

Silicon UV avalanched photodiode

APD3000-UT



Description

APD3000-UT is circular ($\Phi 3000\mu\text{m}$) 7.07mm^2 active area Avalanche Photodiode with optimized sensitivity In the UV to visible range.

It's applicated for low light level measurement and Analytical instrument.

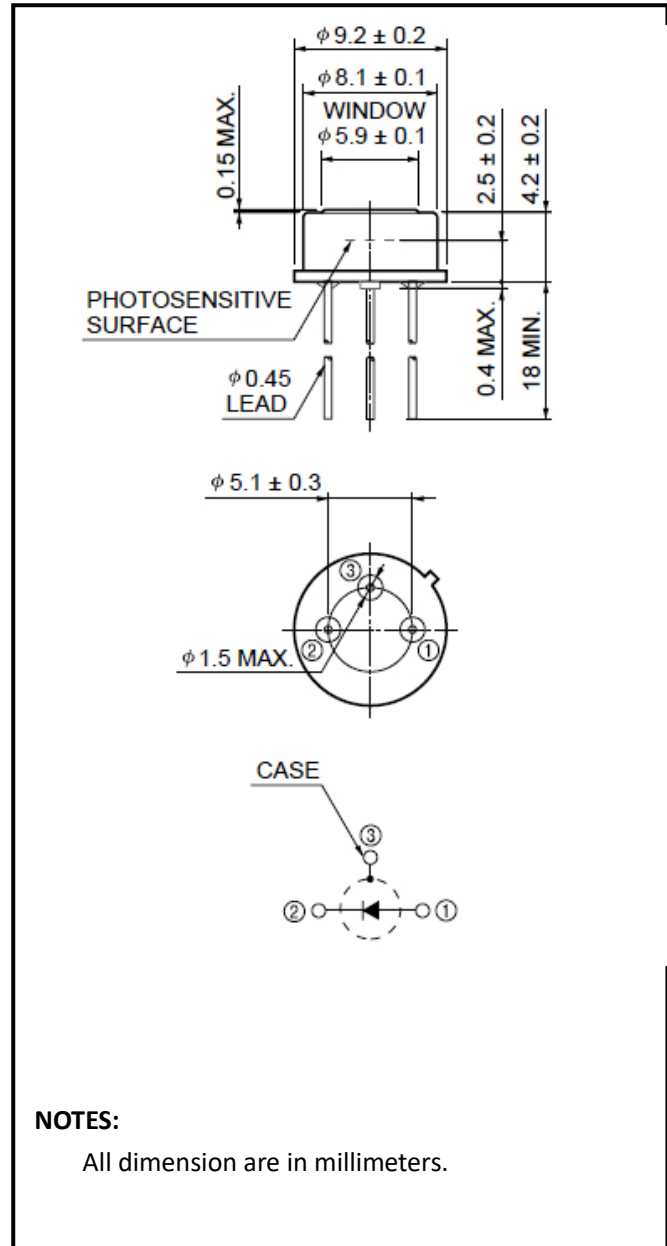
Features

- * Top illumination planar APD
- * $\Phi 3000\mu\text{m}$ active area
- * High gain at low bias voltage
- * Operating temperature is from -40 to $+80^\circ\text{C}$

Applications

- * Low light level measurement
- * Analytical instrument
- * Florescent measurement
- * Medical instrument

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)

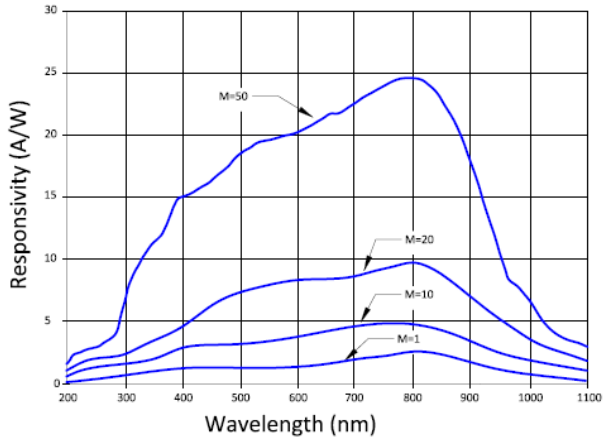
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Wavelength range	λ		200-1100			nm
Peak wavelength	λ_p		800			nm
Active diameter	ϕ		3000			μm
	A		7.07			mm^2
Dark current	I_D	VR=80V		6.3	35	nA
Junction Capacitance	C	VR=90V, f=1MHz		20		PF
Reverse breakdown voltage	V_{BR}	ID=100 μ A	90	97	110	V
Operating voltage temperature coefficient	δ	Tc=-40~+85 °C	0.4			V/°C
Rise time	t_R	M=100, $\lambda=400\text{nm}$, 50 Ω		10		ns
Cut-off frequency	BW	-3dB		25		MHz
Maximum multiplication gain	M_{max}	$\lambda=905\text{nm}$, $\phi_e=1\mu\text{w}$		100		
Responsivity	Re	$\lambda=355\text{nm}$, M=100, VR=10V		22		A/W

Absolute Values

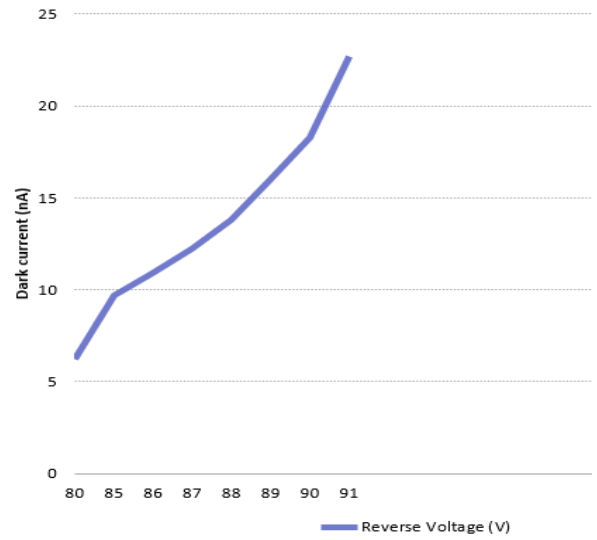
Operating voltage	$0.95 \times V_{BR}$
Forward current	1mA
Power dissipation	60mW

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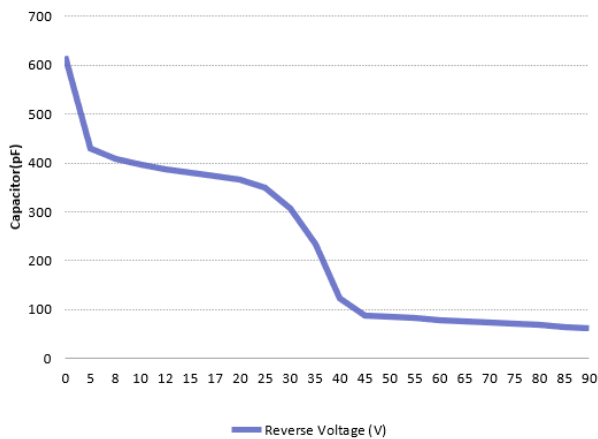
■ Responsivity vs. Wavelength at



■ Dark current VS. U_{Bias}



■ Capacitance vs. Operating voltage



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