

SILICON PHOTODIODE CHIPS

DEVICE NO. : PD-1233

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 ± 0.030 mm).
- 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	IL	VR=5V H=5mw/cm ²	2			μA
Reverse dark Current	ID	VR=5V H=0mw/cm ²			1.0	nA
Reverse breakdown voltage	V(BR)R	IR=5μA H=0mw/cm ²	50			V
Forward Voltage	VF	IF=100mA		1.2	1.5	V
Total Capacitance	Ct	VR=5V H=0mw/cm ² f=1MHz			2.0	pF
Resposivity	R _φ	VR=10V	λ=880nm	0.50		A/W
			λ=650nm	0.3		
Turn-on/ Turn-off Time	90 ton/toff 10	VR=10V RL=50 Ω	λ=880nm	1.0		nS

