

## Silicon avalanched photodiode

### APD230-9T



### Description

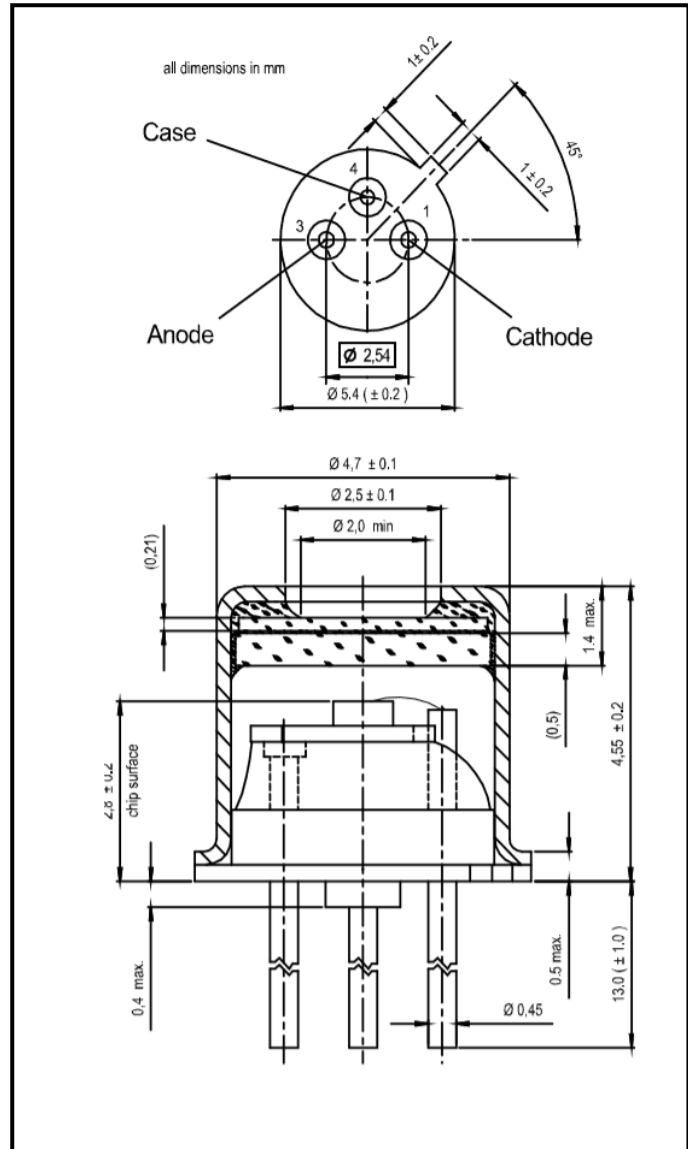
APD230-9T is circular ( $\Phi$  230 $\mu$ m).2mm<sup>2</sup> active area Avalanche Photodiode array with optimized sensitivity At 905nm. It is well suited for applications requiring high Speed and low noise in Visible-near IR applications.

### Features

- \* Top illumination planar APD
- \*  $\Phi$  230 $\mu$ m active area
- \* High gain at low bias voltage
- \* Operating temperature is from -40 to +80°C
- \* Storage temperature is from -50 to +120°C
- \* soldering temperature is 260°C @Max.5 seconds at the

### Applications

- \* Laser range finder
- \*High speed optical communications



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
Wavelength range	$\lambda$		400-1100			nm
Active diameter	$\phi$		230			$\mu\text{m}$
Dark current	$I_D$	M=100	0.1	0.4	1.0	nA
Junction Capacitance	C	M=100		0.80		PF
Reverse breakdown voltage	$V_{BR}$	ID=2 $\mu$ A	80		200	V
Operating voltage temperature coefficient	$\delta$	Tc=-40~+85°C	0.9			V/°C
Rise time	$t_R$	F=1MHz, $\lambda$ = 905nm, 50 $\Omega$	0.5	0.65	1.5	ns
Maximum multiplication gain	$M_{max}$	$\lambda$ =905nm, $\phi$ e=1 $\mu$ w	200			
Reponsivity	Re	$\lambda$ =905nm, $\phi$ e=1 $\mu$ w, M=100	50	55		A/W

## Absolute Values

Operating voltage	$0.95 \times V_{BR}$
Forward current	1mA
Power dissipation	1mW

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OTRON ELECTRONIC TECHNOLOGY CO.LTD

