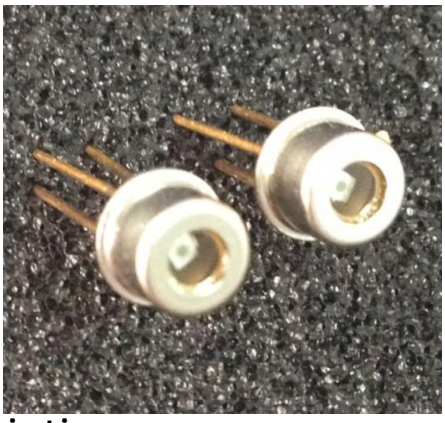
Silicon avalanched photodiode

APD1500-10T



Description

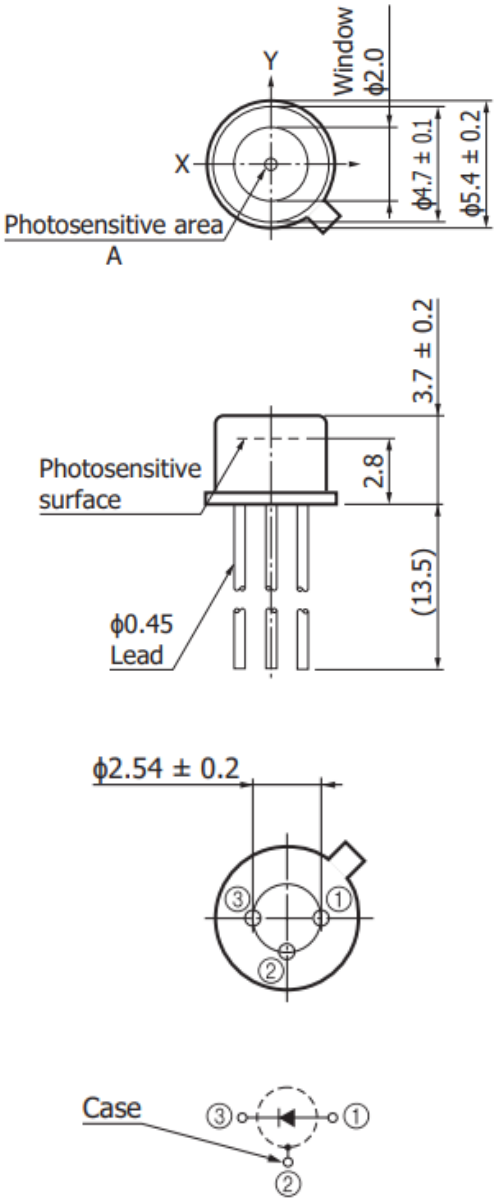
APD1500-10T is circular (Φ1500um) 1.77mm^2 active area Avalanche Photodiode array with optimized sensitivity At 1064nm. It is well suited for applications requiring High speed and low noise in IR applications.

Features

* Top illumination planar APD
*Φ1500um active area
* High gain at low bias voltage
* Operating temperature is from -40 to +80℃
* Storage temperature is from -50 to +120℃
* soldering temperature is 260℃ @Max.5 seconds at the

Applications

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



NOTES:

All dimension are in millimeters.

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Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Wavelength range	λ		400-1100			nm
Peak wavelength	λp		1064			nm
Active diameter	ϕ		1500			μm
	A		1.77			mm^2
Dark current	I_D	M=100		7.0	90	nA
Junction Capacitance	C	M=100，f=1MHz		3.0		PF
Reverse breakdown voltage	V_{BR}	ID=2μA	250		600	V
Operating voltage temperature coefficient	δ	Tc=-40~+85℃	0.9			V/℃
Rise time	t_R	M=100, λ= 1064nm, 50Ω		5		ns
Cut-off frequency	BW	-3dB		70		MHz
Maximum multiplication gain	M_{max}	λ=1064m,ϕe=1μw		100		
Responsivity	Re	λ=905nm, M=100	50	55		A/W
		λ=1064nm, M=100		55		A/W

Absolute Values

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

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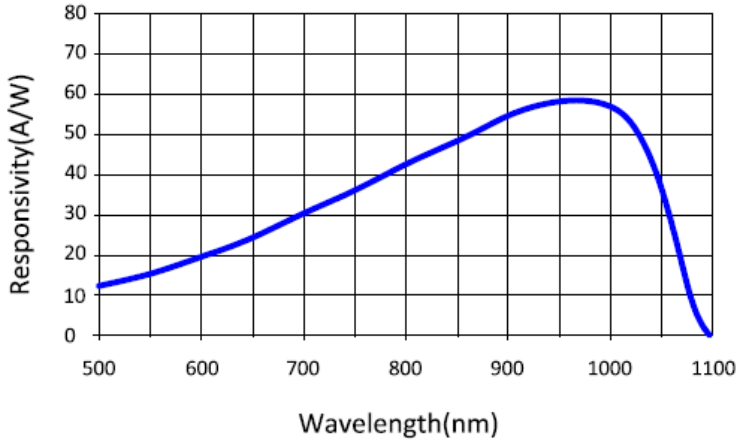
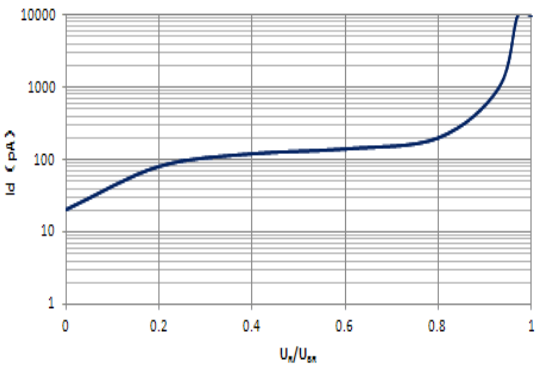
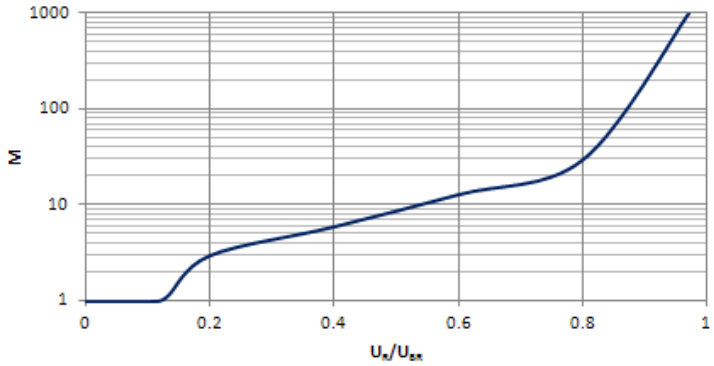
■ Responsivity vs. Wavelength at



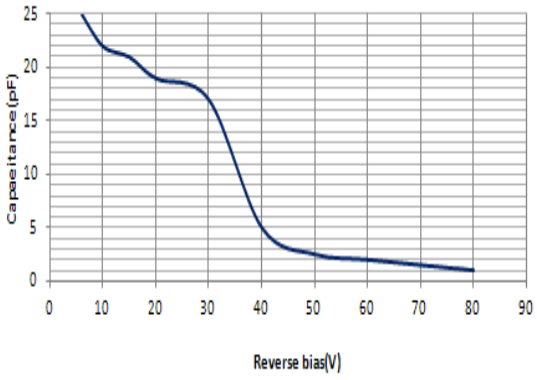
■Dark current VS.U_R/U_{BR}



■Gain vs.U_R/U_{BR}



■Capacitance vs. Operating voltage



■Gain vs. U_{BR}