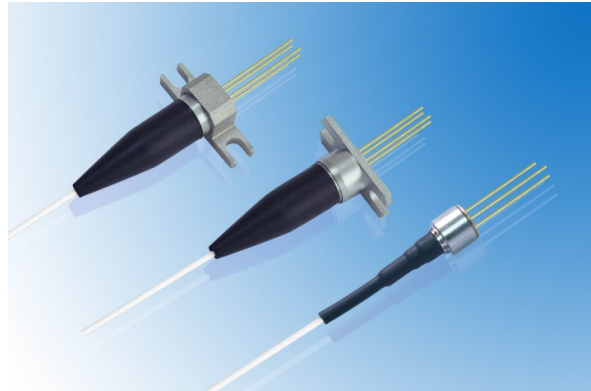


GADP-293XXXX

The detector includes a 5 pin APD plus AGC Pre-amplifier, supports 1.25/2.5Gbps long distance fiber communication application.



Features

- ◆ Differential Output
- ◆ Coaxial Package
- ◆ Single Power Supply Voltage +3.3V
- ◆ InGaAs Avalanche Photodiodes (APD) with Trans Impedance
- ◆ Laser Welding, High reliability And Long Operation life
- ◆ Wavelength from 1000nm to 1600nm
- ◆ Rate : 1.25Gbps/2.5Gbps
- ◆ Low Noise
- ◆ High-Sensitivity (-33dBm typical)
- ◆ RoHS Compliant Products Available

Applications

- ◆ Communication system
- ◆ Ethernet
- ◆ Fiber Channel

Ordering Information (Standard version ^{*Note1})

Part No.	Wavelength (nm)	Bandwidth (GHz)	TIA supply voltage (V)	Pin Type
GADP-293XXXX	1310~1550	2	3.3	N
GADP-273XXXX	1310~1550	2	3.3	F

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

Absolute maximum ratings

Parameter	Min	Max	Unit
APD supply voltage	-	VBR	V
TIA supply voltage		6	V
APD reverse current		0.5	mA
Storage temperature		-40 ~ +85	° C

RECOMMENDED OPERATING CONDITIONS

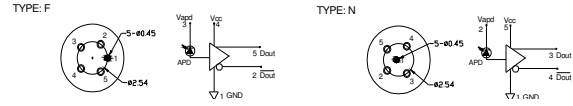
Test conditions	Symbol	Limits			Unit
		Min.	Typ.	Max.	
TIA supply voltage	Vcc	3	3.3	5.5	V
Case temperature	Tc	-20		85	°C

