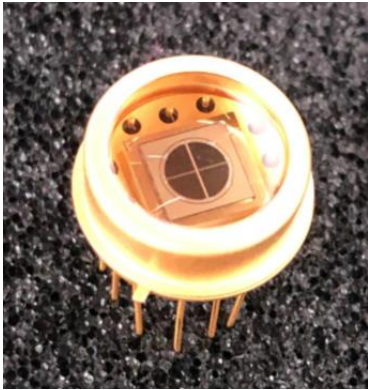


APD QUADRANT PHOTODIODE



Description

Segmented quadrant avalanche photodiode with Enhanced IR responsivity in hermetic TO type metal can Including peltier element.

Features

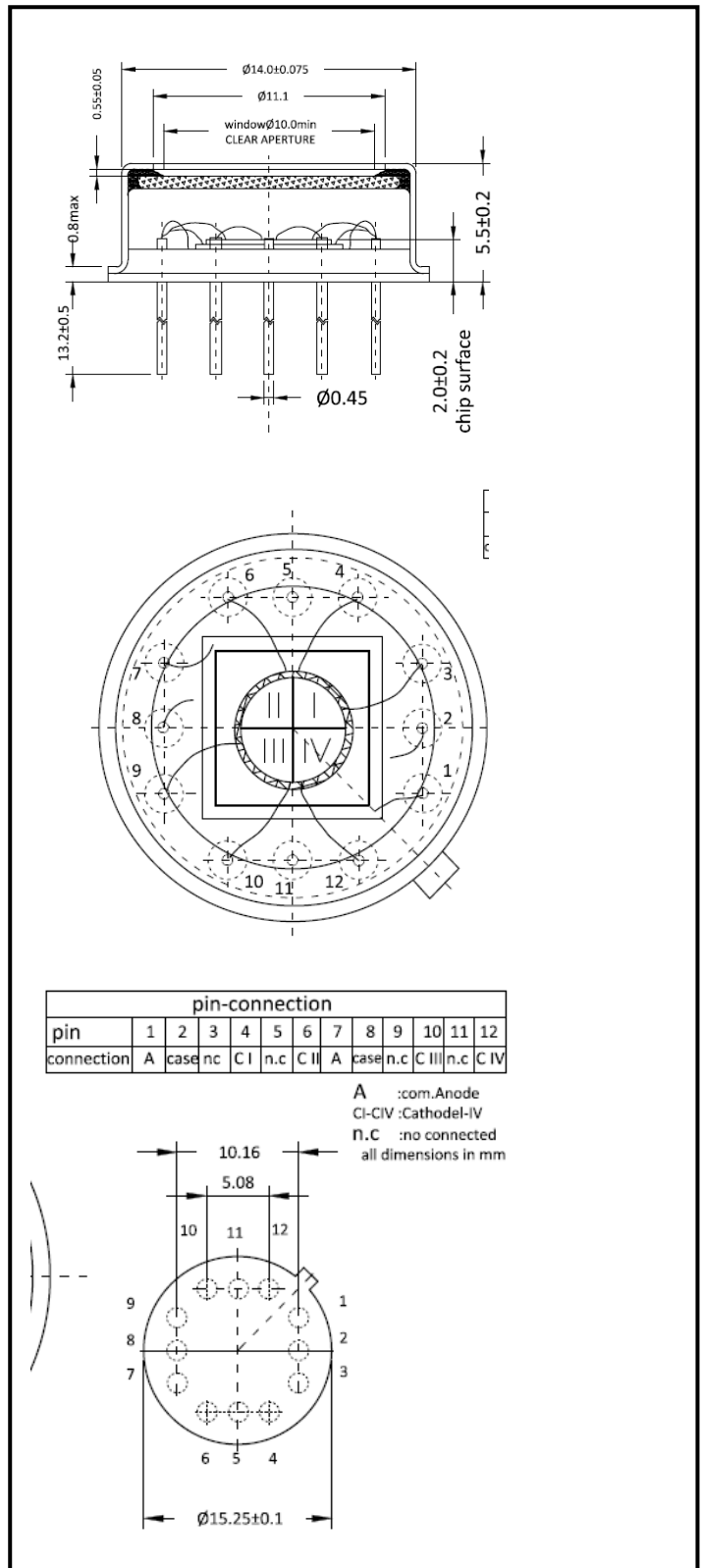
- * 4mm diameter active area
- * Small gap
- * High QE for 1064nm
- * TEC for temperature control

