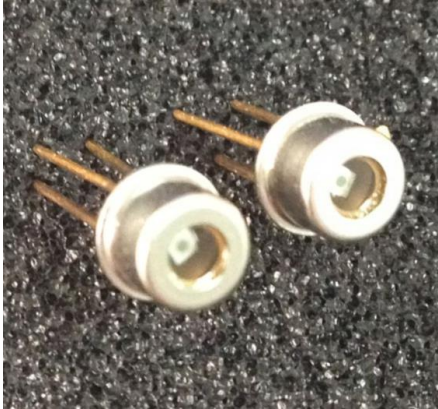


## Silicon avalanched photodiode

### APD1500-9T



### Description

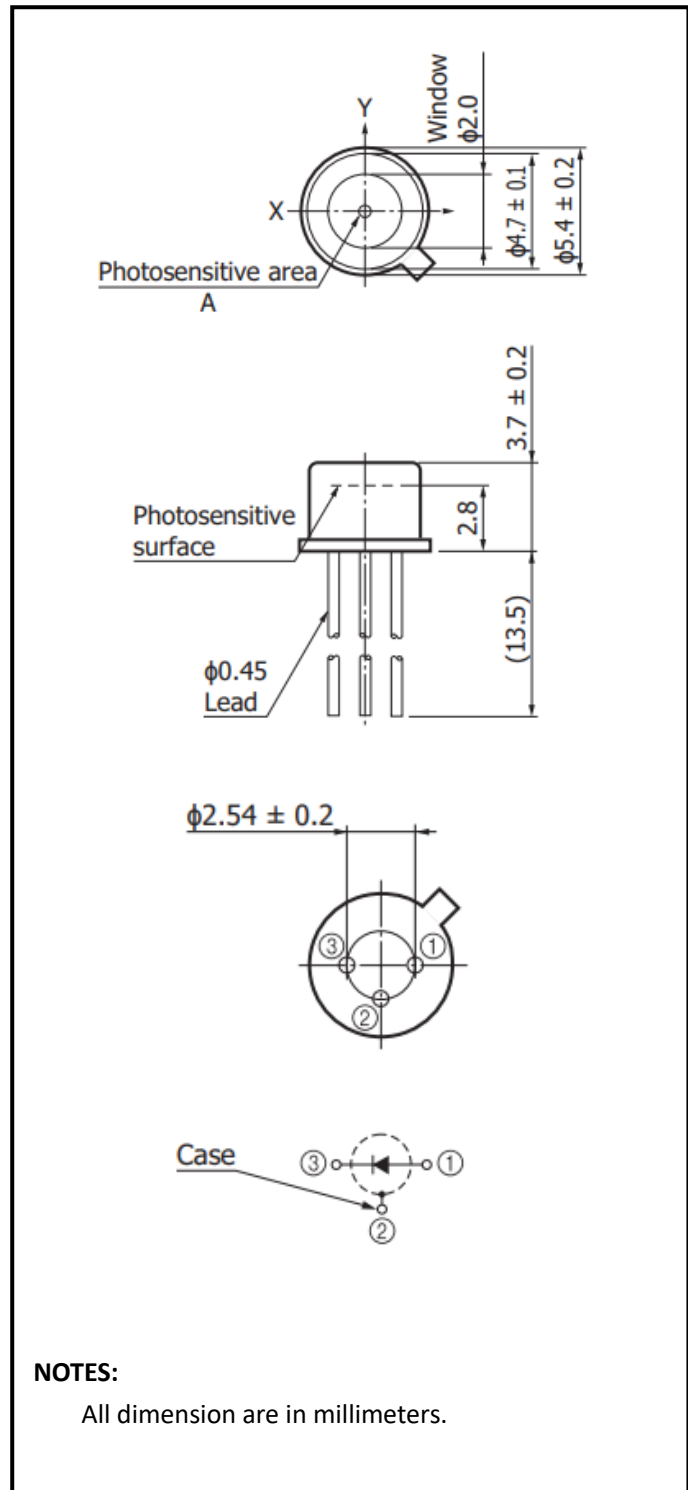
APD1500-9T is circular ( $\Phi$  1500um) 1.77mm<sup>2</sup> active area Avalanche Photodiode array with optimized sensitivity At 905nm. It is well suited for applications requiring High speed and low noise in IR applications.