ELECTRICAL / OPTICAL CHARACTERISTICS

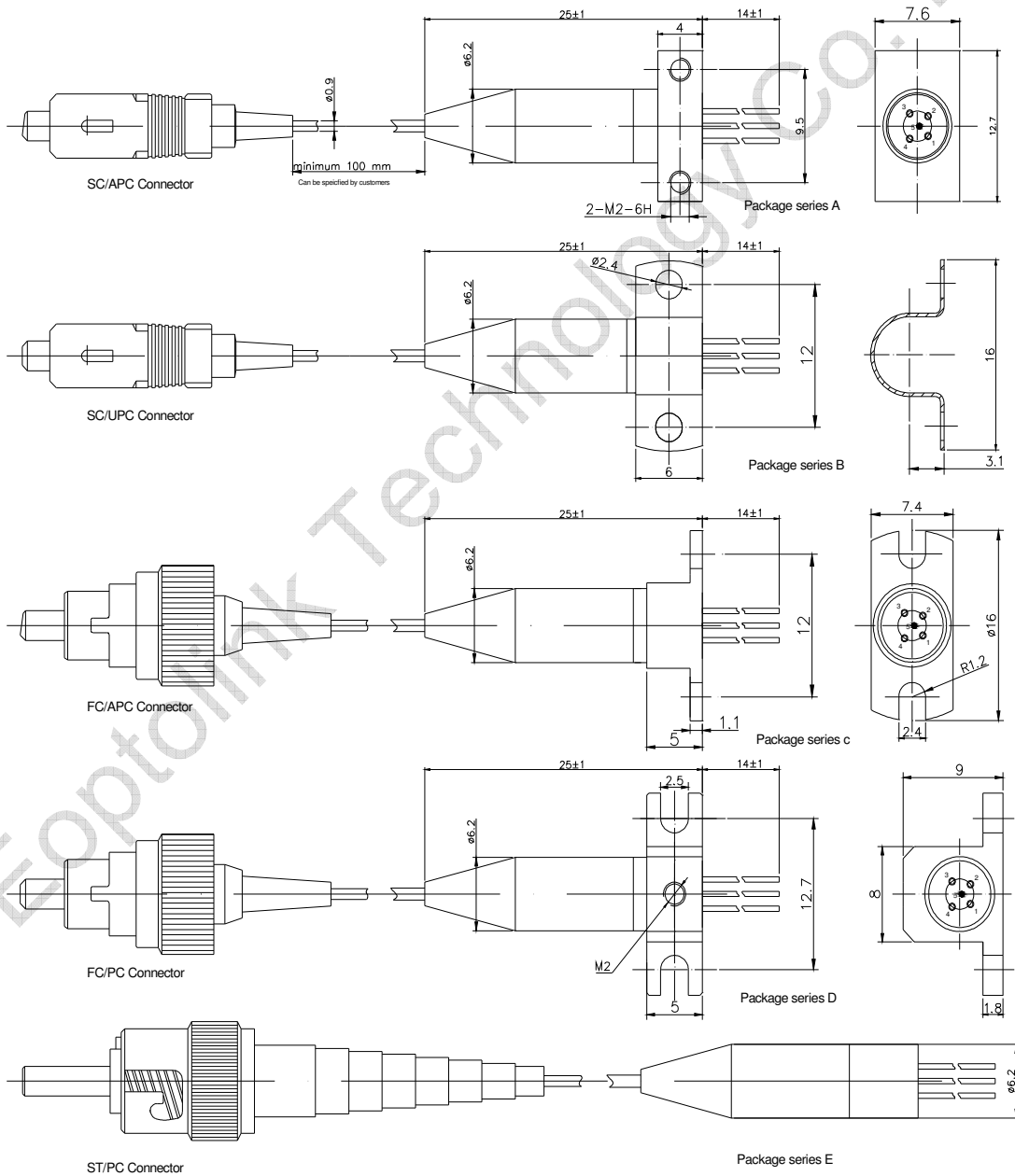
(Tc=+25°C, Vcc=3.3V, l=1550nm)

Parameter	Symbol	Test conditions	Min	Typ.	Max	Unit
APD Breakdown voltage	VBR	Id=100mA	40	60	80	V
APD Operating Voltage		Best sensitivity		VBR -3		
Responsivity	R	M=10, RL=50W, Single-ended	9.5	15		kV/W
TIA Operating current	Icc	Pin=0mW		35	70	mA
Small Signal Bandwidth	BW	M=9	1.5		2.5	GHz
Averaged equivalent input noise current density	in	Pin=0mW, f=10MHz-1.4GHz, RL=50W		9		pA/ Hz ^{1/2}
Minimum received sensitivity	Pr	NRZ, PBS=223-1, BER=10 ⁻¹⁰ , 2.488G/s, at optimum M		-33		dBm
Output Amplitude	Vout	Differential			330	mV
Low Frequency Cut-off	LF			3	5	kHZ
Saturation Power	PSAT		-7			dBm

Pin Assignment



Pigtail Package dimension *Note2, 3, 4



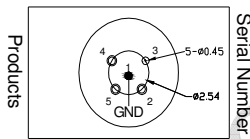
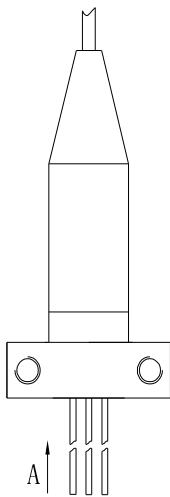
*Note2: PIN direction and laser mark can be customized. Pigtail is standard SM fiber; the length also can be customized.

