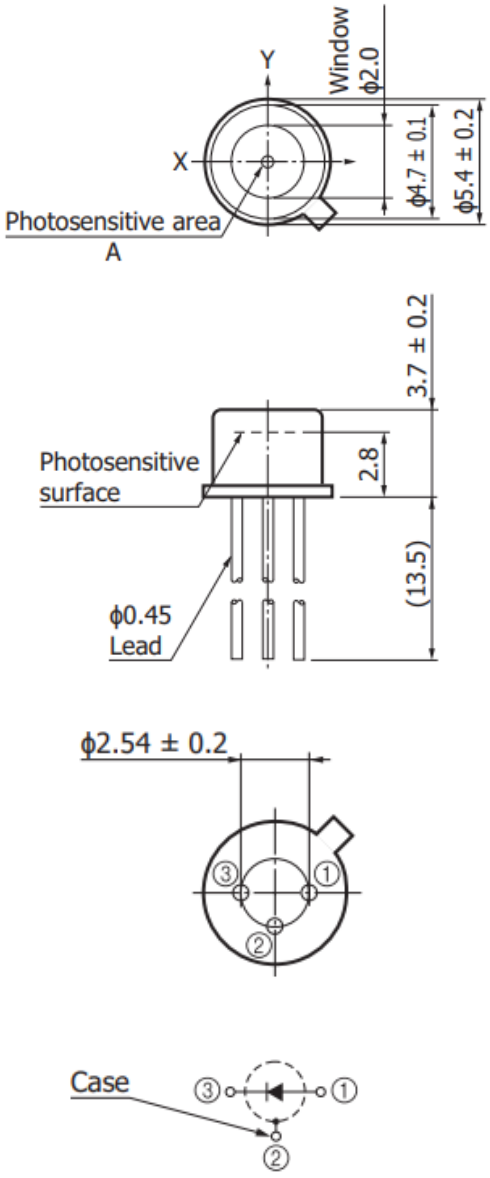
APD500-8TO52S1

Silicon avalanched photodiode



NOTES:

All dimension are in millimeters.

Description

APD500-8TO52S1 is circular (Φ500um) 0.2mm^2 active area Avalanche Photodiode array with optimized sensitivity At 800nm. It is well suited for applications requiring high Speed and low noise in Visible-near IR applications.

Features

* Top illumination planar APD
* Φ500um active area
* High gain at low bias voltage
* Operating temperature is from -40 to +80℃
* Storage temperature is from -50 to +100℃
* soldering temperature is 260℃ @Max.5 seconds at the position of 2mm from the PIN legs.

Applications

* Laser range finder
*High speed optical communications

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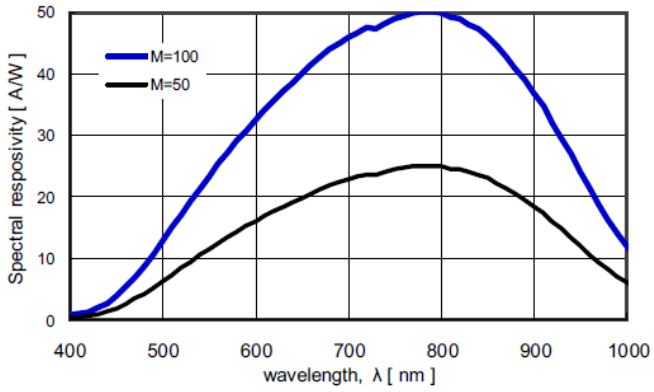
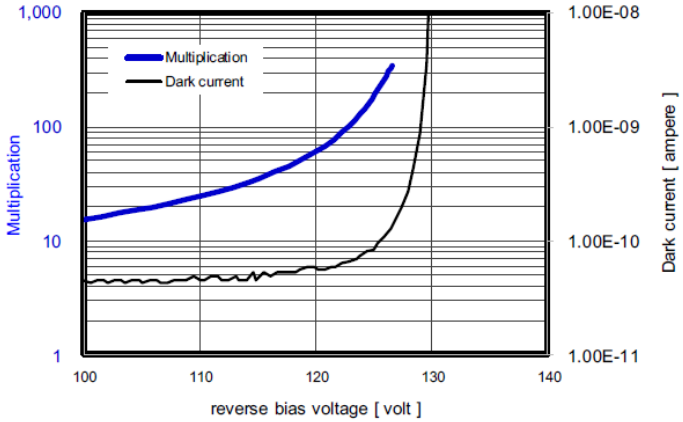
Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Wavelength range	λ			400-1100		nm
Active diameter	ϕ			500		μm
Dark current	I_D	M=100	0.05	0.10	3.0	nA
Junction Capacitance	C	M=100,f=1MHz		2.0		PF
Reverse breakdown voltage	V_{BR}	Id=10μA	80		200	V
Operating voltage temperature coefficient	δ	Tc=-40~+85℃		0.65		V/℃
Rise time	t_R	f=1MHz,λ= 800nm, 50Ω	-	0.3	-	ns
Maximum multiplication gain	M_{max}	λ=800m,ϕe=1μw		100		
Reponsivity	Re	λ=800nm,ϕe=1μw, M=1	0.50	0.55		A/W

■ Spectral response with multiplication



■ Multiplication and Dark current vs Bias



■ Junction capacitance vs V_R