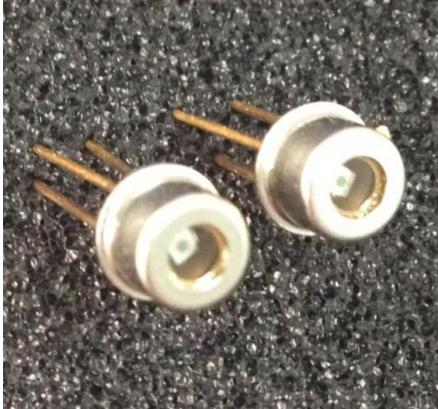


Silicon avalanched photodiode

APD800-9T



Description

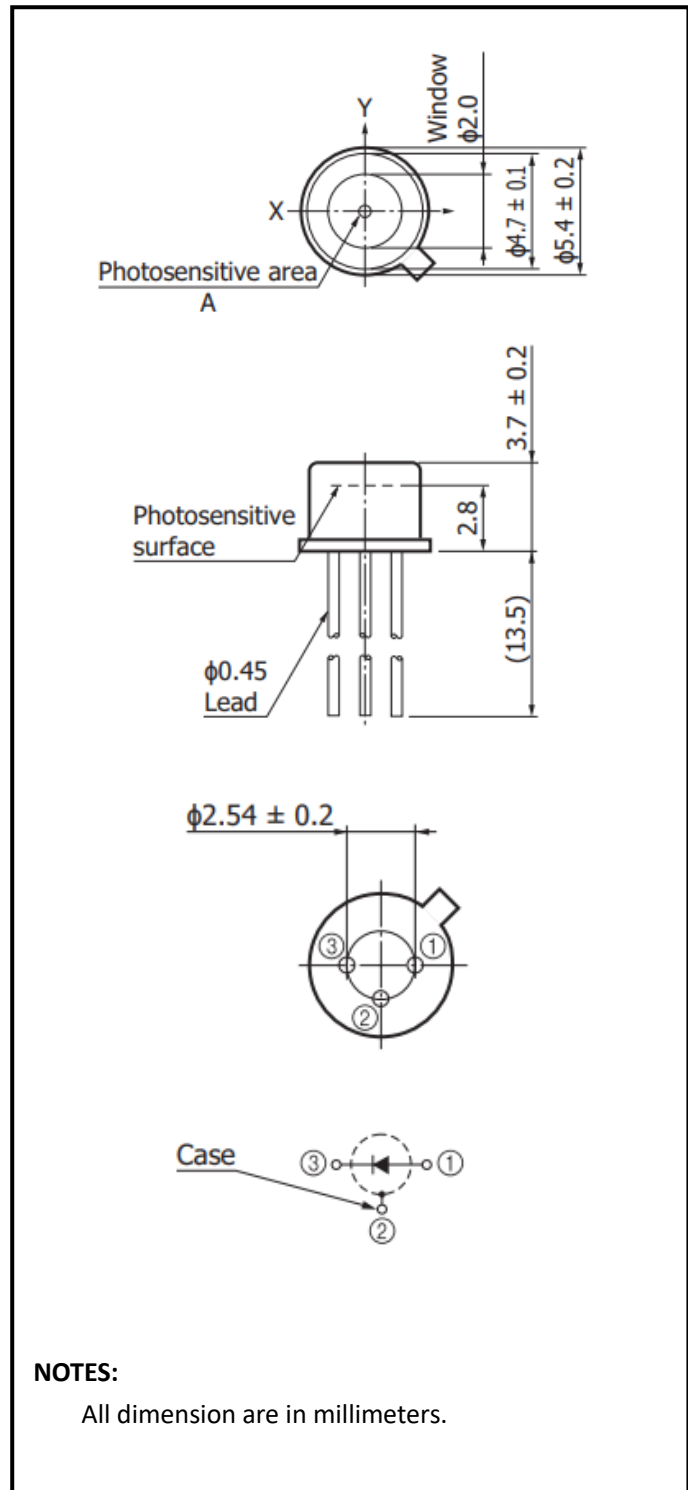
APD800-9T is circular (Φ 800um) 0.5mm² active area Avalanche Photodiode array with optimized sensitivity At 905nm. It is well suited for applications requiring High speed and low noise in IR applications.

