

1. Scope :

- 1-1 This specification applies to extra high speed PIN silicon photodiode chips.
Device No. PD-1233
- 1-2 High modulation bandwidth (>100MHz)
- 1-3 Design for irda transmission systems requirement.
- 1-4 Low applied voltage , low junction capacitance , low series resistance.

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 : 23.6 mils × 33.5 mils (0.60 mm × 0.85 mm).
- 3-2. Chip thickness : 8.6 ±1.2 mils (0.220± 0.030mm).
- 3-3. Active area : 17.7 mils × 27.6 mils (0.45 mm × 0.70 mm).
- 3-4. Bonding pad (Anode) : 4 mils× 4 mils (0.10mm × 0.10 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 light Current	I_L	$V_R=5V$ $E_e=5mW/cm^2$	2			μA
*Reverse dark Current	I_D	$V_R=5V$ $E_e=0mW/cm^2$			1.0	nA
*Reverse breakdown voltage	$V_{(BR)R}$	$I_R=5\mu A$ $E_e=0mW/cm^2$	50			V
*Forward Voltage	V_F	$I_F=100mA$		1.2	1.5	V
Total Capacitance	C_t	$V_R=5V$ $E_e=0mW/cm^2$ $f=1MHz$			2.0	pF
Responsivity	R_ϕ	$V_R=10V$	$\lambda=880nm$	0.50		A/W
			$\lambda=650nm$	0.3		
Turn-on/ Turn-off Time	ton/toff	$V_R=10V$ $R_L=50\Omega$	$\lambda=880nm$	1.0		nS

*Based on 100% probing

