Si 800μm 1064nmAPD Chip

P/N:YB-SIAPD800A1

❖ Applications

Laser range finder,Laser alarming,RADAR,etc. application.

❖ Absolute Maximum Rating

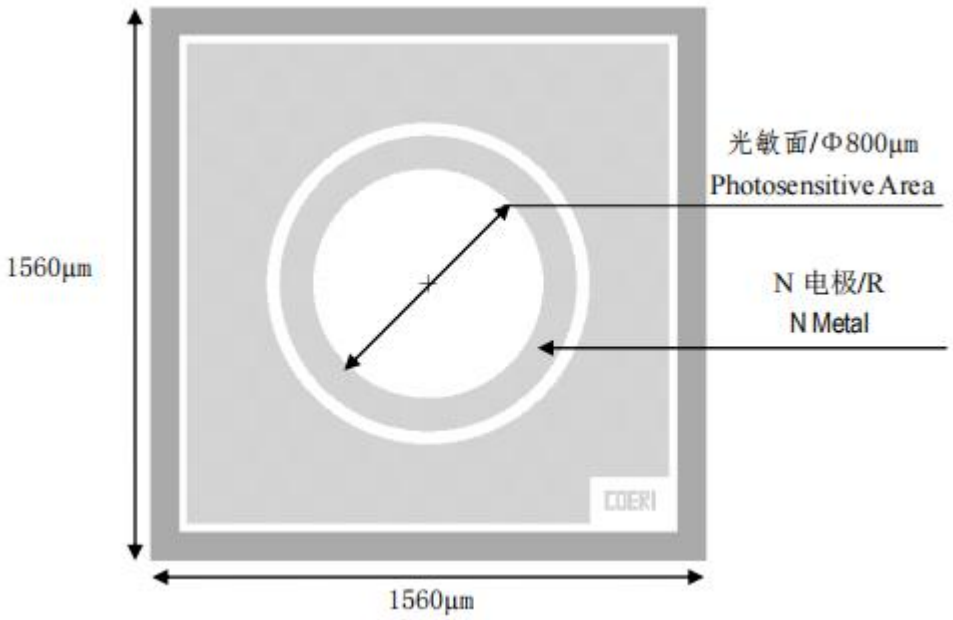
Parameter	Symbol	Min.	Max.	Unit
APD voltage supply	V_{PD}	—	0.95 ·V_{BR}	V
Operating Temperature	T_C	-45	+85	ºC
Storage Temperature	T_{STG}	-45	+100	ºC
Forward current	I_F	—	1	mA

❖ Electro-Optical Characteristics (@ Tc=22±3C)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Response Spectrum	λ	—	400～1100			nm
Photosensitive diameter	⌀	—	800			μm
Responsivity	Re	λ=1064nm,φe=1μw, M=100	30	36	—	A/W
Response time	t_s	f=1MHz,RL=50Ω, λ=1064nm	—	2.0	—	ns
Dark Current	I_D	M=100	—	5.0	12.0	nA
Total capacitance	Ctot	M=100,f=1MHz	—	2.5	4.0	pF
Reverse Breakdown Voltage	V_{BR}	IR =10μA	350	—	460	V
Temperature coefficient of VBR	δ	Tc=-40°C～85°C	—	2.4	3.0	V/°C

❖ **Die Dimensions**

Parameter	Min.	Typ.	Max.	Unit	Notes
Die Width	1550	1560	1570	μ m	
Die Length	1550	1560	1570	μ m	
Thickness	110	120	130	μ m	
R N metal	—	80	—	μ m	Al metal
P metal	——				Al metal



❖ **Introduction**

The structure of Si avalanche photodiode, which can convert optical signal to current signal and multiple it internally, is planar and front illuminated with N electrode on the top and P electrode on the bottom.

Bonding force and temperature should be applied in a gradual fashion.