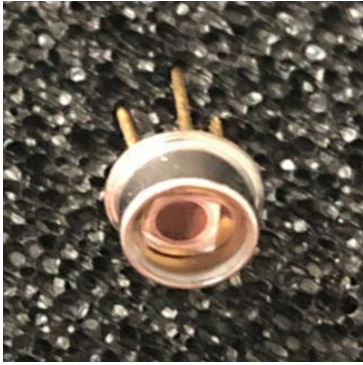


## Silicon UV avalanched photodiode

### APD1800-UT



## Description

APD1800-UT is circular ( $\Phi 1800\mu\text{m}$ )  $1.77\text{mm}^2$  active area Avalanche Photodiode with optimized sensitivity In the UV to visible range.

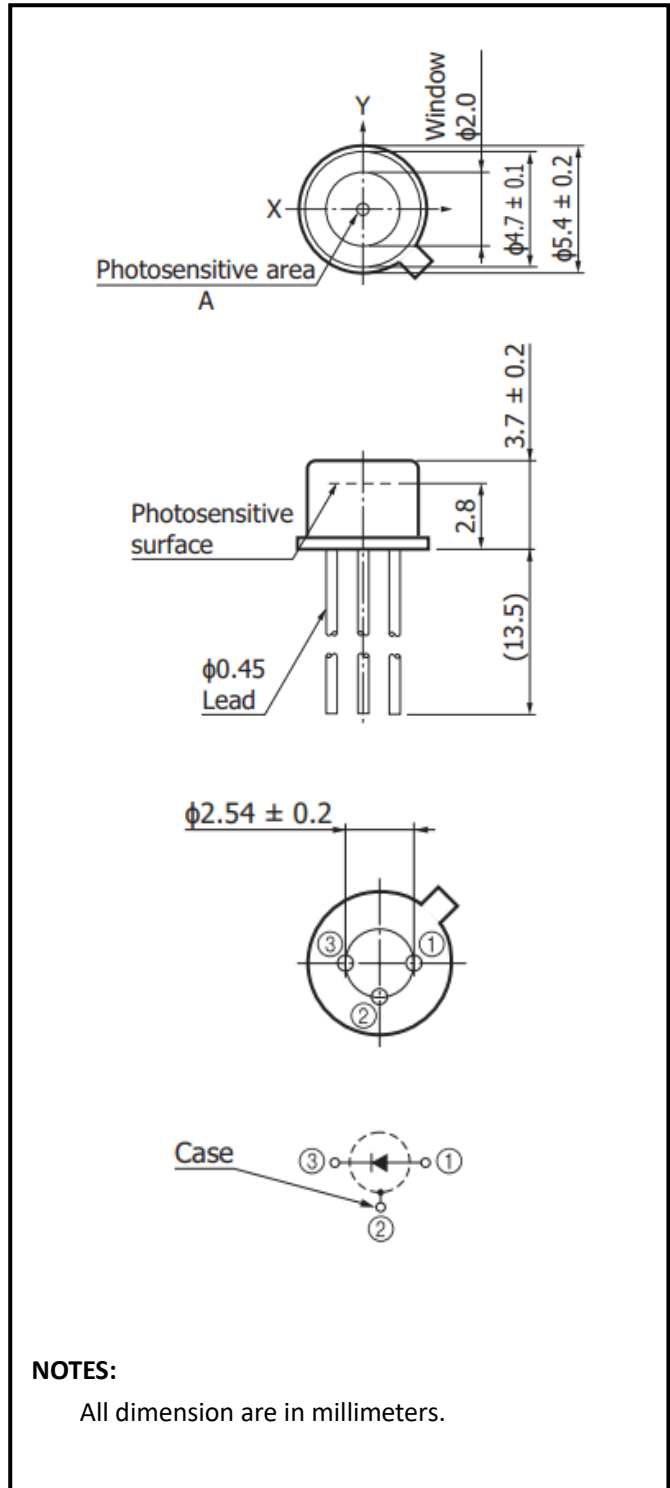
It's applicated for low light level measurement and Analytical instrument.

