

The LAPD200B InGaAs APD Module**DESCRIPTION**

The LAPD200B is a 200um InGaAs APD housed in a hermetic 3pin Coaxial Package and TO46 Package. The APD also can be coupled to a singlemode fiber pigtail. The low noise, overload tolerant LAPD5510 APD makes the devices ideal for OTDRS, line receivers and any other light level detection/signal transmission application.

FEATURES

Top illumination planar APD

High operation frequency

High multiplication gain

APPLICATION

OTDR

Laser range finder

Laser alarming

RADAR

ABSOLUTE MAXIMUM RATINGS (T=25°C)

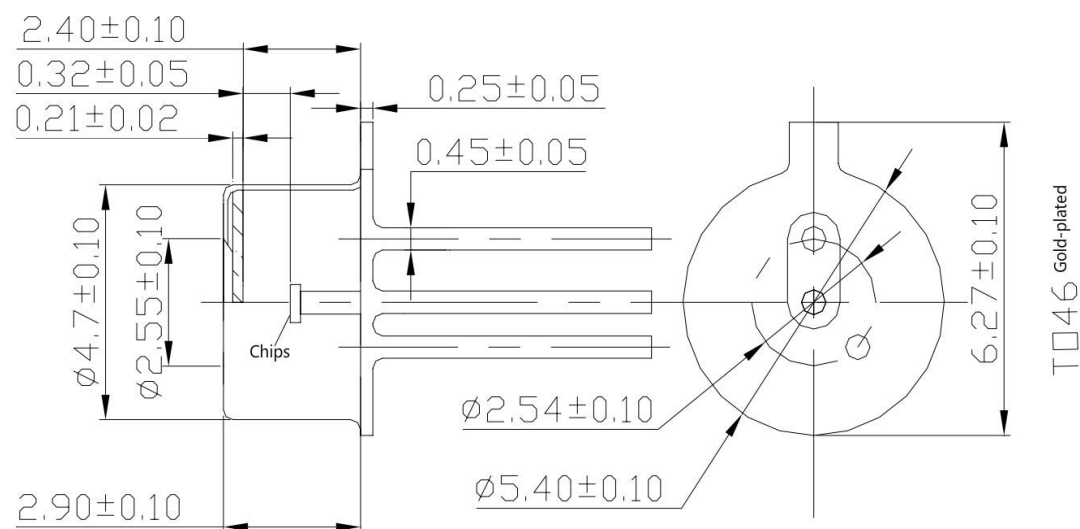
Parameter	Rating	Units
Operating voltage	$0.99 \times V_{BR}$	V
Forward current	10	mA
Operating temperature	-50 ~ +100	°C
storage temperature	-55 ~ +125	°C
Power dissipation	50	mW
Soldering temperature	260 °C	°C
Soldering time	10	S

OPTICAL AND ELECTRICAL CHARACTERISTICS (T=25°C)

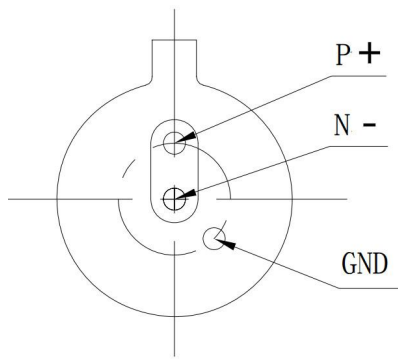
Parameters	Sym	Test conditions	Min	Typ	Max	Unit
Response Spectrum	λ	-	900-1700			nm
Active diameter	ϕ	-	50,200,500			μm
Reponsivity	R_e	$M=10, \lambda=1.55\mu\text{m}, \phi_e=1\mu\text{m}$	9.0			A/W
Maximum multiplication gain	M_{max}	$\lambda=1.55\mu\text{m}, \phi_e=1\mu\text{m}$	20			
Max linear power	ϕ_s	$V_R=5V, R_L=50\Omega, f=1\text{MHz}$		3	5	mW
Response time	t_s	$f=1\text{MHz}, R_L=50\Omega$		0.6	1.0	ns
Total capacitance	C	$V_R=5V, \phi_e=0$		1	5	pF
Dark current	I_D	$M=10$	10		30	nA
Shunt impedance	R_{sh}	$I_R=10\mu\text{A}$	40			$M\Omega$
Reverse breakdown voltage	V_{BR}	$R=100\mu\text{A}$	40		60	V
Operating voltage temperature coefficient	δ	$T_c=-40\sim+85^\circ\text{C}$		0.12	0.15	V/°C

