

**1. Scope :**

This specification applies to PIN silicon UV-enhanced photodiode chips,  
Device No. PD-0120U.

**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 : 117 mils x 117 mils ( 2.970 mm x 2.970 mm ).
- 3-2. Chip thickness :  $12 \pm 1.5$  mils (  $0.305 \pm 0.038$  mm ).
- 3-3. Active area : 97.2 mils x 97.2 mils ( 2.470 mm x 2.470 mm ).
- 3-4. Bonding pad (Anode ) : 7.9 mils x 7.9 mils (0.200mm x 0.200mm).
- 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	$I_D$	$V_R=10V$ $E_e=0mW/cm^2$			30	nA
*Reverse breakdown voltage	$V_{(BR)R}$	$I_R=100\mu A$ $E_e=0mW/cm^2$	33			V
Open circuit Voltage	$V_{oc}$	$T=2856K$ $E_e=5mW/cm^2$		350		mV
Short circuit current	$I_{sc}$	$T=2856K$ $E_e=5mW/cm^2$	40	60		$\mu A$
Reverse light Current	$I_L$	$V_R=5V$ $T=2856K$ $E_e=5mW/cm^2$	40	60		$\mu A$
Total Capacitance	$C_t$	$V_R=5V$ $E_e=0mW/cm^2$ $f=1MHz$		17		pF
Turn-on/Turn-off Time	ton/toff	$V_R=5V$ $R_L=50\Omega$ $\lambda=850nm$		50/50		nS
Sensitivity Wavelength Range	$\lambda$	-	300		1100	nm
Peak sensitivity wavelength	$\lambda_p$	-		940		nm

\*Based on 100% probing