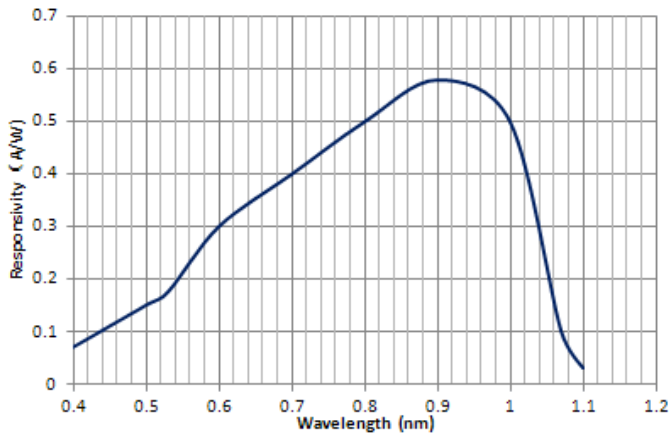
TEL:+86-21-54971821

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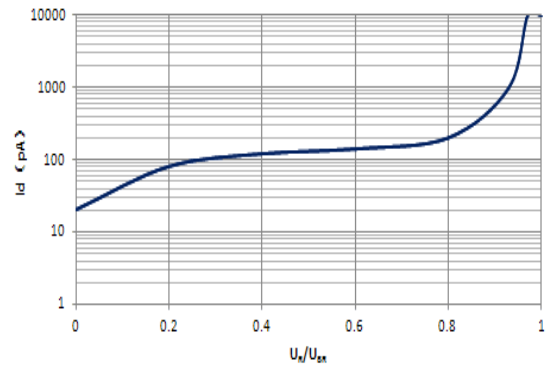
EMAL: [frank.shuai@e-otron.com](mailto:frank.shuai@e-otron.com)

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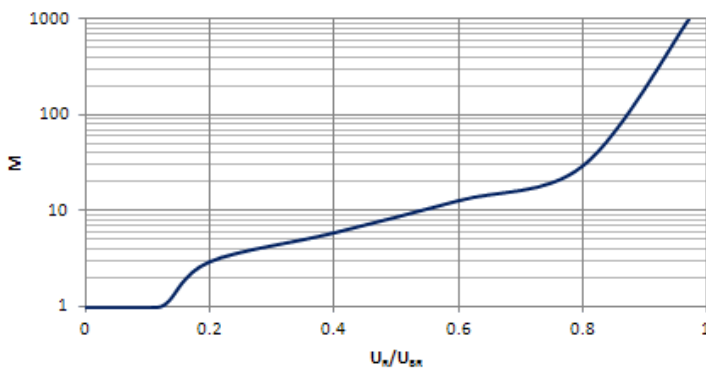
## ■ Responsivity vs. Wavelength at



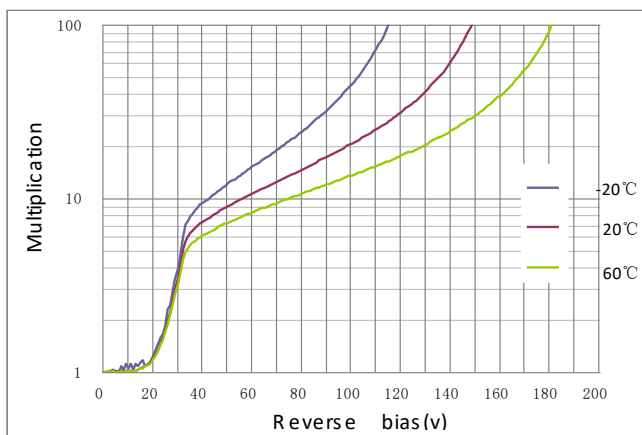
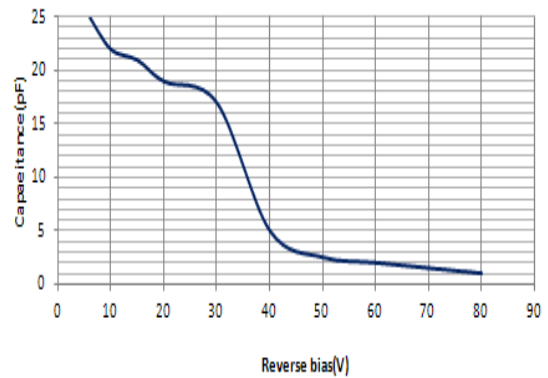
## ■ Dark current VS. $U_R/U_{BR}$



## ■ Gain vs. $U_R/U_{BR}$



## ■ Capacitance vs. Operating voltage



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