DIMENSIONAL OUTLINE

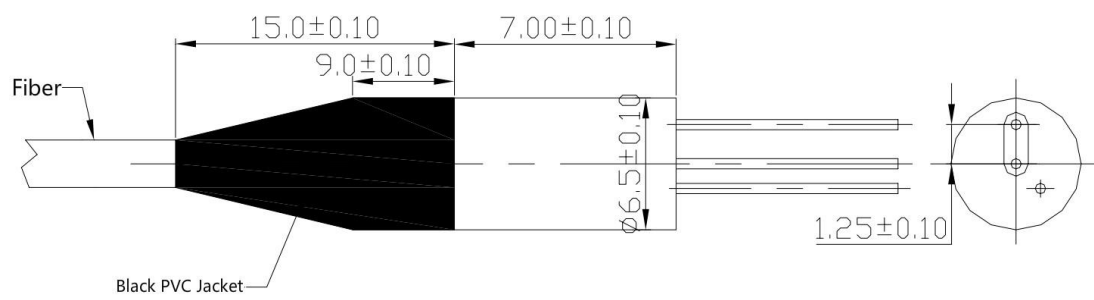
Package Type A



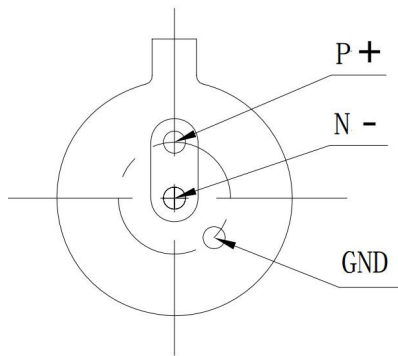
(dimensions in mm)