### Features

- \* Top illumination planar APD
- \*  $\Phi$ 1500um 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
- \* Pulsed 905nm laser 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)

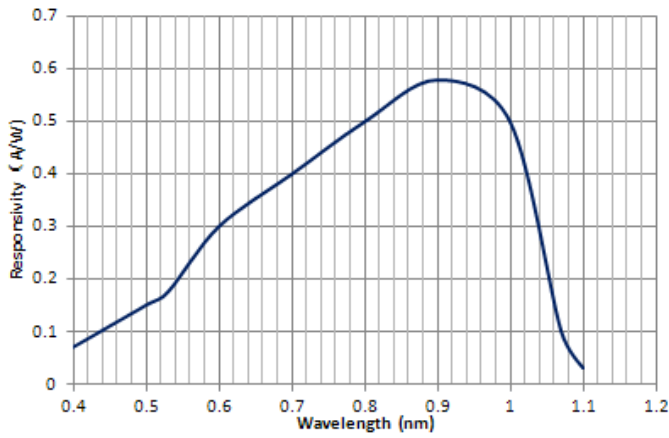
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Wavelength range	$\lambda$		400-1100			nm
Peak wavelength	$\lambda_p$		905			nm
Active diameter	$\phi$		1500			$\mu\text{m}$
	A		1.77			$\text{mm}^2$
Dark current	$I_D$	M=100		15.0	25	nA
Junction Capacitance	C	M=100, f=1MHz		8.0		PF
Reverse breakdown voltage	$V_{BR}$	ID=2 $\mu$ A	120		400	V
Operating voltage temperature coefficient	$\delta$	Tc=-40~+85 °C	0.9			V/°C
Rise time	$t_R$	M=100, $\lambda=1064\text{nm}$ , 50 $\Omega$		1.5		ns
Cut-off frequency	BW	-3dB		250		MHz
Maximum multiplication gain	$M_{max}$	$\lambda=905\text{nm}$ , $\phi_e=1\mu\text{w}$		100		
Responsivity	Re	$\lambda=905\text{nm}$ , M=100	50	55		A/W

## Absolute Values

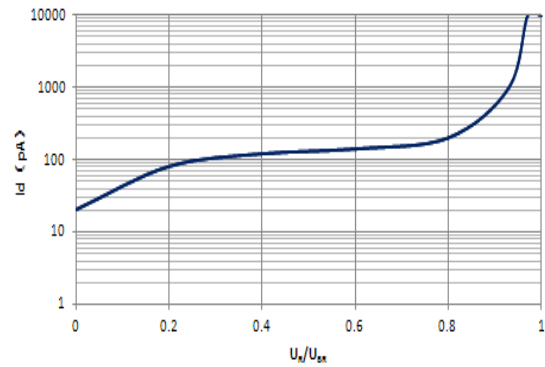
Operating voltage	$0.95 \times V_{BR}$
Forward current	1mA
Power dissipation	1mW

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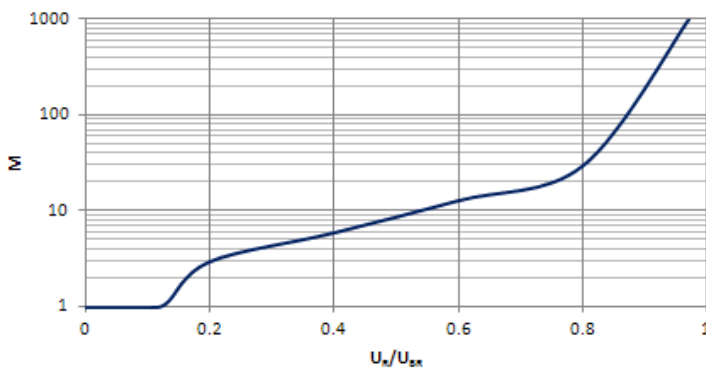
## ■ Responsivity vs. Wavelength at



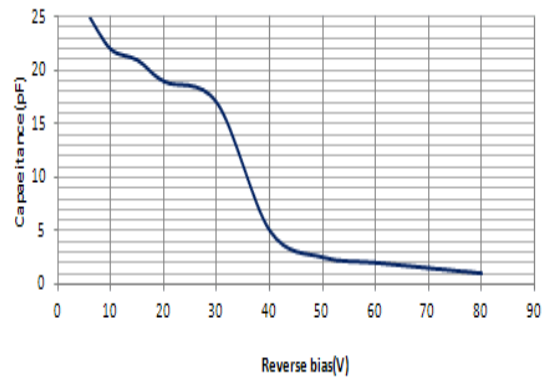
## ■ Dark current VS. $U_R/U_{BR}$



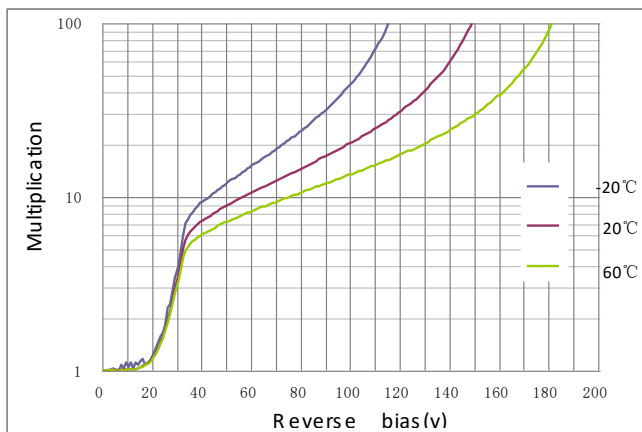
## ■ Gain vs. $U_R/U_{BR}$



## ■ Capacitance vs. Operating voltage



## ■ Gain vs. $U_{BR}$



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