

Silicon avalanched photodiode



Description

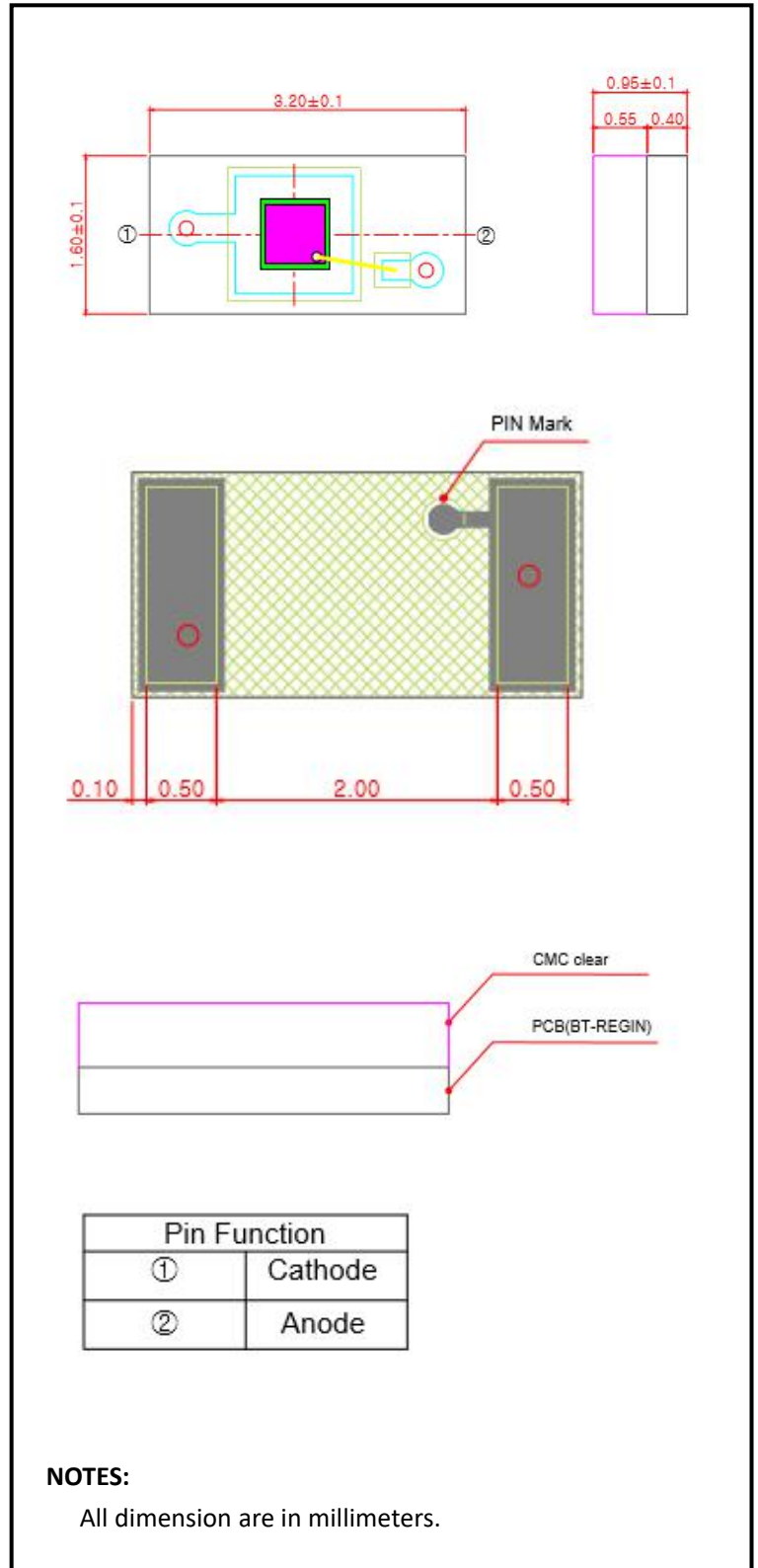
100um circular active area chip, high speed, high gain APD with N-P- PP+ construction. It's packaged in resin coating type.