Features

- * Top illumination planar APD
- * Φ 800um 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)

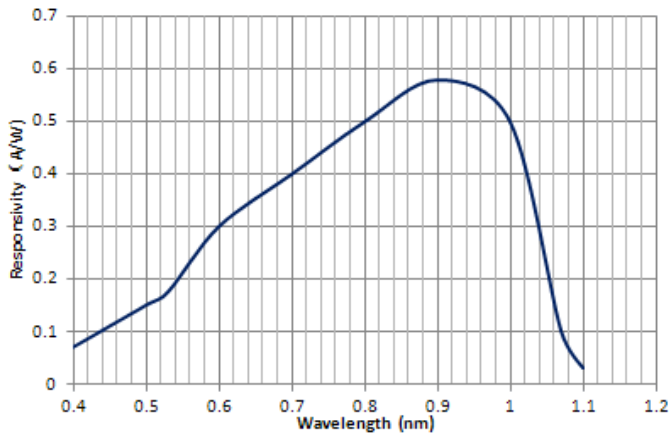
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Wavelength range	λ		400-1100			nm
Peak wavelength	λ_p		905			nm
Active diameter	ϕ		800			μm
	A		0.5			mm^2
Dark current	I_D	M=100		2.0	25	nA
Junction Capacitance	C	M=100, f=1MHz		2.0		PF
Reverse breakdown voltage	V_{BR}	ID=2 μ A	120		400	V
Operating voltage temperature coefficient	δ	Tc=-40~+85 °C	0.9			V/°C
Rise time	t_R	M=100, $\lambda=1064\text{nm}$, 50 Ω		1.3		ns
Cut-off frequency	BW	-3dB		300		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

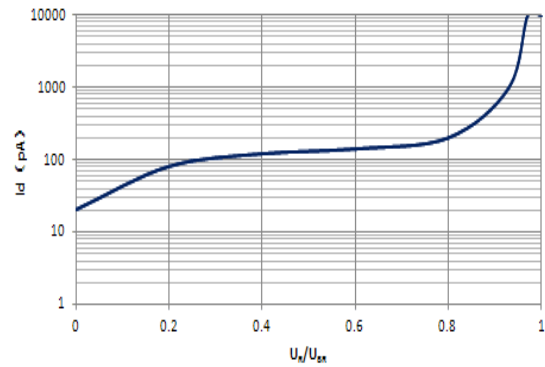
Operating voltage	$0.95 \times V_{BR}$
Forward current	1mA
Power dissipation	1mW

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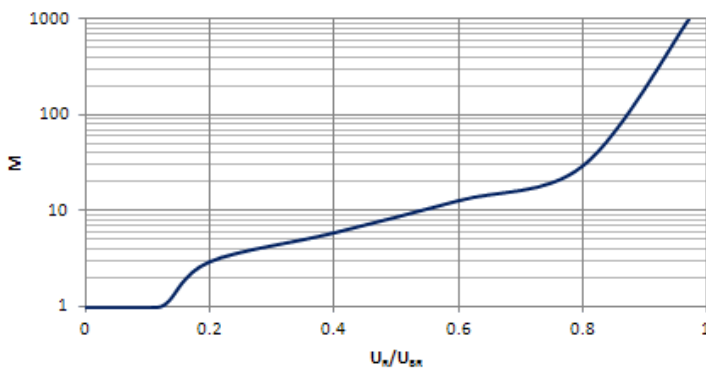
■ Responsivity vs. Wavelength at



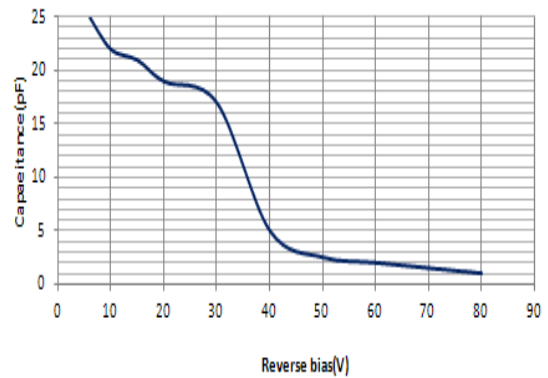
■ Dark current VS. U_R/U_{BR}



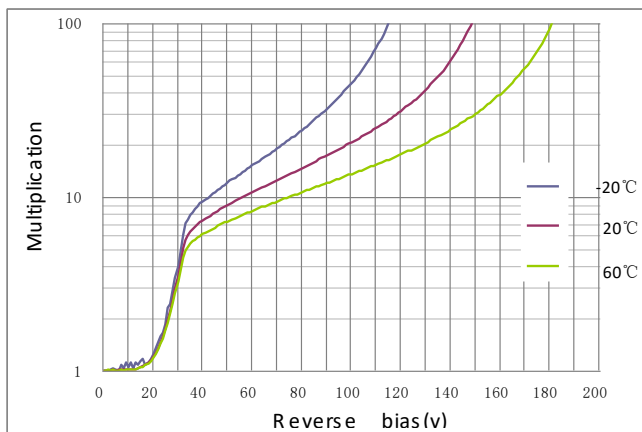
■ Gain vs. U_R/U_{BR}



■ Capacitance vs. Operating voltage



■ Gain vs. U_{BR}



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