Package Type B

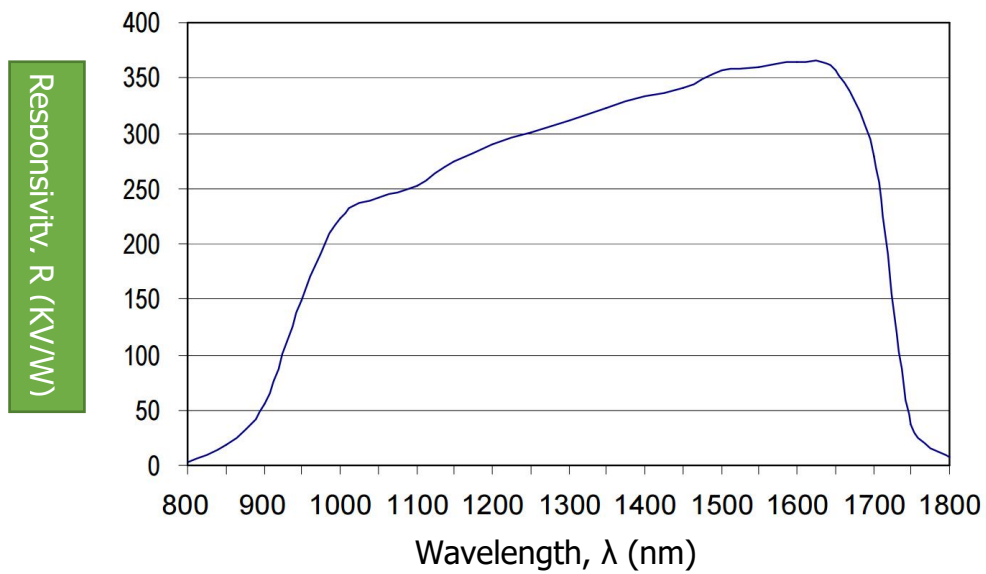


Pigtail Bullet Package B

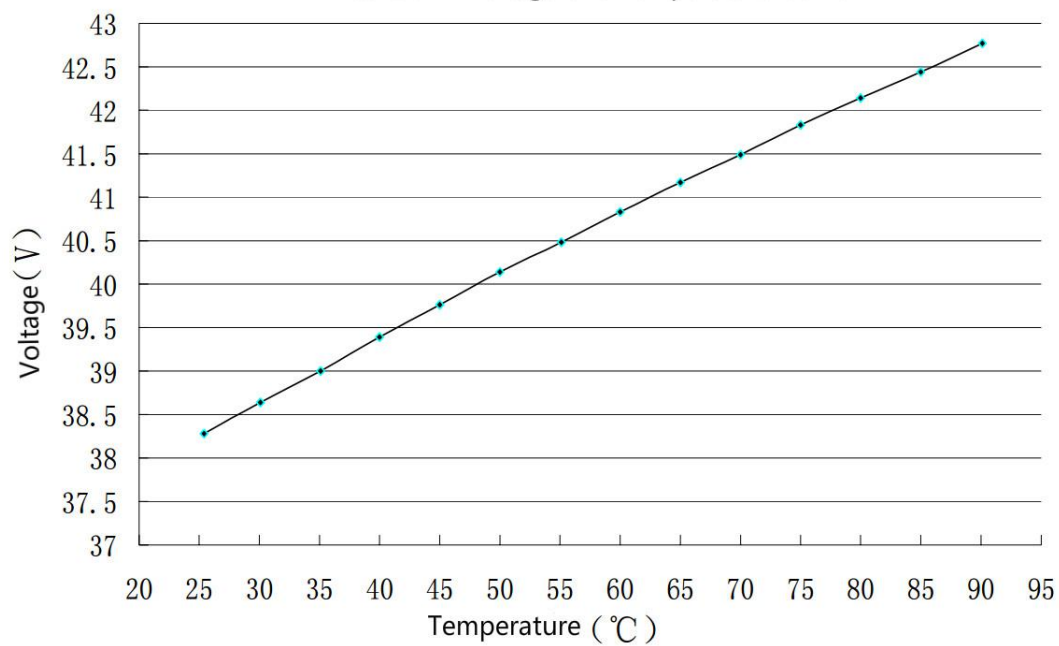


TYPICAL CHARACTERISTICS

Fig. 1 Spectral Response (R vs. λ)



Breakdown Voltage and Temperature Curve



Electric circuit

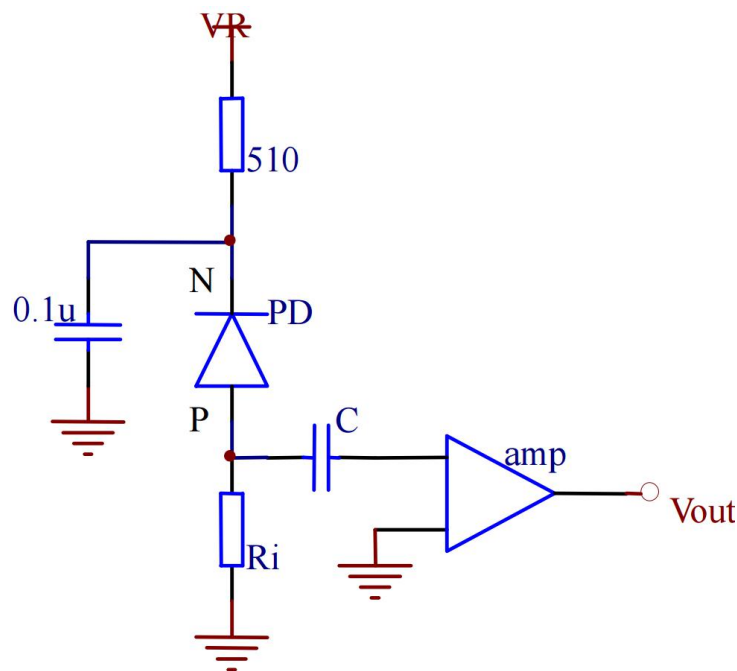


Fig. 2 Dark Current vs. Reverse Voltage

NOTES

- a. The detector needs feedback of voltage temperature control when operating.
- b. ESD protecting needed during storage, transporting and using.

Model Number Table

When ordering, refer to the numbering diagram below.

LAPD	Active area	Package Type	Fiber type	Connector
	5:50um	A:TO46	SMF:SMF-28E	FA:FC/APC
InGaAs APD	20:200um	B:Pigtail	MM5:50/125 MM fiber	FP:FC/PC
	50:500um		MM6:62.5/125MM fiber	SA:SC/APC

Products can be ordered directly from FOGPhotonics, Inc. or its representatives. For a complete listing of representatives, visit our website at www.fogphotonics.com

Personal Hazard and Handling Precautions:

Handle optical fiber with normal care, avoiding stretch, tension, kink or bend abuse. ESD precautions apply.

Warranty:

Please refer to your product purchase agreement for complete details or check with your FOGPhotonics, Inc sales representative.

Notice:

FOGPhotonics, Inc. reserves the right to make changes to the products or information

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