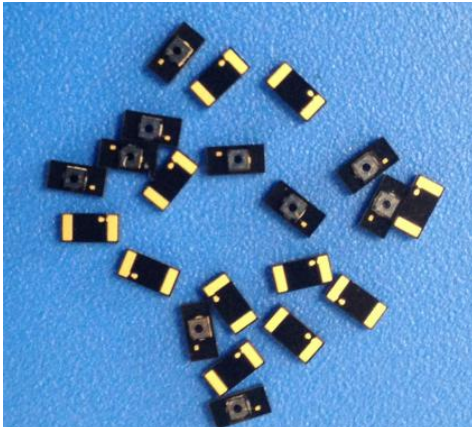


Silicon avalanched photodiode



Description

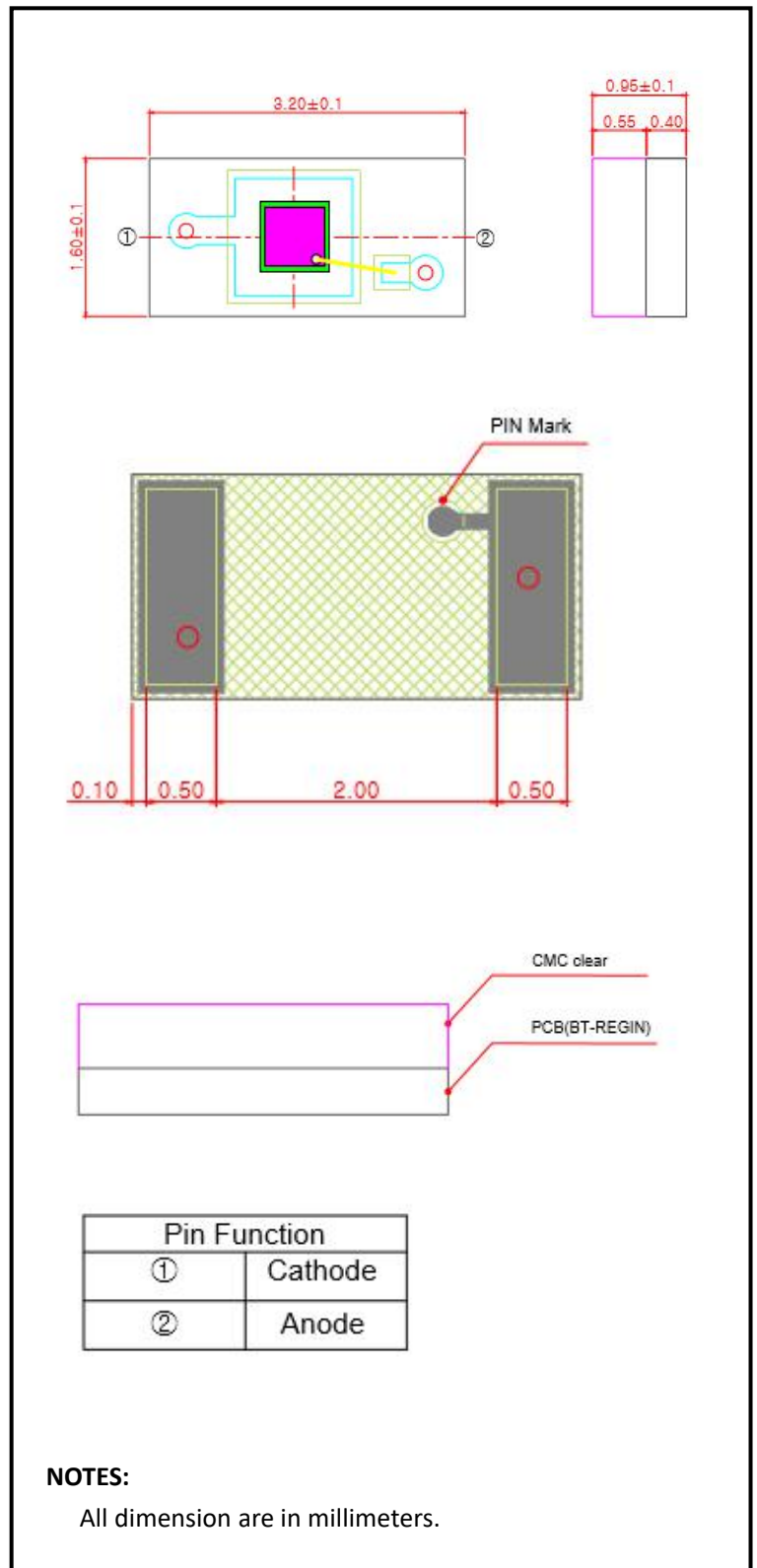
500um circular active area chip, high speed, high gain APD with N-P- PP+ construction. It's packaged in resin coating type.

Features

- * Top illumination planar APD
- * Φ 500um 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