Applications

- * Laser beam position sensor
- * Optical tweezers
- * Laser guidance

Absolute maximum rating:

Storage temp.: -55~+125°C
Operating temp: -40~+100°C



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

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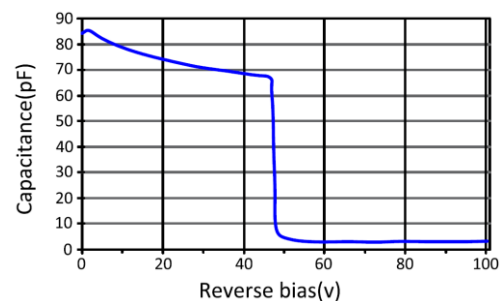
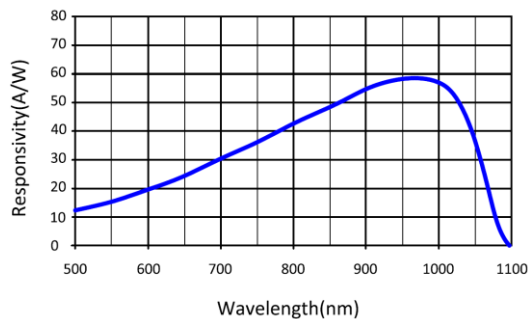


Absolute Maximum Ratings (Ta=25°C)

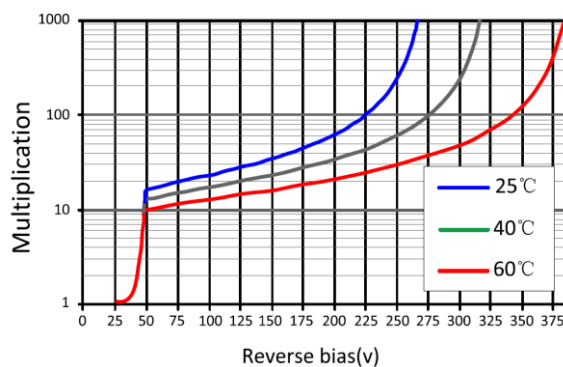
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Chip size	Dia.			Φ4		mm
Gap	d	element to element		110		um
Dark current	I _D	M=100, λ=905nm, per segment		7	75	nA
Rise time	t _R	M=100; λ=905nm, R _L =50Ω		5		ns
Temp coefficient	T _{CID}			3.3		V/K
Reverse breakdown voltage	V _{(BR)R}	I _R =2μA Ev=0lx	220	300	600	V
Junction Capacitance	C _J	M=100, per segment		4		pF
Cross talk (Channel- to -Channel)					2	%
Uniformity of each Element	δ _{Re}	M=50		±5	±10	%
Saturation power	L	V _R =5V,	10			mw
Photo sensitivity	S _R	M=100, λ=905nm, per segment		33		A/W
Spectral Application Range	λ _{range}		400		1100	nm
Spectral Response-Peak	λ _p			1064		nm
Heat transported by TEC		Performance under standard conditions			4.6	W
Angular Resp 50% Resp Pt	θ _{1/2}			±50		Degrees

*please note that depending on operation voltage APD operation at temperatures below -15°C may require sophisticated control circuit.

■ Spectral response (M=100, Ta=25°C) ■ Capacitance vs. UR(per segment)



■ Multiplication vs. UR



■ Dark current vs. UR (per segment)

