

LC-AD1J2W3JEOGQ-x

The detector includes a 7 pin APD plus CMOS Pre-amplifier, supports 25Gbps long distance fiber communication application.

Features

- ◆ Differential output
- ◆ Coaxial package
- ◆ Single power supply voltage +3.3V
- ◆ InGaAs/InP avalanche photodiodes (APD) with trans impedance
- ◆ High reliability and long operation life
- ◆ Wavelength from 1260nm to 1620nm
- ◆ Operates from 25.78Gb/s NRZ rates
- ◆ Low noise
- ◆ RoHS compliant products available

Applications

- ◆ 25Gb ethernet
- ◆ Fiber channel

General

LC-AD1J2W3JEOGQ-x Series is 7 pin APD TIA with Receptacle package and operating on 25Gb/s optical communication systems. It is also with high-speed response and low noise.

Ordering information (Standard version ^{*Note1})

Part No	Wavelength (nm)	Bandwidth (GHz)	TIA supply voltage (V)	Pin type
LC-AD1J2W3JEOGQ-x	1260~1620	7	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 _f	—	3	Ma
APD reverse current	I _r	—	2	Ma
Power supply voltage	V _P	-0.5	4.5	V
Storage temperature	T _{stg}	-40	85	°C
Case temperature	T _c	-40	85	°C

Electrical/optical characteristics

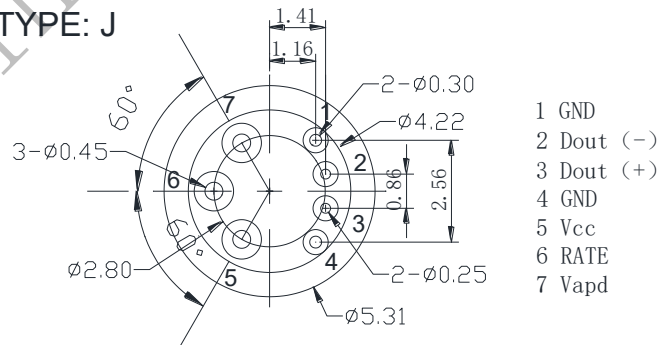
(Tc=+25°C, Vcc=3.3V, λ=1310nm)

Parameter	Symbol	Min	Typ.	Max	Unit	Test conditions
Supply current	I _{cc}	26	—	33	mA	V _{cc} =3.3V
Supply voltage	V _{cc}	3	3.3	3.6	V	
APD breakdown voltage	V _{br}	16	—	21	V	I _d =100uA
APD operating voltage	V _{APD}	15	—	20	V	
Temp. coefficient of V _{br}	T _{Vbr}	0.01	—	—	V/°C	I _d =100uA, TC=25°C~75°C
Dark current	I _d	—	—	3	uA	V _{br} -1V, 25°C
		—	—	1	uA	V _{br} -3V, 25°C
Responsivity	R	2.0	—	—	A/W	V _{br} -3V, -20dBm
Sensitivity	Sen	—	—	-14	dBm	26.56Gbaud, PAM4, λ=1310 nm, ER=6dB, BER=2e-4, PR BS31Q
Overload power	P _{load}	—	+4	—	dBm	
Single-ended output impedance	R _{out}		100		Ω	
Max differential output voltage	V _{OUT}	—	300	—	mV _{pd}	
Optical return loss ^{*Note2}	ORL	—	—	-26	dB	λ=1310nm

Note2: This data is test by stub ROSA

Pin assignment ^{*Note3}

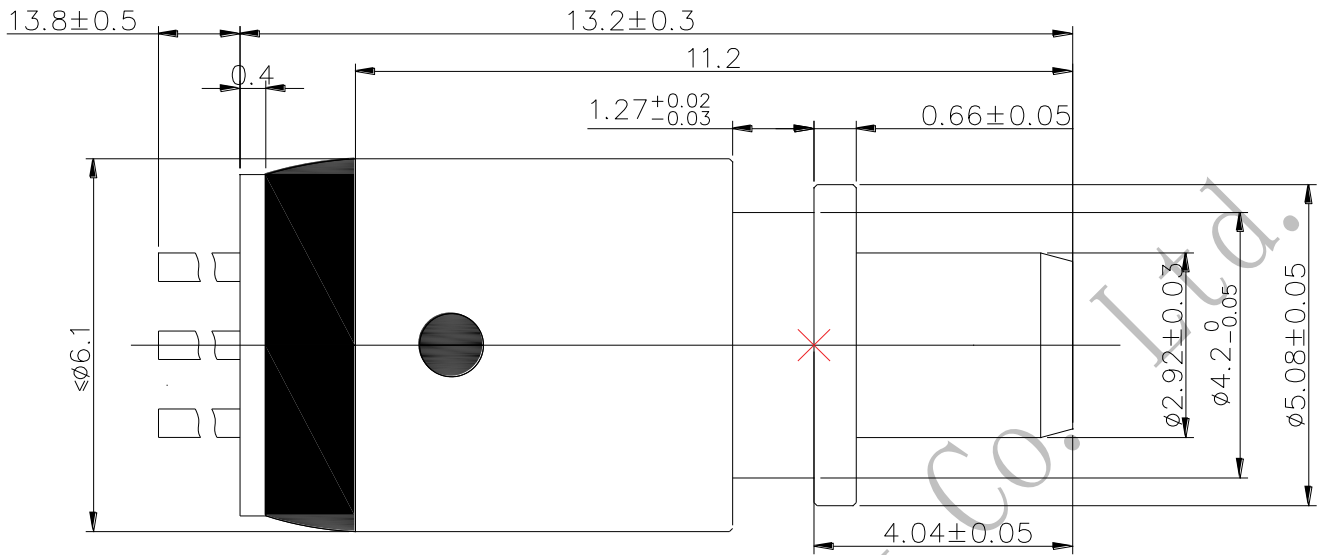
TYPE: J



25G APD-pin-J

Note3: Other Pin type can be customized.

Package dimension ^{*Note4}



*Note4: Insulation is the TO-CAN and the metal pipe insulation.

Nomenclature

LC—AD □ □ □ □ □ □ □ □ □
 A B C D E F G H I

Code	Parameter	Detailed description	
A	Split sleeve Type	1=Structure LC-ROSA1-7	
B	Insulation	J= Insulation	
C	Wavelength	2=1260~1620nm	
D	Date rate	W=25Gb/s	
E	TIA Voltage	3=3.3V	
F	Pin Type	J=APD-pin-J	
G	Rx Chip Type	EO=EOPTOLINK	
H	Rx TIA Type	GQ= GN1086	
I	Programme	Blank= None	X=1-9

Precaution

(1) The modules should be handled in the same manner as ordinary semiconductor devices to prevent the electro-static damages. For safe keeping and carrying, the modules should be packaged with ESD proof 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	2020-1-22
Va-2	Yinchun.Zhao	James.liu	Vincent.yu	Add receiver chip definition	2020-3-20
Va-3	Yinchun.Zhao	James.liu	Vincent.yu	Add Test Condition	2020-7-2
Va-4	Yinchun.Zhao	James.liu	Vincent.yu	The lcc was updated from 26 mA to 26-33 mA	2020-9-21
Va-5	Yinchun.Zhao	James.liu	Vincent.yu	Update diameter	2020.10.19
Va-6	Yinchun.Zhao	James.liu	Vincent.yu	Updated Responsivity 2.0AW, Updated Dark current	2020.11.23

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