

## InGaAs Avalanched Photodiode

### IGA200-APD



### Description

IGA200-APD is a large area InGaAs APD designed for distance Measurement, spatial light transmission and low light level Detection etc. Despite its large active area of  $\phi 200\mu\text{m}$ .

IGA200-APD provide high responsivity and low noise in the Spectral range between 1100nm with 1700nm, it's optimized For use at a wavelength of 1550nm, suitable for use in Eye-safe laser range finding systems.

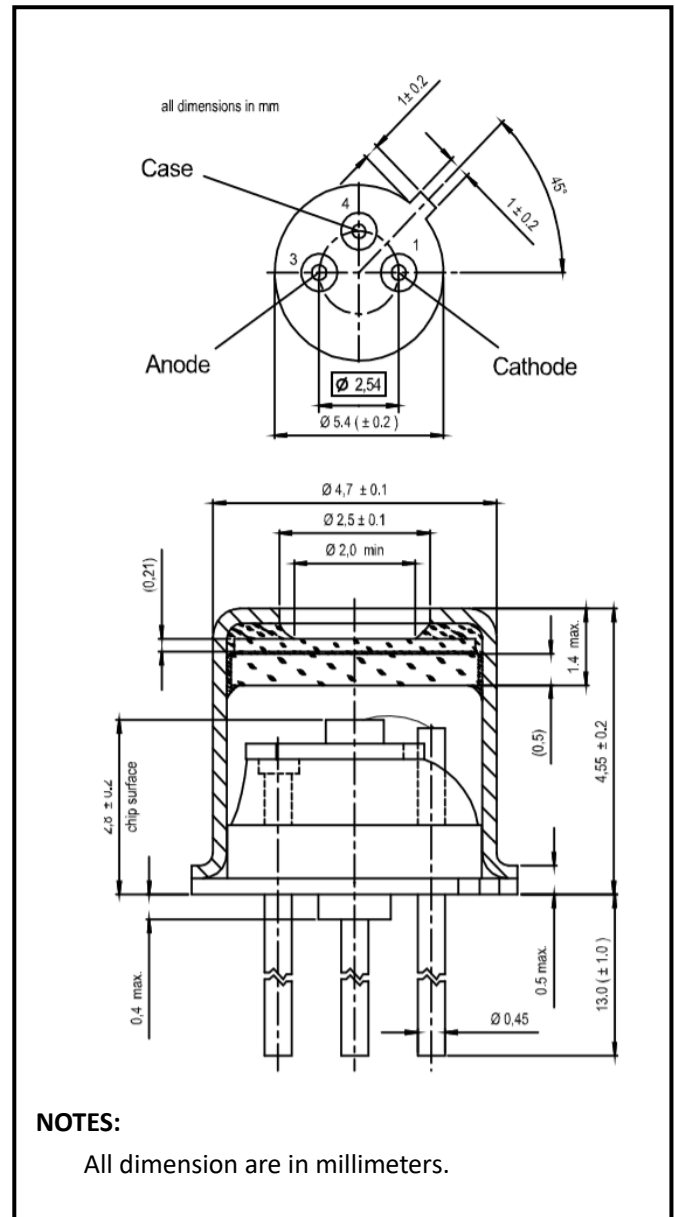
The chip is hermetically sealed in a modified TO-46 package.

### Features

- \* Back illumination planar APD
- \* Low voltage operation
- \* Low dark current
- \* High operation Frequency
- \* Large Active Area Diameter
- \* Spectral Range 950nm to 1700nm

### Applications

- \* Range finding
- \* OTDR
- \* Optical communication systems
- \* Low light level detection



Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject change without notice



## Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Active area	A	Φ 200				um
Bandwidth	BW			550		MHz
Operating Gain	M		1	15	20	
Reverse breakdown voltage	V <sub>(BR)</sub>	I <sub>R</sub> =100μA Ev=0lx, Id>0.1mA, T=294K	40	45	60	V
ΔVbr/ΔT			34	37	40	Mv/K
Junction Capacitance	C <sub>J</sub>	M>3, V <sub>R</sub> =V <sub>BR</sub> *0.9, f=1M		2.2		pF
Photo sensitivity@M=10	S <sub>R</sub>	λ <sub>p</sub> =1.55um, M=10	9.1	10.1	10.4	A/W
		λ <sub>p</sub> =1.064um, M=10	6.6	7.3	7.8	
Spectral Application Range	λ <sub>range</sub>	V <sub>R</sub> =10mV	950		1700	nm
Spectral Response-Peak	λ <sub>p</sub>	V <sub>R</sub> =0V		1064-1550		nm
Excess Noise Factor		M=5		2.1		
		M=10		3.4		
		M=15		4.3		
Noise Spectral Density		M=10		0.94		PA/√Hz
Dark Current		M=10, T=298K	60	81	96	nA
Operation Voltage	V	0.9*V <sub>(BR)</sub>				
Absolute Optical Input	I <sub>F</sub>	5dBm				
Absolute Reverse Current		3mA				
Absolute Forward Current		5mA				
Operating temperature		-75~+75°C				
Storage temperature		-80~+125°C				

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OTRON ELECTRONIC TECHNOLOGY CO., LTD

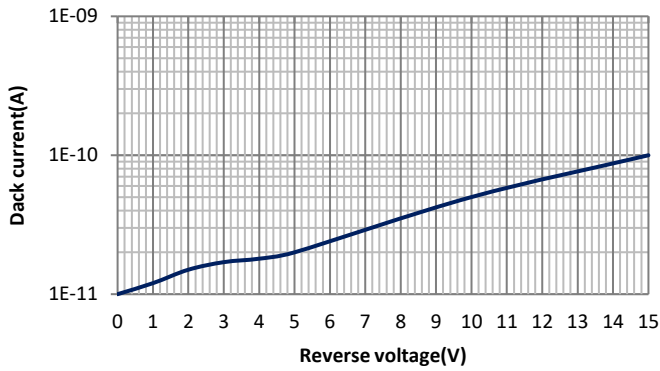
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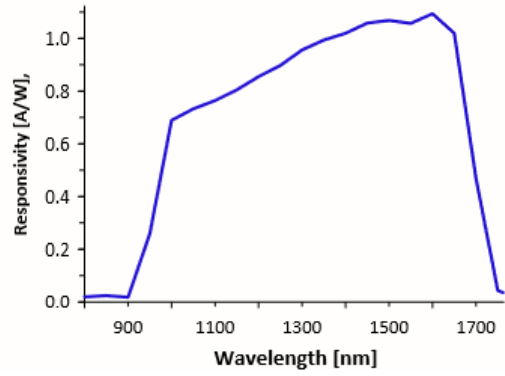
EMAL:frank.shuai@e-otron.com

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## ■ Dark current vs. reverse voltage

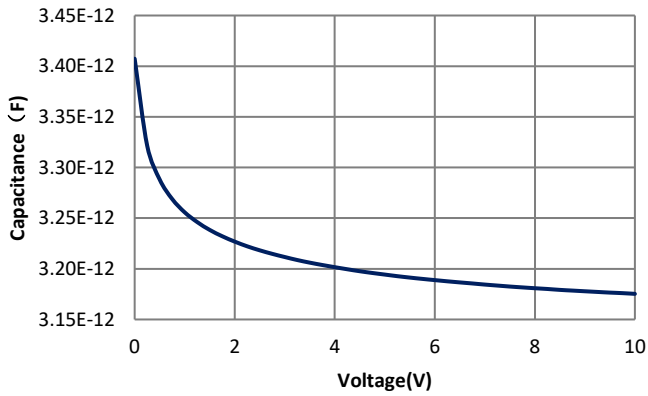


## ■ Spectral response ( M=10)



## ■ Relative Junction Capacitance

VS. Voltage



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