

Silicon avalanched photodiode

APD3000-10T



Description

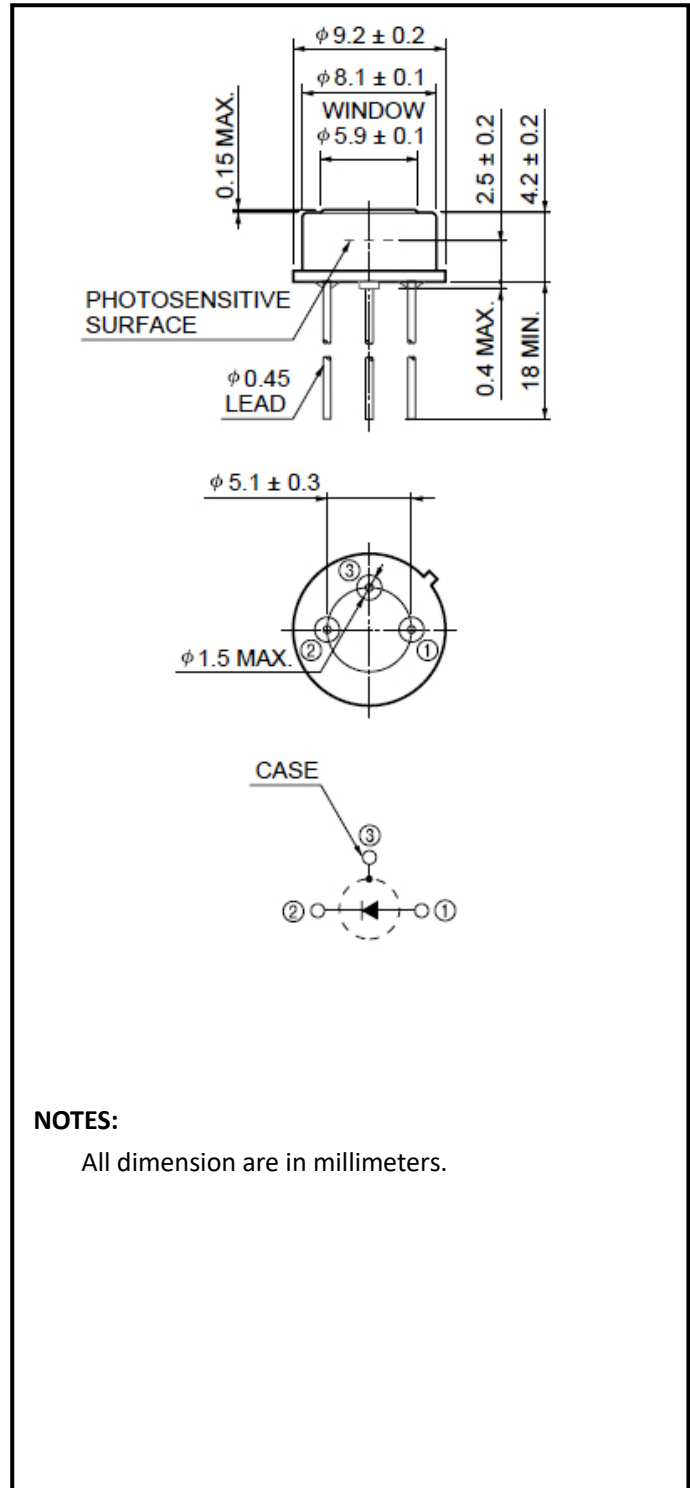
APD3000-10T is circular ($\Phi 3000\mu\text{m}$) 7.07mm^2 active area Avalanche Photodiode array with optimized sensitivity At 1064nm. It is well suited for applications requiring High speed and low noise in IR applications.

Features

- * Top illumination planar APD
- * $\Phi 3000\mu\text{m}$ active area
- * High gain at low bias voltage
- * Operating temperature is from -40 to $+80^\circ\text{C}$
- * Storage temperature is from -50 to $+120^\circ\text{C}$
- * soldering temperature is 260°C @Max.5 seconds at the

Applications

- * Laser range finder
- * High speed optical communications
- * Pulsed 1064nm laser detection



NOTES:

All dimension are in millimeters.

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	λ		400-1100			nm
Peak wavelength	λ_p		1064			nm
Active diameter	ϕ		3000			μm
	A		7.07			mm^2
Dark current	I_D	M=100		45	500	nA
Junction Capacitance	C	M=100, f=1MHz		20		PF
Reverse breakdown voltage	V_{BR}	ID=2 μ A	250	300	600	V
Operating voltage temperature coefficient	δ	Tc=-40~+85 °C	1.0			V/°C
Rise time	t_R	M=100, $\lambda=1064\text{nm}$, 50 Ω		10		ns
Cut-off frequency	BW	-3dB		60		MHz
Maximum multiplication gain	M_{max}	$\lambda=1064\text{nm}$, $\phi_e=1\mu\text{w}$		100		
Responsivity	Re	$\lambda=905\text{nm}$, M=100	50	55		A/W
		$\lambda=1064\text{nm}$, M=100		55		A/W