Features

- * Top illumination planar APD
- * Φ 100um active area
- * High gain at low bias voltage
- * Operating temperature is from -40 to $+80^{\circ}\text{C}$
- * Storage temperature is from -50 to $+100^{\circ}\text{C}$
- * soldering temperature is 260°C @Max.5 seconds at the position of 2mm from the PIN legs.

Applications

- * Laser range finder
- * High speed optical communications



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

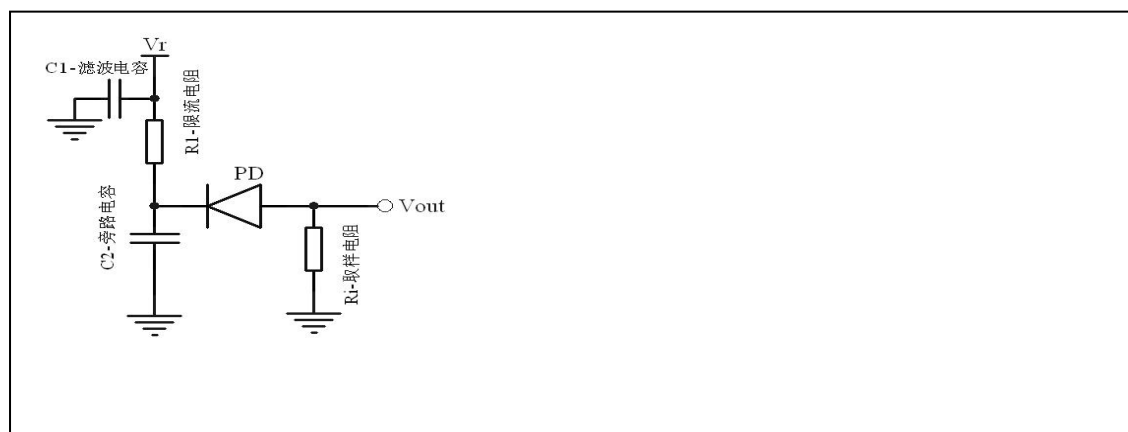
Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Wavelength range	λ		400-1100			nm
Active diameter	ϕ		100			μm
Dark current	I_D	M=100		0.05	0.15	nA
Junction Capacitance	C	M=100, f=1MHz		0.50		PF
Reverse breakdown voltage	V_{BR}	$I_D=10\mu\text{A}$	80		200	V
Operating voltage temperature coefficient	δ	$T_C=-40\sim+85^\circ\text{C}$	0.5			V/°C
Rise time	t_R	f=1MHz, $\lambda=800\text{nm}$, 50Ω	-	0.2	-	ns
Maximum multiplication gain	M_{max}	$\lambda=800\text{nm}$, $\phi_e=1\mu\text{w}$	200			
Reponsivity	Re	$\lambda=800\text{nm}$, $\phi_e=1\mu\text{w}$, M=1	0.45	0.5		A/W

Absolute Values

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

Application circuit



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OTRON ELECTRONIC TECHNOLOGY CO.LTD

