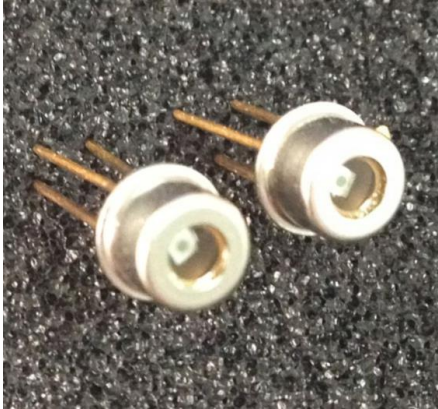


Silicon avalanched photodiode

APD500-10T



Description

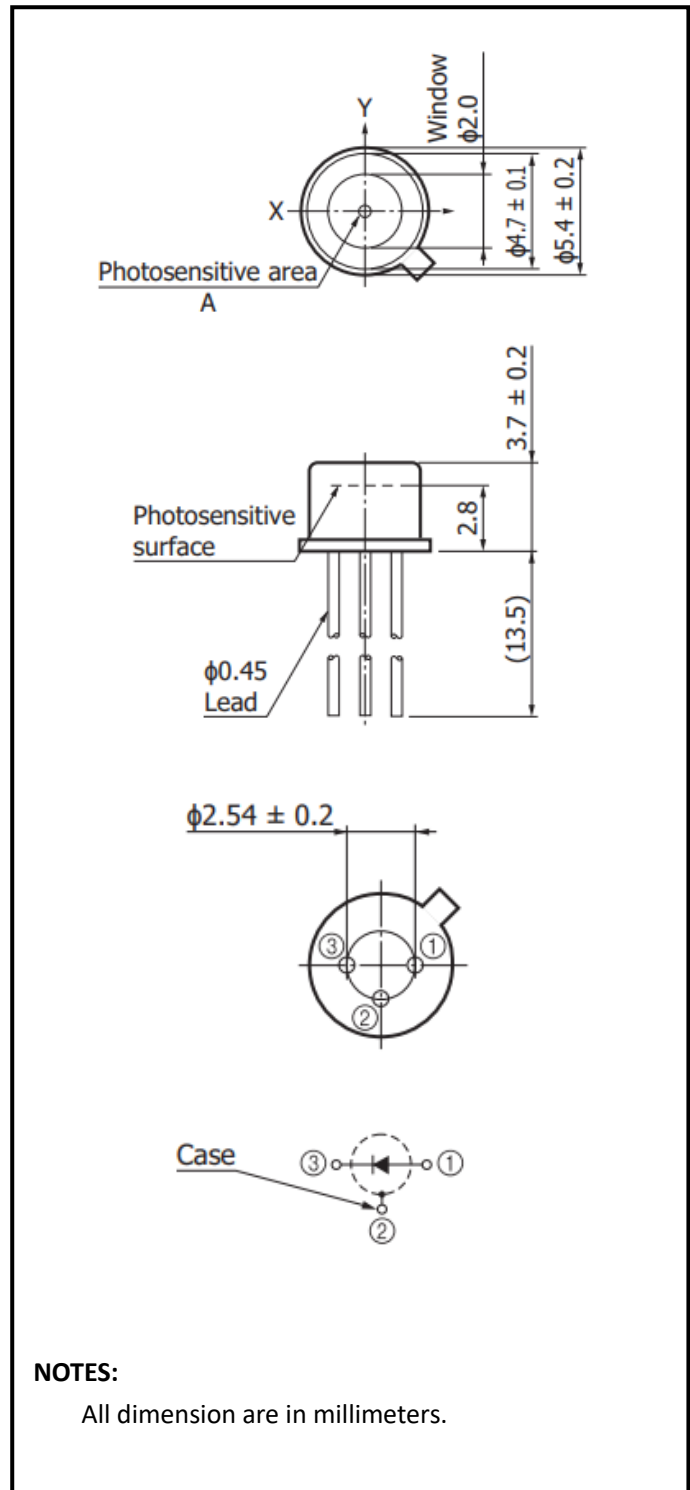
APD500-10T is circular (Φ 500um) 0.2mm² active area Avalanche Photodiode array with optimized sensitivity At 1064nm. It is well suited for applications requiring High speed and low noise in IR applications.

