

SILICON UV-ENHANCED PHOTODIODE CHIPS

DEVICE NO. : PD-0120U

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 × 117 mils (2.970 mm × 2.970 mm).

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

3-3. Active area : 97.2 mils × 97.2 mils (2.470 mm × 2.470 mm).

3-4. Bonding pad (anode) : 7.9 mils × 7.9 mils (0.200 mm × 0.200 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	$V_{(BR)R}$	$I_R=100uA$ $H=0mw/cm^2$	33	120		V
Open circuit Voltage	V_{oc}	$C_T=2870^\circ K$ $H=5mw/cm^2$		350		mV
Short circuit current	I_{sc}	$C_T=2870^\circ K$ $H=5mw/cm^2$	40	55		μA
Reverse light Current	I_L	$V_R=5V$ $C_T=2870^\circ K$ $H=5mw/cm^2$	40	60		μA
Total Capacitance	C_t	$V_R=0v$		135	165	pF
		$V_R=1v$		105	125	pF
		$V_R=2v$		90	105	pF
		$V_R=3v$		75	85	pF
		$V_R=4v$		30	35	pF
		$V_R=5v$		20	25	pF
Turn-on/ turn-off Time	ton/toff	$V_R=10V$ $R_L=1000\Omega$		50/50		nS
Sensitivity Wavelength Range	λ		190		1100	nm
peak sensitivity wavelength	λ_p			950		nm

