

12GHZ Analog High Speed InGaAs PIN Photodiode Version: 3.1 17-03-01

Model: LSIHPD-A12

Features:

- High reliability
- Bandwidth up to 12GHz
- Built-in Bias-T
- DC coupled
- Hermetic package with SMA RF connector

Applications:

- Optical fiber sensor
- High speed Test and Measurement OTDR
- Microwave Photonic Link
- High Speed Optical-fiber Communication
- Science analysis and experiment



Absolute Maximum Rating ($T_C = 25^\circ\text{C}$)

Parameter	Sym.	Rating	Unit
Storage temperature range	T_{STG}	-40 ~ +100	$^\circ\text{C}$
Operating case temperature range	T_C	-40 ~ +85	$^\circ\text{C}$
Bias Voltage	V_R	30	V
Optical Input Power(Bandwidth> 100MHZ)	P_{in}	10	dBm
Lead soldering temperature	T_p	260 (10s)	$^\circ\text{C}$

Electrical/Optical Characteristics ($T_C = 25^\circ\text{C}$)

Parameter	Sym	Test Condition	Parameter values(Typ.)	Unit
-3dB bandwidth	BW	$V_R = 5V, \lambda = 1550\text{nm}$ $P_{in} = 1\text{mW}, R_L = 50\Omega$	0.1-12	GHz
wavelength range	λ	-	980-1650	nm
Responsivity	Re	$V_R = 5V, P_{in} = 100\mu\text{W}, \lambda = 1310\text{nm}$	0.85	A/W
		$V_R = 5V, P_{in} = 100\mu\text{W}, \lambda = 1550\text{nm}$	0.90	
Amplitude Flatness	F		± 1.5	dB
Output VSWR	VSWR		2.5:1	
Output Impedance		R_L	50	Ω
Dark current	I_d	$V_R = 5V,$	6	nA
Saturation Optical Power	P_s	$V_R = 5V, \lambda = 1550\text{nm}$ Bandwidth> 100MHZ	8	dBm
Optical insert loss	O_{IL}	—	0.4	dB
Optical return loss	L_o	$\lambda = 1.55\mu\text{m}, \phi_e = 100\mu\text{W}$	40	dB
Operating voltage	V_R		5-9	V

NOTICE: The above product specifications are subject to change without notice.

Typical Frequency Resonsivity Curve

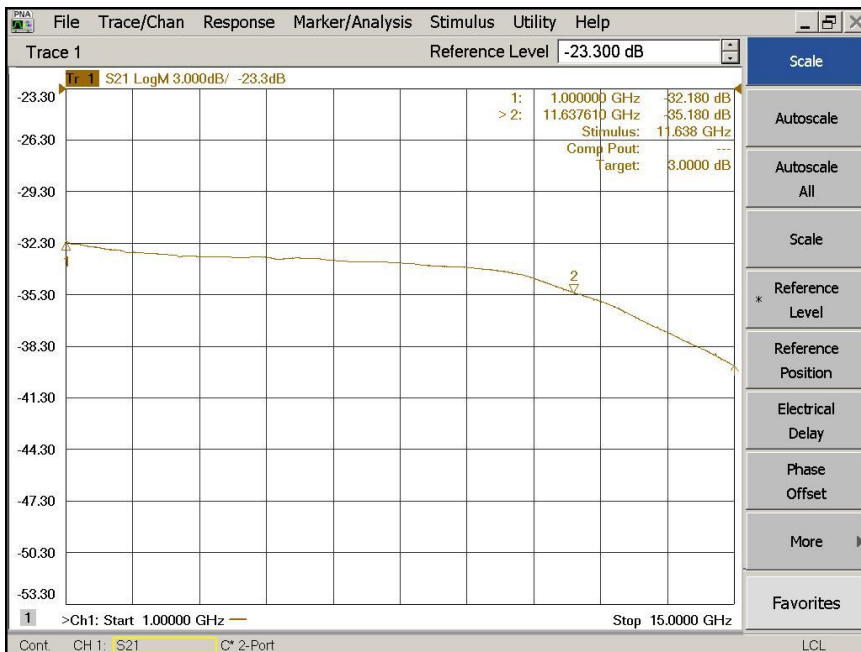
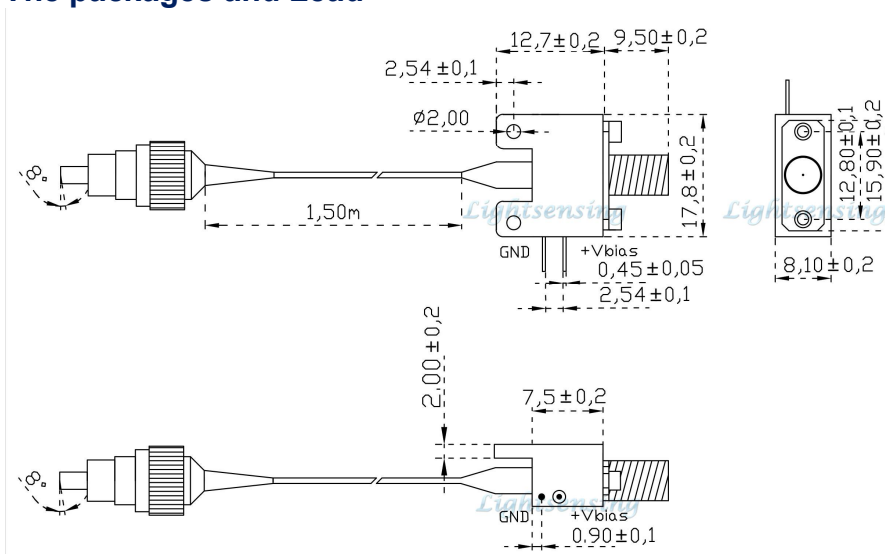


Fig.1 0.1~12GHZ Photodetector Frequency Response

The packages and Lead



Order information:

LSIHPD-A12-X

X=SMFA 1.5m length SM Fiber coupling with FC-APC connector
X=Other By customer's request

The cautions

- 1: The above product specifications are subject to change without notice.
- 2: The suitable ESD protecting measures are recommend in storage, transporting and using.
- 3: The fiber bending radius no less than 20mm for avoiding fiber damaged ,Be sure the fiber coupling facet is clean before connecting it to opto-circuit.