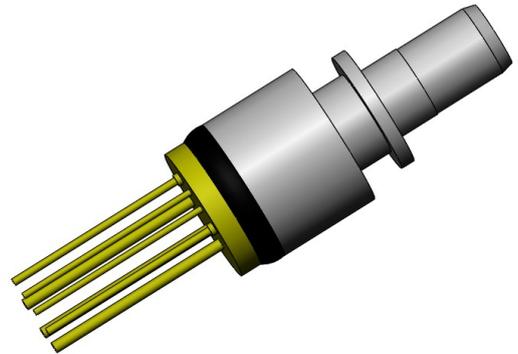


## LC-AD8J2F3JEOGN-1

The detector includes a 7 pin APD plus AGC Pre-amplifier, supports 50Gbps long distance fiber communication application.



### Features

- ◆ Differential output
- ◆ Coaxial package
- ◆ Single power supply voltage +3.3V
- ◆ InGaAs/InP avalanche photodiodes (APD) with transimpedance
- ◆ Laser welding, high reliability and long operation life
- ◆ Wavelength from 1260nm to 1360nm
- ◆ Operates from 50Gb/s NRZ rates
- ◆ Low noise
- ◆ RoHS compliant products available

### Applications

- ◆ 50Gb ethernet
- ◆ Fiber channel

### General

LC-AD8J2F3JEOGN-x Series is 7 pin APD TIA with Receptacle package and operating on 50Gb/s optical communication systems. It is also with high-speed response and low noise.

### Ordering information (Standard version <sup>\*Note1</sup>)

Part No	Wavelength (nm)	Bandwidth (GHz)	TIA supply voltage (V)	Pin type
LC-AD8J2F3JEOGN-1	1260~1360	50	3.3	J

\*Note1: For more ordering information, please refer the nomenclature and contact EPOTOLINK sales.

## Absolute maximum ratings

Parameter	Symbol	Min	Max	Unit
APD forward current	I <sub>f</sub>	—	3	mA
APD reverse current	I <sub>r</sub>	—	1	mA
Optical power	P <sub>in</sub>	—	0	dBm
Case temperature	T <sub>c</sub>	-40	85	°C
Storage temperature	T <sub>stg</sub>	-40	100	°C

## Electrical/optical characteristics <sup>\*Note2</sup>

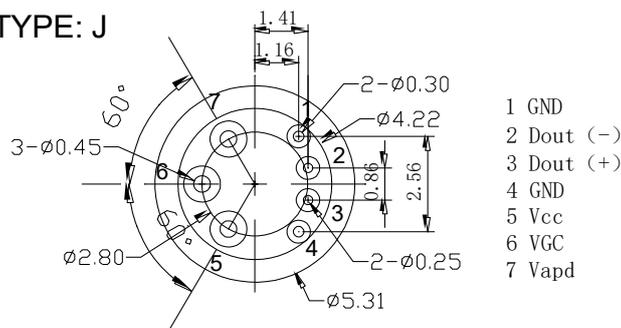
(T<sub>c</sub>=+25°C, V<sub>cc</sub>=3.3V, λ=1310nm)

Parameter	Symbol	Min	Typ.	Max	Unit	Test conditions
Detection Wavelength Range	λ	1260		1360	nm	
Supply voltage	V <sub>cc</sub>	3.0	3.3	3.6	V	
Supply current	I <sub>cc</sub>	35	—	75	V	V <sub>cc</sub> =3.3V
APD breakdown voltage	V <sub>br</sub>	16		21	V	I <sub>d</sub> =100uA
APD operating voltage	V <sub>APD</sub>	15		20	V	V <sub>br</sub> -3V(Best Sensitivity)
Temp. coefficient of V <sub>br</sub>	T <sub>Vbr</sub>		0.01		V/°C	—
Dark current	I <sub>d</sub>	—	—	3	uA	V <sub>br</sub> -1V, T <sub>c</sub> =25°C
Responsivity	R	2.0	—	—	A/W	V <sub>br</sub> -3V, λ=1310nm, P <sub>in</sub> =-20dBm
Sensitivity	Sen	—	—	-18	dBm	53.125GbpsNRZ λ=1310nm, PRBS=2 <sup>31</sup> -1, BER=10 <sup>-12</sup> , ER=9dB
Overload power	P <sub>load</sub>	-2	—	—	dBm	
-3Db Bandwidth	BW		23	—	GHz	V <sub>br</sub> -3V, λ=1310nm, P <sub>in</sub> =-20dBm, R <sub>I</sub> =50 Ω
Single-ended output impedance	R <sub>out</sub>	40	50	60	Ω	
Optical return loss <sup>*Note2</sup>	ORL	—	—	-26	dB	λ=1310nm

Note2: This data is test by stub ROSA

## Pin assignment <sup>\*Note3</sup>

TYPE: J



APD-pin-J



material. To assemble the modules on PCB, the workbench, the soldering iron and the human body should be grounded.

- (2) Please pay special attention to the atmosphere condition because the dew on the module may cause some electrical damages.
- (3) Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.

## Obtaining document

You can visit our website:

<http://www.eoptolink.com>

Or contact Eoptolink Technology Inc., Ltd. Listed at the end of the documentation to get the latest documentation.

## Revision history

Verision	Initiated	Reviewed	Approved	Revision history	Release date
Va-1	Yinchun.zhao	James.liu	Vincent.yu	Released	2019.12.18
Va-2	Yinchun.zhao	James.liu	Vincent.yu	Change Responsivity	2020.04.01
Va-3	James.liu	Yinchun.zhao	Vincent.yu	Change Responsivity	2020.07.01
Va-4	James.liu	Yinchun.zhao	Vincent.yu	Increase lcc index	2020.11.04

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