*Note3: For the package series D, the clamping rings dimensions (A) and drill size (B) are can be selected. The following types can be available. Please designate the detailed type while ordering the package series D.

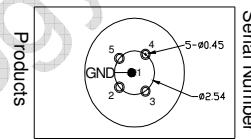
	A(mm)	B(mm)
D	16	12
D-S	17	12.7

*Note4: For the package series B, the fix card is fixed by customer self. For the detailed information of fix card of A, C, D package series, please refers the following graphs. The direction of fix card

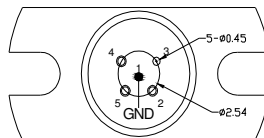
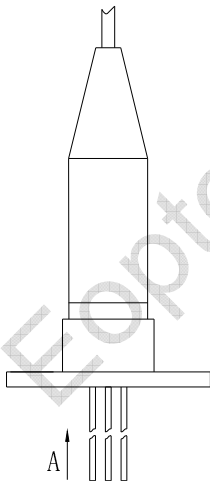
The direction of fix card



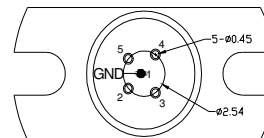
Direction A view
PADNA-1(DEFAULT)



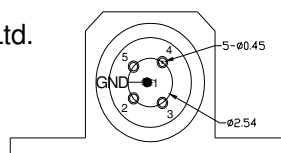
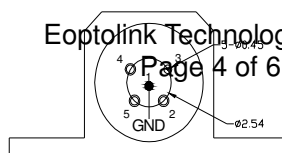
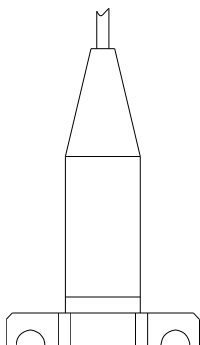
Direction A view
PADNA-2



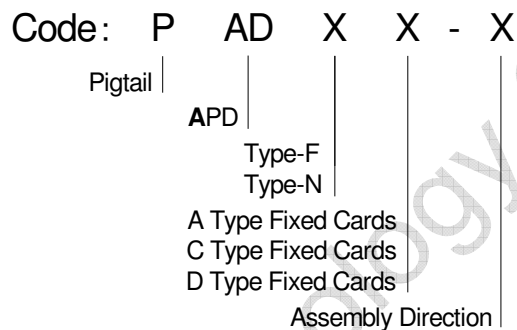
Direction A view
PADNC-1(DEFAULT)



Direction A view
PADNC-2



Nomenclature of assembly direction^{*Note5}



*Note5: Please designate the code of assembly direction.

Ordering Information

G A D P —

A B C D E F

A	Wavelength	2=1100~1610nm			
B	Date rate	7=1.255Gb/s		9=2.5Gb/s	
C	TIA Voltage	3=3.3V			
D	Package series	A	B	C	E
E	Connector	F=FC/PC		S=SC/PC	
		FA=FC/APC		SA=SC/APC	
F	Pin Type	F=APD-pin-F		N=APD-pin-N	

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	Release Date
Va-4	Zore.Zhao	Kelly.Cao		2009-12-22

Notice:

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Contact:

Add: Floor 5, Building 2, No. 21 Gaopeng Avenue, High-Tech District, CHENGDU, SICHUAN 610041 P.R.

CHINA

Tel: (+86) 028-85122709 ext 816 & 809

Fax: (+86) 028-85121912

Postal: 610041

E-mail:sales@eoptolink.com

<http://www.eoptolink.com>