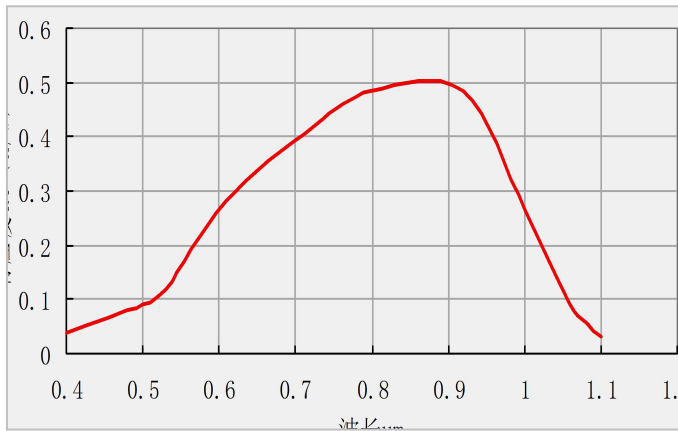
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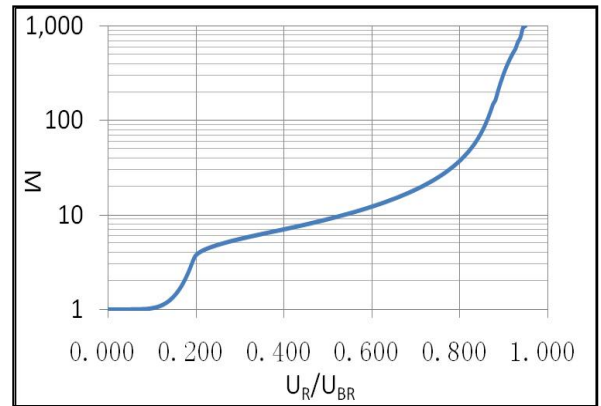
EMAL: frank.shuai@e-otron.com

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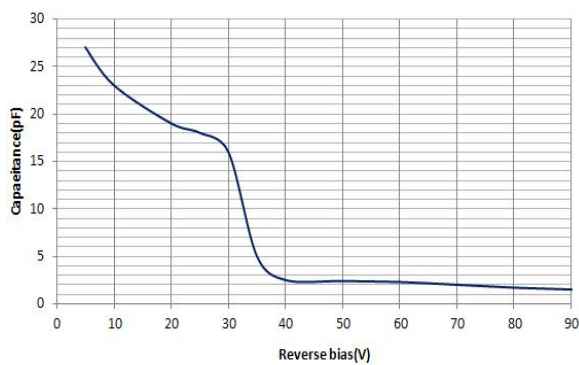
■ Responsivity vs. Wavelength at 0V



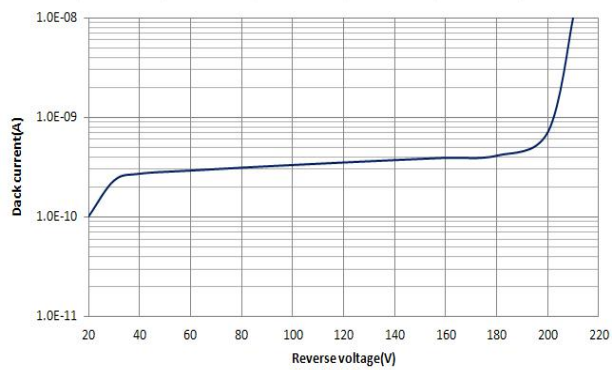
■ Gain vs. U_R/U_{BR}



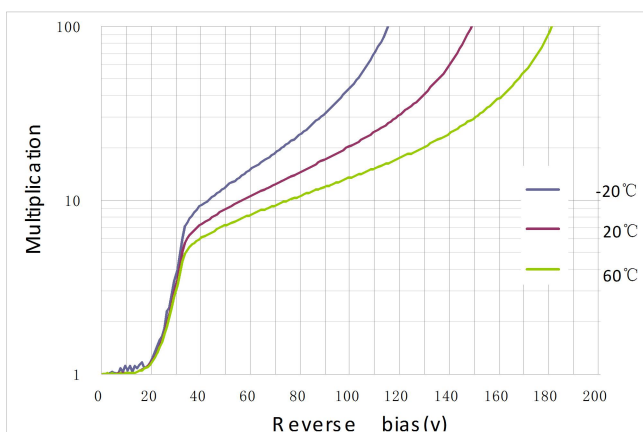
■ Capacitance vs. Operating voltage



■ Dark current vs. Operating voltage



■ Gain vs. Reverse Voltage



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