

## Photo Interrupter

## KIT3003C

### Description

The photointerrupter high-performance standard type KIT3003C combines a high-output GaAs IRED with a high sensitivity phototransistor.

### Features

- With the installation positioning boss.
- 3.0mm gap.
- Optical axis height from the mounting surface : 14.55mm.
- Slim Type.
- RoHS compliant.



### Applications

- VTR.
- Cassette mecha.

### Absolute Maximum Ratings (T<sub>a</sub>=25°C, Unless otherwise specified)

Characteristic		Symbol	Ratings	Unit
Input LED	Power dissipation	P <sub>D</sub>	75	mW
	Forward current	I <sub>F</sub>	50	mA
	Reverse voltage	V <sub>R</sub>	5	V
	Pulse forward current *1	I <sub>FP</sub>	0.5	A
Output Detector	Collector dissipation	P <sub>C</sub>	75	mW
	Collector current	I <sub>C</sub>	20	mA
	C-E voltage	V <sub>CEO</sub>	30	V
	E-C voltage	V <sub>ECO</sub>	5	V
Rate of decrease of temp. for forward current *2		I <sub>F</sub> / T <sub>a</sub>	-0.67	mA/°C
Rate of decrease of temp. for collect. Dissipation *2		ΔP <sub>c</sub> / ΔT <sub>a</sub>	-1.00	mW/°C
Operating temperature *3		Topr.	-25 ~ +85	°C
Storage temperature *3		Tstg.	-40~ +100	°C
Soldering temperature *4		Tsol.	260	°C

\*1 : Pulse width  $t_w \leq 100\mu s$  period  $T=10ms$

The contents of this data sheet are subject to change without advance notice for the purpose of improvement. When using this product, would you please refer to the latest specifications.

\*2 :  $T_a \geq 25^\circ\text{C} \sim T_{opr}(\text{max.})$

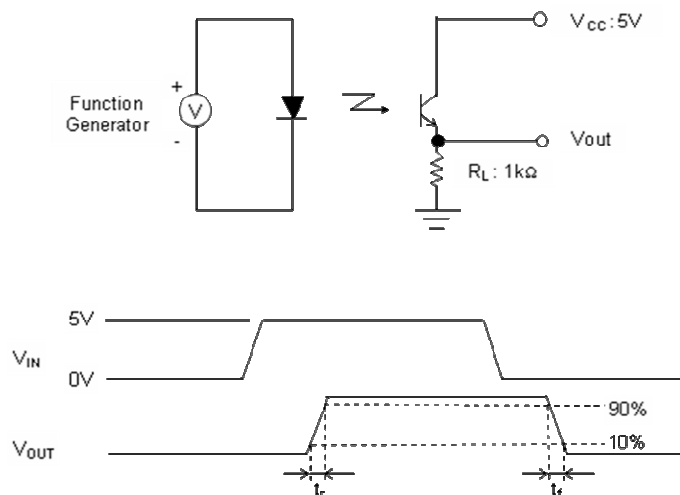
\*3 : No icebound or dew

\*4: The soldering should be 1mm away from bottom of the holder t=within 5sec

## Electrical-Optical Characteristics ( $T_a=25^\circ\text{C}$ )

Characteristic		Simbol	Min.	Typ.	Max.	Unit	Condition
Input	Forward voltage	$V_F$	-	1.2	1.4	V	$I_F=20\text{mA}$
	Reverse current	$I_R$	-	-	10	$\mu\text{A}$	$V_R=5\text{V}$
	Peak wavelength	$\lambda_p$	-	940	-	nm	$I_F=20\text{mA}$
Output	Dark current	$I_{CEO}$	-	1	100	nA	$V_{CE}=10\text{V}, L_V=0\text{Lux}$
	Peak Wavelength	$\lambda_p$	-	880	-	nm	
Transmission Characteristics	Light current	$I_C$	0.5	-	5	mA	$I_F=20\text{mA}, V_{CE}=5\text{V}$ Non shading
	Leakage current	$I_{CEOD}$	-	0.5	10	$\mu\text{A}$	$I_F=20\text{mA}, V_{CE}=5\text{V}$ Shading
	C-E Saturation voltage	$V_{CE(\text{sat})}$	-	0.15	0.4	V	$I_F=20\text{mA},$ $I_C=0.05\text{mA}$
	Rise time	$t_r$	-	50	-	$\mu\text{S}$	$V_{CE}=5\text{V}, I_C=0.1\text{mA}$ $R_L=1\text{k}\Omega$
	Fall time	$t_f$	-	50	-	$\mu\text{S}$	

