

InGaAs Avalanched Photodiode

IGA500-APD

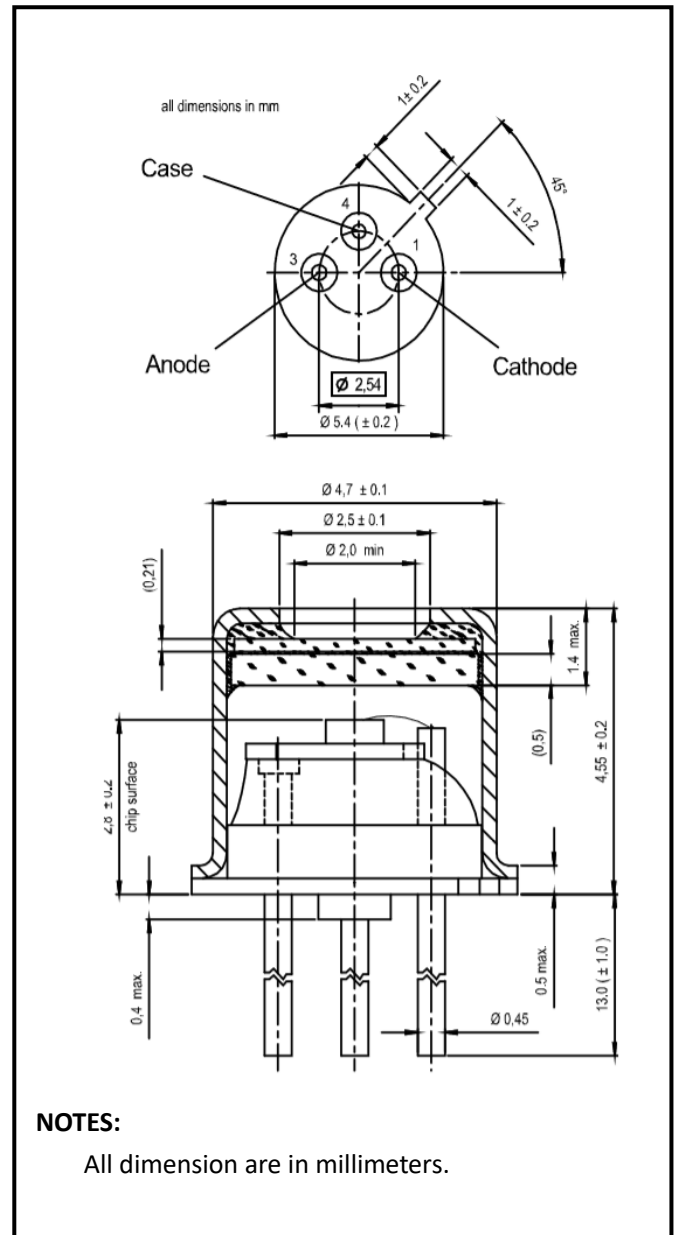


Description

IGA500-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 $\phi 500\mu\text{m}$.

IGA500-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

- * Top illumination planar APD
- * Low voltage operation
- * Low dark current
- * High operation Frequency
- * Large Active Area Diameter
- * Spectral Range 800nm 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

OTRON ELECTRONIC TECHNOLOGY CO.LTD

TEL:+86-21-54971821

FAX:+86-21-54971823

EMAL:frank.shuai@e-otron.com

<http://www.e-otron.com>



Absolute Maximum Ratings (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Active area	A	Φ 500				um
Maxim multiplication gain	Mmax	$\lambda_p=1.55\mu\text{m}$, $E_v=1\text{uw}$	20			
Response time	ts	$f=1\text{MHz}$, $R_L=50\Omega$		1		ns
Dark current	I _D	M=10			100	nA
Reverse breakdown voltage	V _(BR)	I _R =100μA $E_v=0\text{x}$	40		60	V
Junction Capacitance	C _J	M=10, $V_R=V_{BR} * 0.9$, $f=1\text{M}$		10	15	pF
Photo sensitivity	S _R	$\lambda_p=1.55\mu\text{m}$, $E_v=1\text{uw}$, M=10	9			A/W
Spectral Application Range	λ_{range}	$V_R=10\text{mV}$	1000		1680	nm
Spectral Response-Peak	λ_p	$V_R=0\text{V}$		1550		nm
Operation Voltage	V	0.9*V _(BR)				
Forward current	I _F	10mA				
Power dissipation		50mW				
Operating temperature		-50~+100 °C				
Storage temperature		-50~+125 °C				

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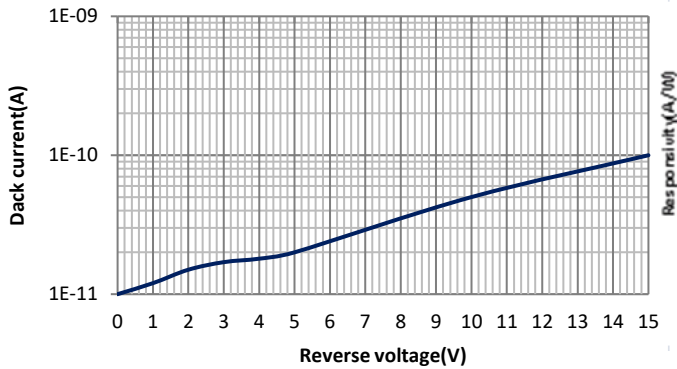
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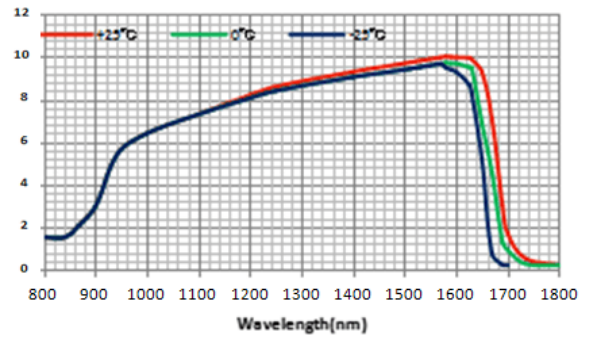
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■ Dark current vs. reverse voltage

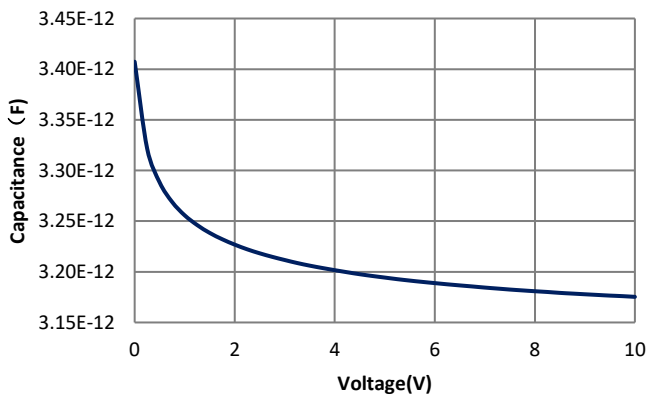


■ Spectral response (M=10)



■ Relative Junction Capacitance

VS. Voltage



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