Absolute Values

Operating voltage	$0.95 \times V_{BR}$
Forward current	5mA
Power dissipation	60mW

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OTRON ELECTRONIC TECHNOLOGY CO., LTD

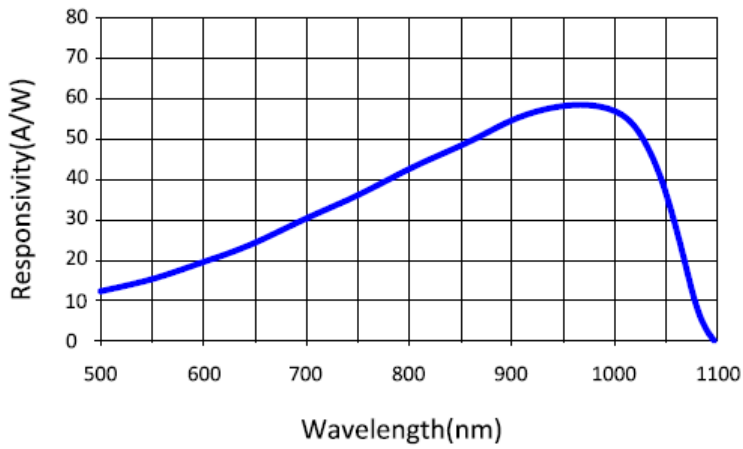
TEL:+86-21-54971821

FAX:+86-21-54971823

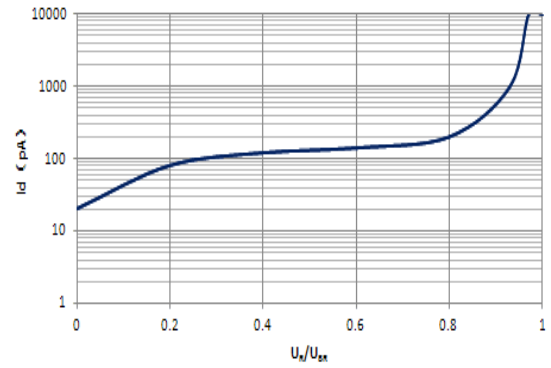
Email: otron.sensor@gmail.com

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

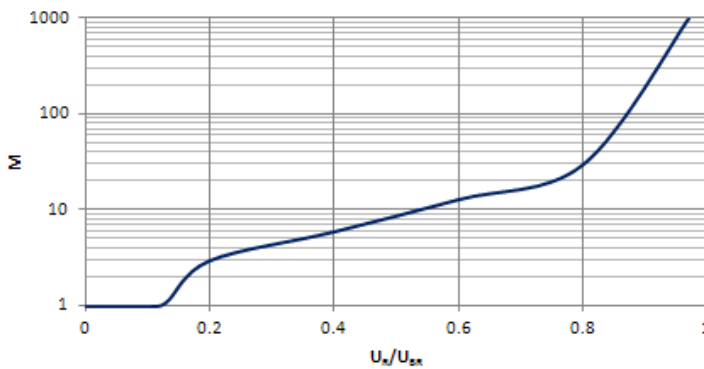
■ Responsivity vs. Wavelength at



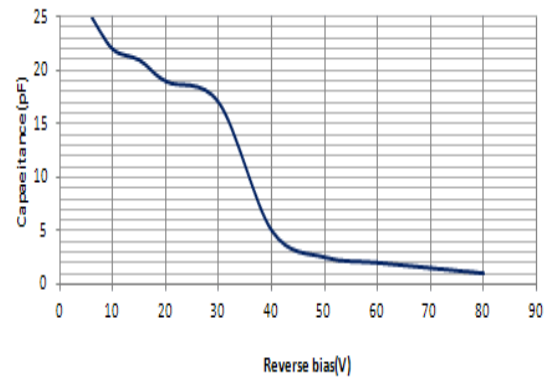
■ Dark current VS. U_R/U_{BR}



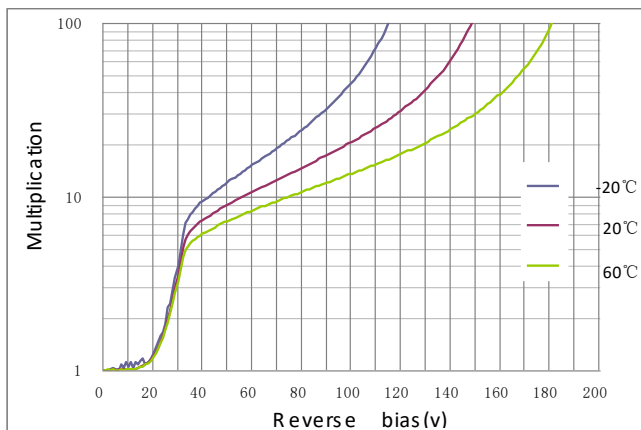
■ Gain vs. U_R/U_{BR}



■ Capacitance vs. Operating voltage



■ Gain vs. U_{BR}



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