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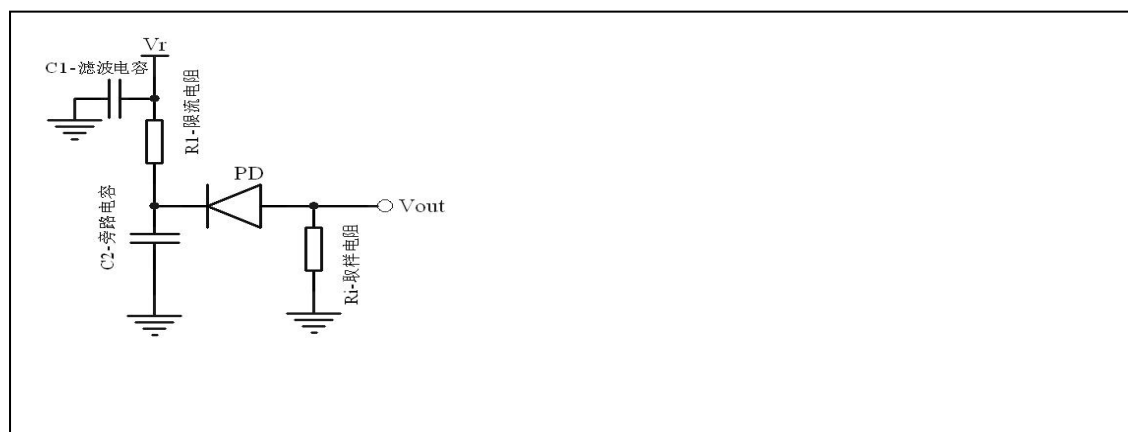
Absolute Maximum Ratings (Ta=25°C)

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	0.40	nA
Junction Capacitance	C	M=100, f=1MHz		3.0		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	-	0.3	-	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	0.50	0.55		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

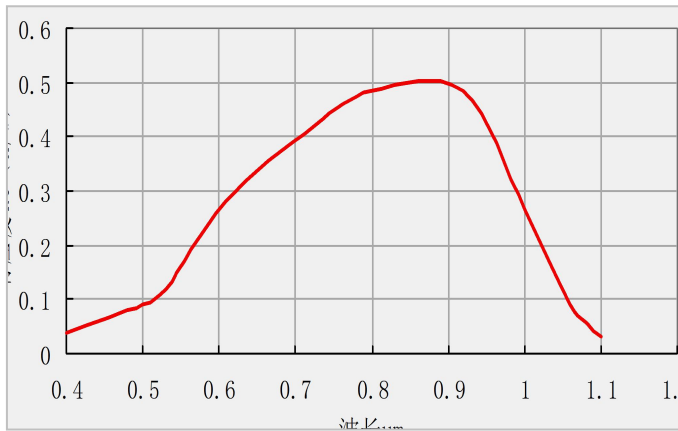
TEL:+86-21-54971821

FAX:+86-21-54971823

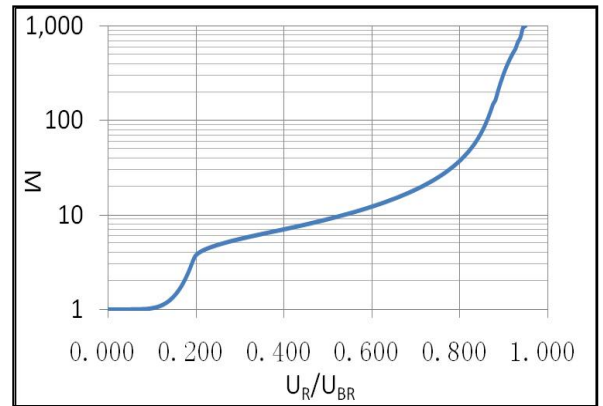
EMAL: frank.shuai@e-otron.com

<http://www.e-otron.com>

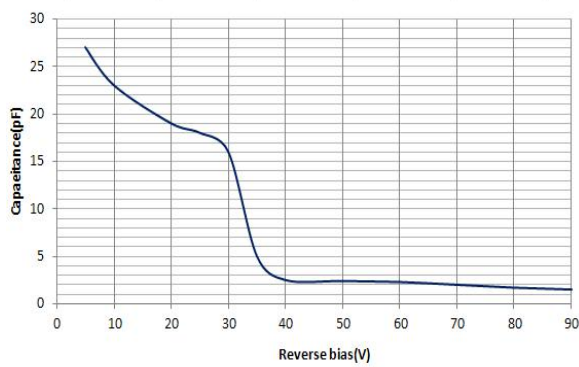
■ Responsivity vs. Wavelength at 0V



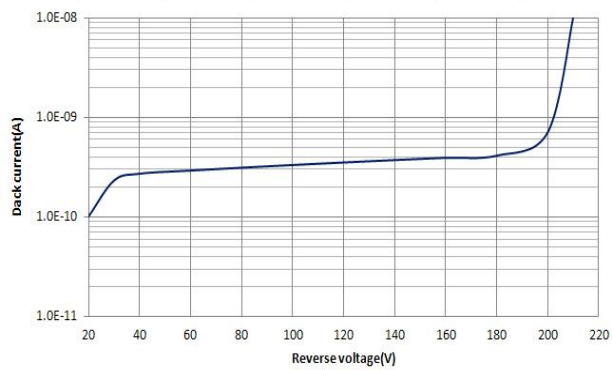
■ Gain vs. U_R/U_{BR}



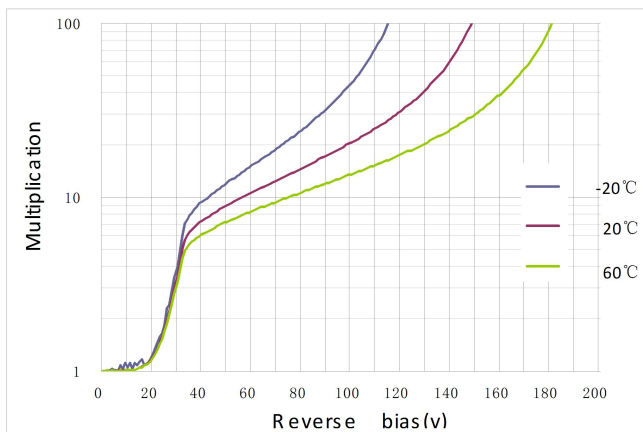
■ Capacitance vs. Operating voltage



■ Dark current vs. Operating voltage



■ Gain vs. Reverse Voltage



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