

1. Scope :

This specification applies to NIP silicon photodiode chips,
Device No. PD-40074-B.

2. Structure :

- 2-1. Type : NIP diode.
- 2-2. Electrodes :
Top side (Cathode) : Aluminum alloy .
Back side (Anode) : Gold.
- 2-3. Passivation : Silicon Nitride

3. Size :

- 3-1. Chip size(including scribe lane) : 74.8 mils × 74.8 mils (1.900 mm × 1.900 mm).
- 3-2. Real chip size (after wafer sawing) : 1.875mm × 1.875mm ± 0.025mm.
- 3-3. Chip thickness : 12 ± 1.5 mils (0.305 ± 0.038 mm).
- 3-4. Active area : 67.7 mils × 67.7 mils ± 0.4 mils (1.720 mm × 1.720 ± 0.01mm).
- 3-5. Bonding pad (Cathode) : 5.90 mils × 5.90 mils ± 0.78 mils (0.150 mm × 0.150mm ± 0.02mm).
- 3-6. Pattern drawing : Refer to the attached drawing (pattern coordinates unit is um).

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
*Reverse dark current	I_D	$V_R=10V$ $E_e=0mW/cm^2$			10	nA
*Reverse breakdown Voltage	$V_{(BR)R}$	$I_R=100\mu A$ $E_e=0mW/cm^2$	33			V
*Forward Voltage	V_F	$I_F=20mA$ $E_e=0mW/cm^2$			1.3	V
Open circuit voltage	V_{oc}	$T=2856K$ $E_e=5mW/cm^2$		390		mV
Short circuit Current	I_{sc}	$T=2856K$ $E_e=5mW/cm^2$		25		μA
Reverse light current	I_L	$V_R=5V$ $T=2856K$ $E_e=5mW/cm^2$		25		μA
Total Capacitance	C_t	$V_R=5V$ $E_e=0mW/cm^2$ $f=1MHz$		9		pF

*Based on 100% probing test.