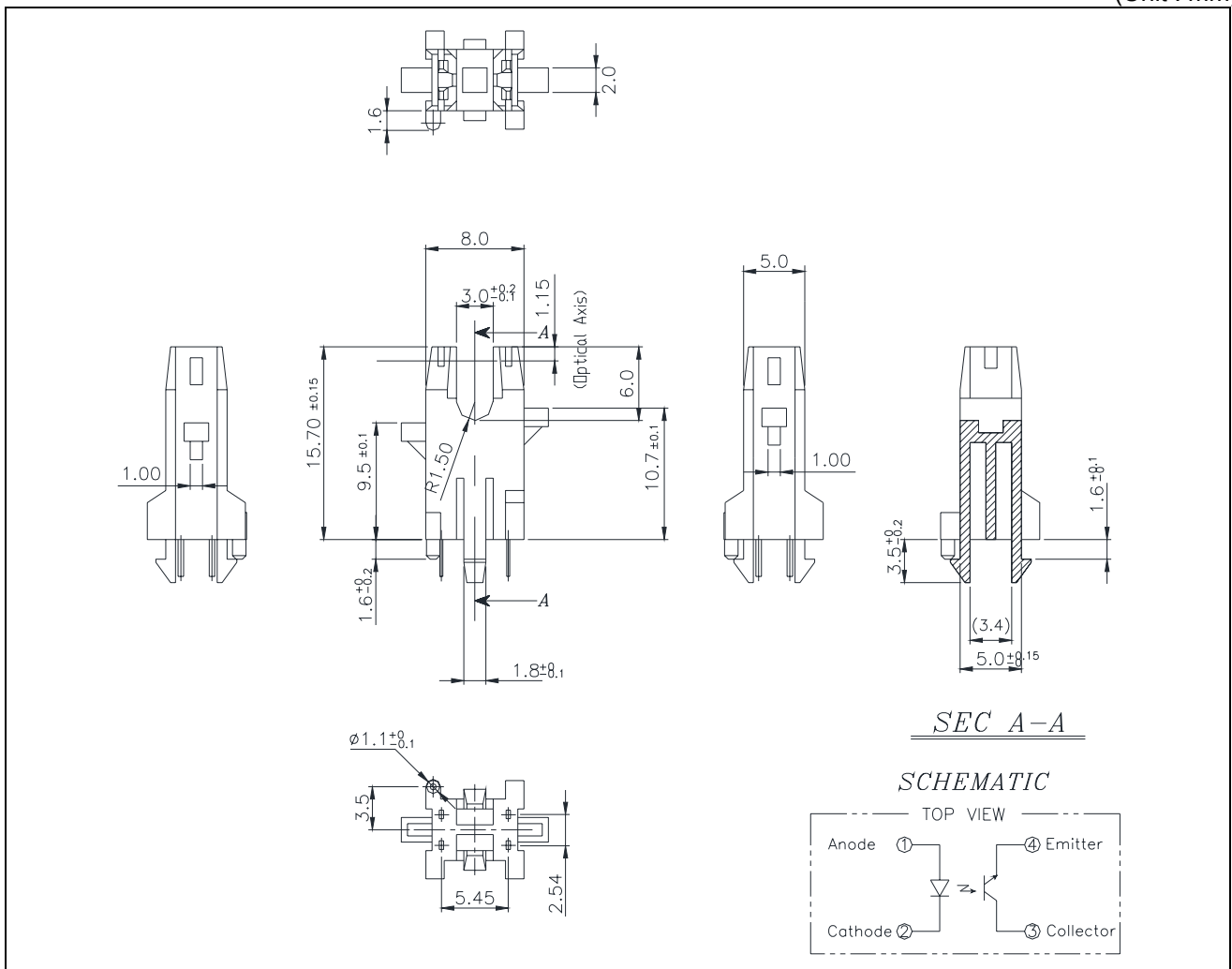
\* Circuit for measuring response time



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## Package Outline Dimensions

(Unit : mm)



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