Features

- * Top illumination planar APD
- * Φ 500um 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 1064nm 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	λ		400-1100			nm
Peak wavelength	λ_p		1064			nm
Active diameter	ϕ		500			μm
	A		0.2			mm^2
Dark current	I_D	M=100		1.5	10	nA
Junction Capacitance	C	M=100, f=1MHz		0.5		PF
Reverse breakdown voltage	V_{BR}	ID=2 μ A	250		600	V
Operating voltage temperature coefficient	δ	Tc=-40~+85 °C	0.9			V/°C
Rise time	t_R	M=100, $\lambda=1064\text{nm}$, 50 Ω		5		ns
Cut-off frequency	BW	-3dB		90		MHz
Maximum multiplication gain	M_{max}	$\lambda=1064\text{nm}$, $\phi_e=1\mu\text{w}$		100	1000	
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	1mA
Power dissipation	1mW

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OTRON ELECTRONIC TECHNOLOGY CO., LTD

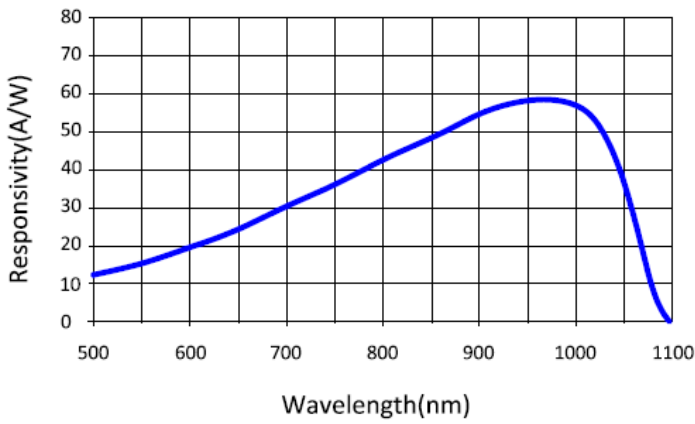
TEL:+86-21-54971821

FAX:+86-21-54971823

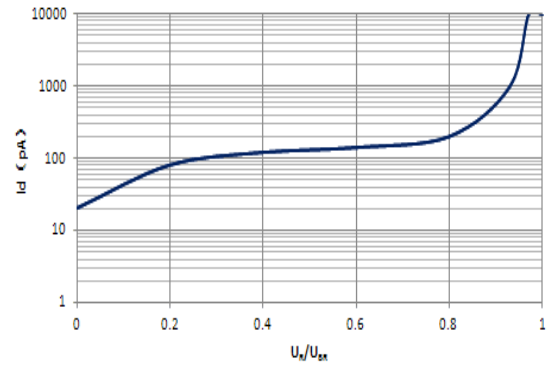
Email: otron.sensor@gmail.com

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

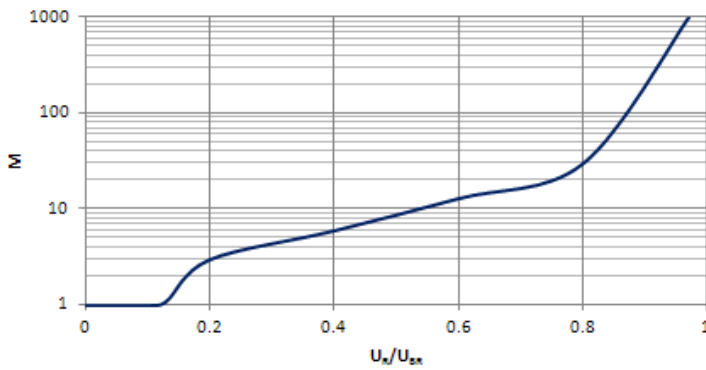
■ Responsivity vs. Wavelength at



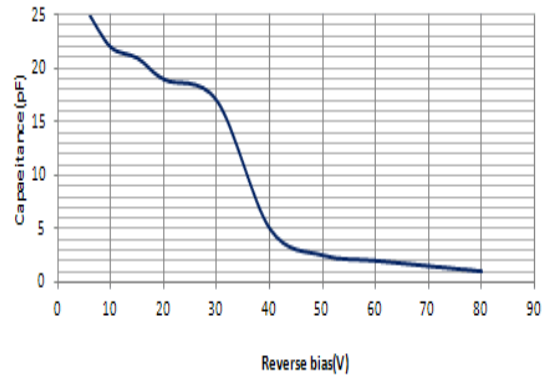
■ Dark current VS. U_R/U_{BR}



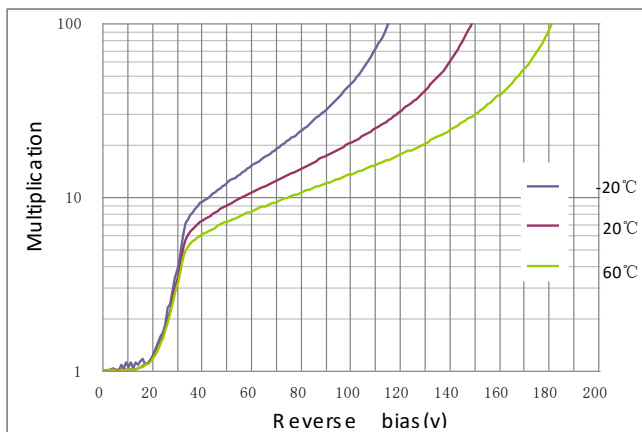
■ Gain vs. U_R/U_{BR}



■ Capacitance vs. Operating voltage



■ Gain vs. U_{BR}



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