

Si Photo-diode Chip — TK0123PDI

1. Scope

- The specification applies to PIN 3-channel (R,G,B) silicon photo-diode chips.
- Type : TK0123PDI.

2. Structure

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

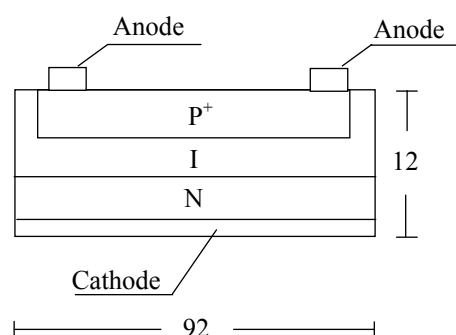
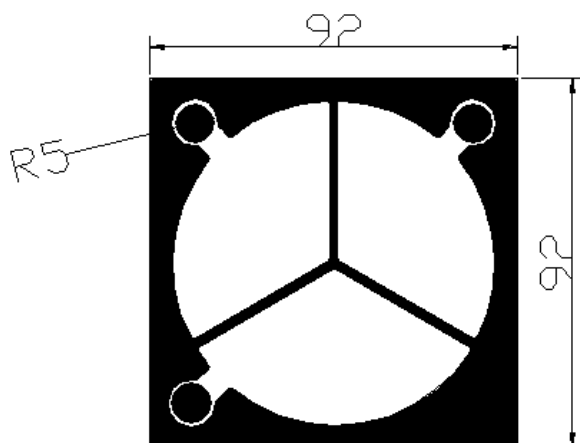
3. Size

- Chip size : 92mil × 92mil ± 2mil (2.338mm × 2.338mm ± 0.05mm)
- Thickness : 12mil ± 1mil (0.300mm ± 0.025mm)
- Active area : 3-segment (RGB) circular active area of $\phi 79$ mil(2mm)
- Pattern drawing : per fig. 1

4. Electro-Optical Characteristics

(Ta = +25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit.
Forward Voltage	V _F	I _F = 10mA, H=0	0.5		1.3	V
Reverse Dark Current	I _D	V _R = 10V, H=0			10	nA
Reverse Breakdown Voltage	V _{BR}	I _R = 100μA, H=0	35			V
Peak Sensitivity Wavelength	λ _p	Blue		470		nm
		Green		550		nm
		Red		620		nm
Spectral Response Range	λ	Blue		380~540		nm
		Green		470~620		nm
		Red		560~650		nm



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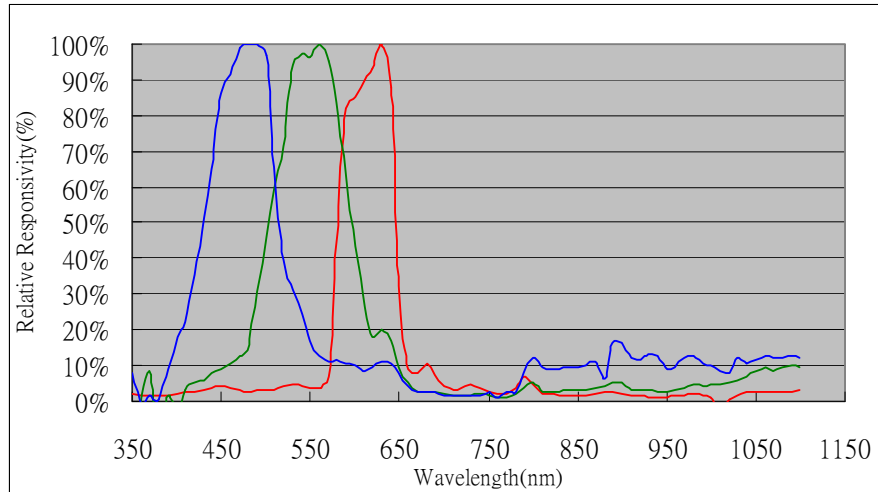
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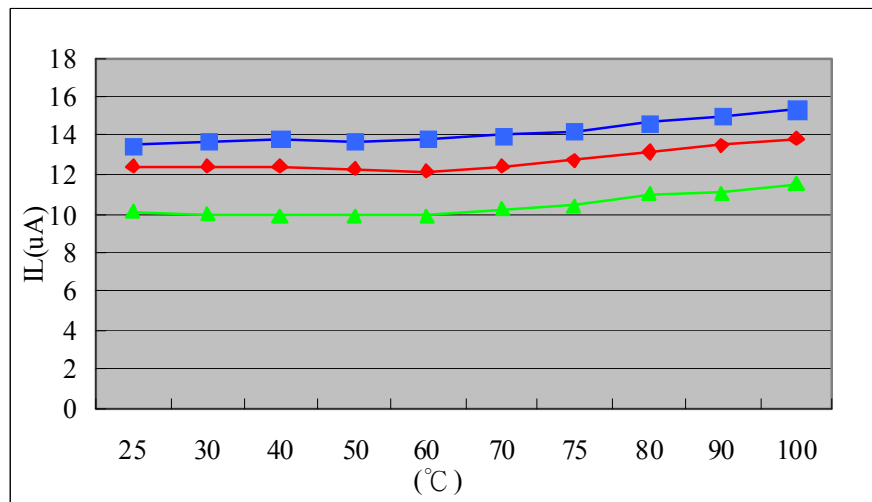
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5. Spectral Response



6. Temperature VS Responsivity



VR=5V, H as RGB LED

Unit : mil

fig. 1

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