## Features

- \* Top illumination planar APD
- \*  $\Phi 1800\mu\text{m}$  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)

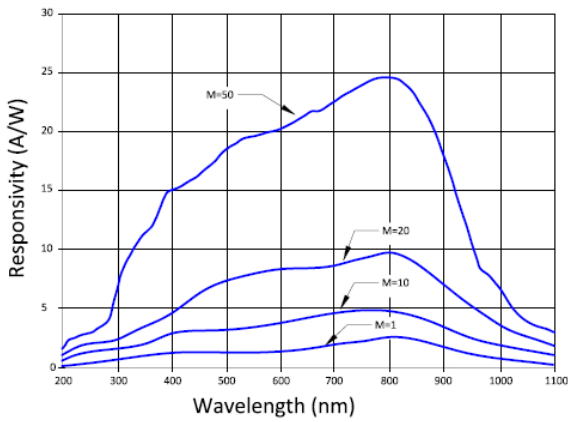
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Wavelength range	$\lambda$		200-1100			nm
Peak wavelength	$\lambda_p$		800			nm
Active diameter	$\phi$		1800			$\mu\text{m}$
	A		1.77			$\text{mm}^2$
Dark current	$I_D$	M=100		3	10	nA
Junction Capacitance	C	VR=150V, f=1MHz		20		PF
Reverse breakdown voltage	$V_{BR}$	ID=100 $\mu$ A	80	170	200	V
Operating voltage temperature coefficient	$\delta$	Tc=-40~+85 °C	0.4			V/°C
Rise time	$t_R$	M=100, $\lambda=1064\text{nm}$ , 50 $\Omega$		3	5	ns
Cut-off frequency	BW	-3dB		250		MHz
Maximum multiplication gain	$M_{max}$	$\lambda=905\text{nm}$ , $\phi_e=1\mu\text{w}$		100		
Responsivity	Re	$\lambda=355\text{nm}$ , M=1, VR=10V		0.22		A/W

## Absolute Values

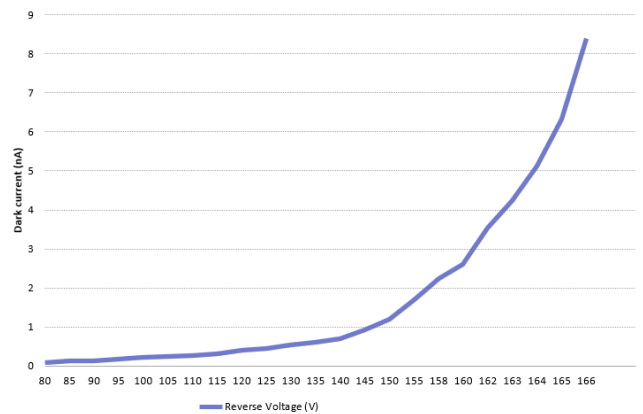
Operating voltage	$0.95 \times V_{BR}$
Forward current	1mA
Power dissipation	1mW

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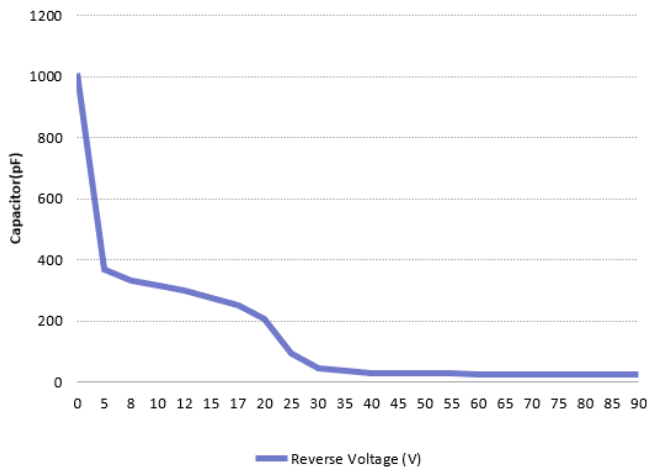
## ■ Responsivity vs. Wavelength at



## ■ Dark current VS./U<sub>Bias</sub>



## ■ Capacitance vs. Operating voltage



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