

Si Photo-diode Chip—TK0090PDN

1. Scope

- The specification applies to PIN silicon photo-diode chips.
- Type : TK0090PDN.

2. Structure

- PIN planar type.
- Electrode topside (anode) : Aluminum.
- Electrode backside (cathode) : Gold.

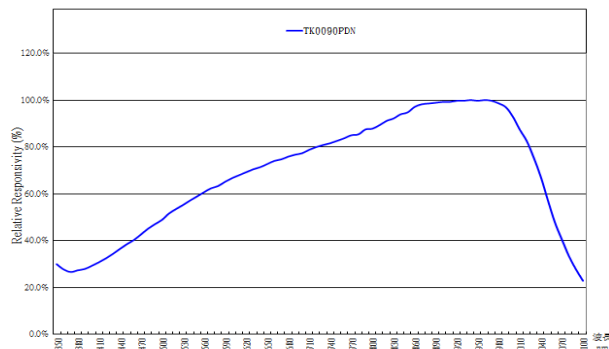
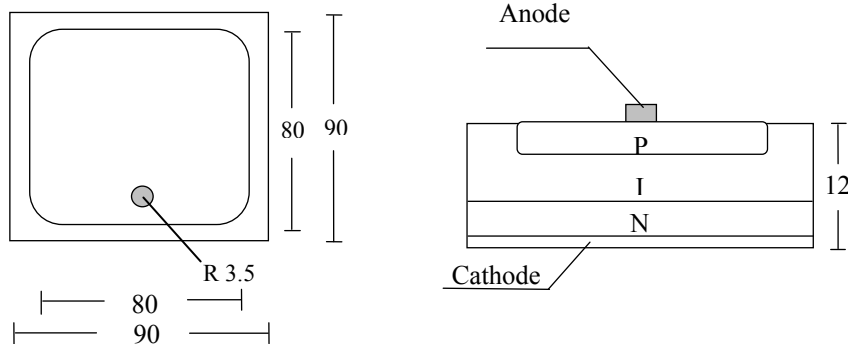
3. Size

- Chip size : $90\text{mil} \times 90\text{mil} \pm 1.5\text{mil}$ ($2.290\text{mm} \times 2.290\text{mm} \pm 0.038\text{mm}$)
- Thickness : $12\text{mil} \pm 1\text{mil}$ ($0.300\text{mm} \pm 0.025\text{mm}$)
- Active area : $80\text{mil} \times 80\text{mil} \pm 0.5\text{mil}$ ($2.030\text{mm} \times 2.030\text{mm} \pm 0.013\text{mm}$)
- Pad size : diameter $3.5\text{mil} \pm 0.4\text{mil}$ ($0.090\text{mm} \pm 0.01\text{mm}$)
- Pattern drawing : per fig. 1

4. Electro-Optical Characteristics

($T_a = +25^\circ\text{C}$)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit.
Forward Voltage	V_F	$I_F=10\text{mA}$, $H=0$	0.5		1.3	V
Reverse Breakdown Voltage	V_{BR}	$I_R=100\mu\text{A}$, $H=0$	35			V
Reverse Dark Current	I_D	$V_R=10\text{V}$, $H=0$			20	nA
Light Current	I_L	$V_R=5\text{V}$, H as $1\text{mw}/\text{cm}^2$ @940nm		135		μA
Peak Sensing Wavelength	λ_p			940		nm
Junction Capacitance	C_t	$V_R=3\text{V}$, $H=0$, $F=1\text{MHz}$		5		pF



Unit : mil

fig. 1

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