

SILICON PHOTODIODE CHIPS

DEVICE NO. : PD-0120A

1. Scope :

This specification applies to PIN silicon photodiode chips,
Device No. PD-0120A

2. Structure :

2-1. Planar type : PIN diode.

2-2. Electrodes :

Top side (Anode) : Aluminum alloy .

Back side (Cathode) : Gold alloy.

3. Size :

3-1. Chip size : 120 mils × 120 mils (3.000 mm × 3.000 mm).

3-2. Chip thickness : 12 ± 1.5 mils (0.305 ± 0.038 mm).

3-3. Active area : 107 mils × 107 mils (2.675 mm × 2.675 mm).

3-4. Bonding pad (Anode) : 9 mils × 9 mils (0.225 mm × 0.225 mm).

3-5. Pattern drawing : Refer to the attached drawing.

4. Electro-optical characteristics (Ta = 25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse dark current	I_D	$V_R=10V$ $H=0mw/cm^2$		5	30	nA
Reverse breakdown voltage	$V_{(BR)R}$	$I_R=100\mu A$ $H=0mw/cm^2$	60	170		V
Open circuit voltage	V_{oc}	$C_T=2870^\circ K$ $H=5mw/cm^2$		350		mV
Short circuit Current	I_{sc}	$C_T=2870^\circ K$ $H=5mw/cm^2$		73		μA
Reverse light current	I_L	$V_R=5V$ $C_T=2870^\circ K$ $H=5mw/cm^2$		73		μA
Total Capacitance	C_t	$V_R=3V$ $H=0mw/cm^2$ $f=1MHz$		25		pF
Resposivity	R_ϕ	$V_R=10V$ $\lambda=940nm$		0.6		A/W
		$\lambda=880nm$		0.55		
		$\lambda=650nm$		0.3		
Turn-on/ turn-off Time	$\frac{90}{10} \frac{ton}{toff}$	$V_R=10V$ $R_L=1K\Omega$ $\lambda=940nm$		1000/1000		nS
		$\lambda=880nm$		200/200		
		$\lambda=650nm$		80/80		
Turn-on/ turn-off Time	$\frac{90}{10} \frac{ton}{toff}$	$V_R=50V$ $R_L=50\Omega$ $\lambda=940nm$		10		nS

