		-12	-8	dB
Output impedance		Z_{RF}	50			Ω
Electrical interface	-10G/20G		SMA(f)			
	-40G		2.92mm(f)			
	-70G		1.85(f)			

* 940~1650nm for HD-PD-70G

Absolute Maximum Ratings

Parameters	Symbol	Unit	Min.	Typ.	Max.
Input optical power	$P_{in,Max}$	dBm			13
Bias voltage	V_b	V	3	5	7
Operating temperature	T_{op}	°C	-40		70
Storage temperature	T_{st}	°C	-40		85
Humidity	RH	%	5		90
Lead soldering temperature		°C			260
Lead soldering duration		s			10
Fiber bend radius		mm	30		

Test curve

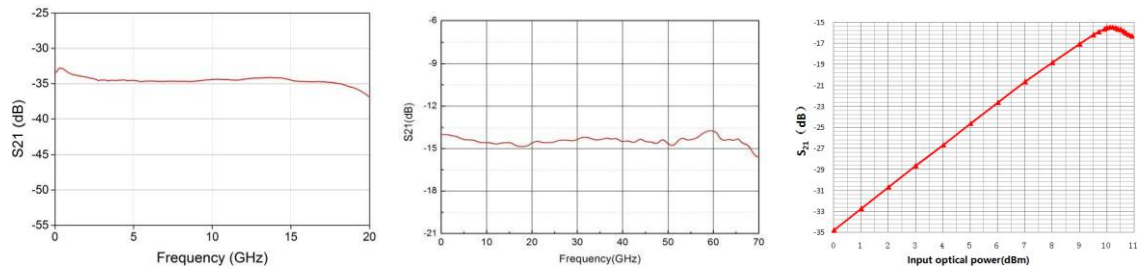
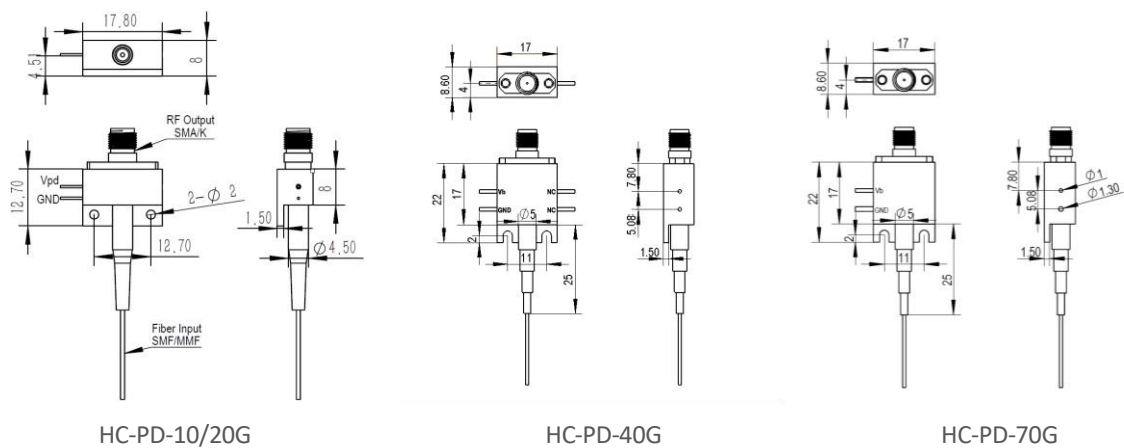


Fig1. S21 (HC-PD-20G&70G)

Dimensions (Unit: mm)



Ordering Information

HC-PD--BW-XX-FA/FP

BW—Bandwidth: 10G, 20G, 40G, 70G

PP—Input Fiber: SM, MM, PM

FA/FP—Connector: FA---FC/APC; FP---FC/PC