Photo Interrupter

KIT3003C

Description

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

RoHS

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_a=25℃, Unless otherwise specified)

Characteristic		Symbol	Ratings	Unit
Input LED	Power dissipation	P_D	75	mW
	Forward current	I_F	50	mA
	Reverse voltage	V_R	5	V
	Pulse forward current *1	I_{FP}	0.5	A
Output Detector	Collector dissipation	P_C	75	mW
	Collector current	I_C	20	mA
	C-E voltage	V_{CEO}	30	V
	E-C voltage	V_{ECO}	5	V
Rate of decrease of temp. for forward current *2		I_F / T_a	-0.67	mA/℃
Rate of decrease of temp. for collect. Dissipation *2		ΔP_c / ΔT_a	-1.00	mW/℃
Operating temperature *3		Topr.	-25 ~ +85	℃
Storage temperature *3		Tstg.	-40~ +100	℃
Soldering temperature *4		Tsol.	260	℃

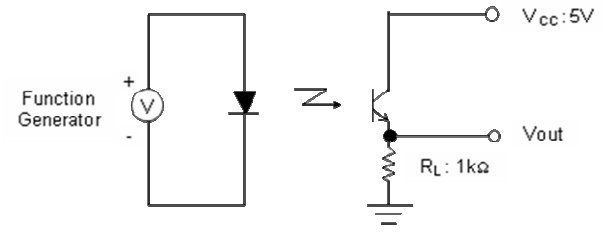
*1 : Pulse width tw≤100μs period T=10ms

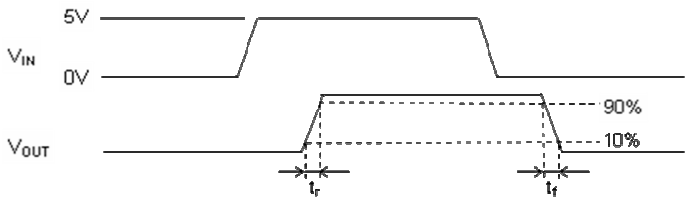
*2 : Ta≥25℃ ~ Topr (max.)
*3 : No icebound or dew
*4: The soldering should be 1mm away from bottom of the holder t=within 5sec

Electrical-Optical Characteristics (T_a=25℃)

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

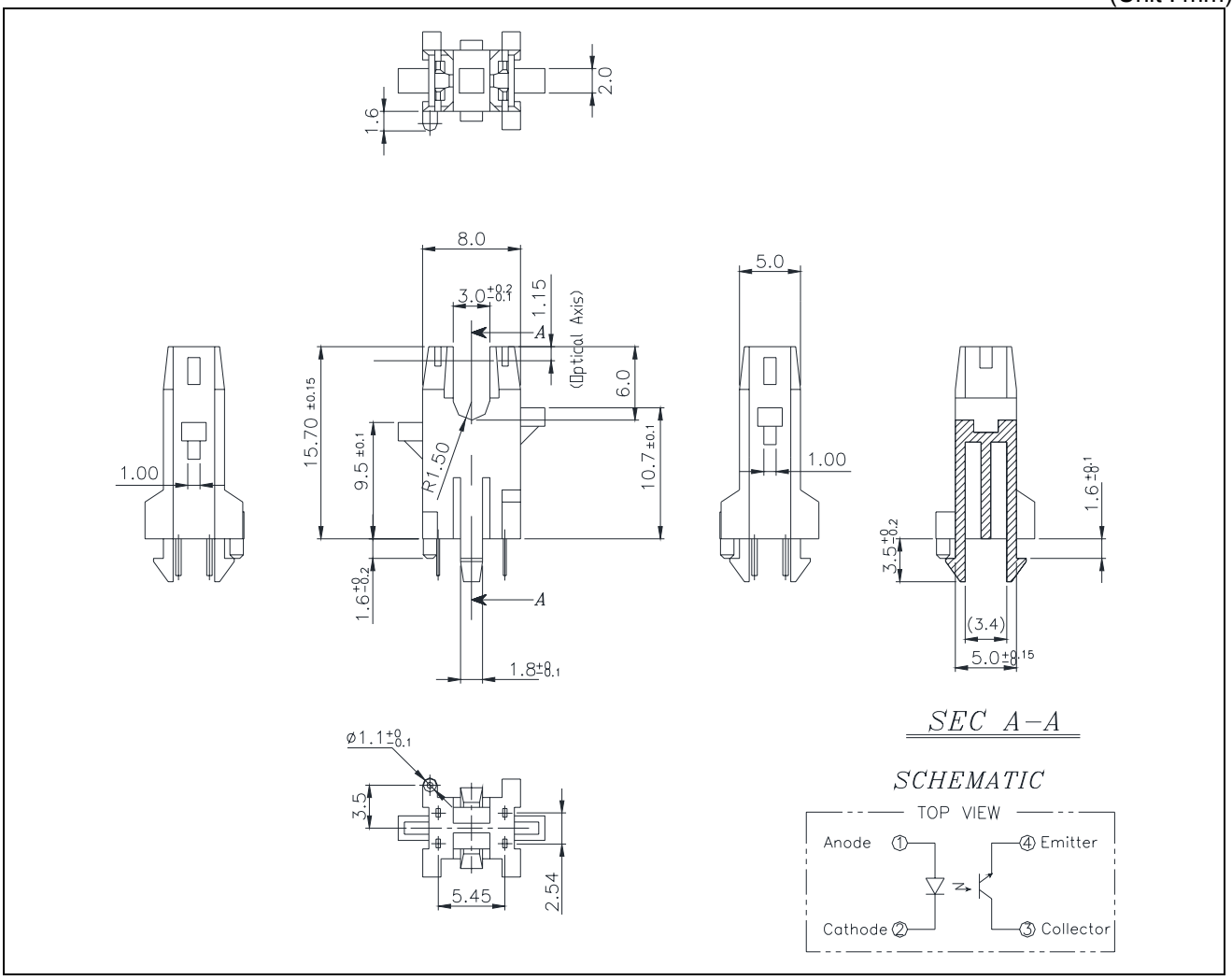
* Circuit for measuring response time





Package Outline Dimensions

(Unit : mm)



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.