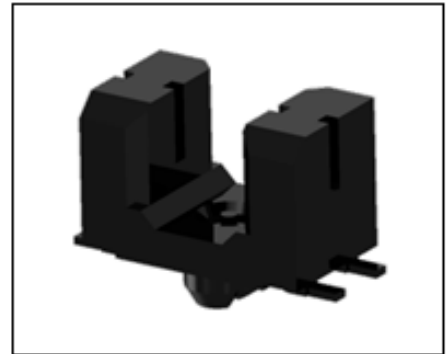


Photo Interrupter

KIT2011S

Description

The KIT2011S photo interrupter high-performance standard type, combines high-output GaAs IRED with high sensitivity phototransistor.



Features

- Transmissive with phototransistor output
- 2.0mm gap, 0.3mm slit with
- Compact size
- Lead Free and RoHS Compliant.
- MSL 3

Applications

- Cameras.
- Encoders.
- Printers.
- DVD.

Absolute Maximum Ratings (T_a=25°C, 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	6	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}	35	V
	E-C Voltage	V _{ECO}	6	V
Operating Temperature *2		T _{opr.}	-40 ~ +95	°C
Storage Temperature *2		T _{stg.}	-40 ~ +100	°C
Soldering Temperature *3		T _{sol.}	260	°C

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

*2 : No icebound or dew

*3 : The soldering should be 0.3mm or more away from bottom of the case t=within 3sec

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.

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

Characteristic		Symbol	Min.	Typ.	Max.	Unit	Condition
Input LED	Forward Voltage	V_F	-	1.2	1.4	V	$I_F=20\text{ mA}$
	Reverse Current	I_R	-	-	10	μA	$V_R=5\text{V}$
	Peak Wavelength	λ_P	-	940	-	nm	$I_F=20\text{ mA}$
Output Detector	Dark Current	I_{CEO}	-	1	100	nA	$V_{CE}=10\text{V}, 0\text{Lux}$
	Peak Wavelength	λ_P	-	880	-	nm	-
Transmission Characteristics	Light Current (Collector Current)	I_C	0.10	-	0.65	mA	$I_F=5\text{ mA}, V_{CE}=5\text{V}$ Non shading
	Leakage Current	$I_{CEO D}$	-	0.5	10	μA	$I_F=5\text{ mA}, V_{CE}=5\text{V}$ Shading
	C-E Saturation Voltage	$V_{CE}(\text{sat})$	-	0.15	0.4	V	$I_F=10\text{ mA},$ $I_C=0.04\text{ mA}$
Response Time	Rise Time	t_r	-	50	150	μs	$V_{CC}=5\text{V}, I_C=1\text{ mA}$ $R_L=1\text{k}\Omega$
	Fall Time	t_f	-	50	150	μs	

- Circuit for measuring response time

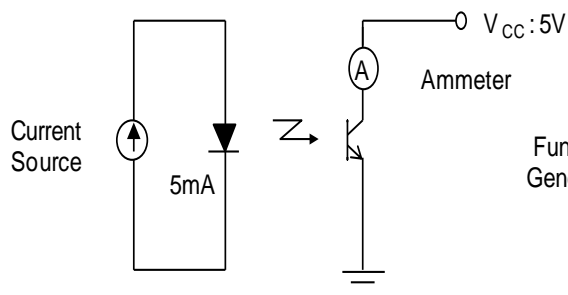


Fig 1. Test Circuit for I_C

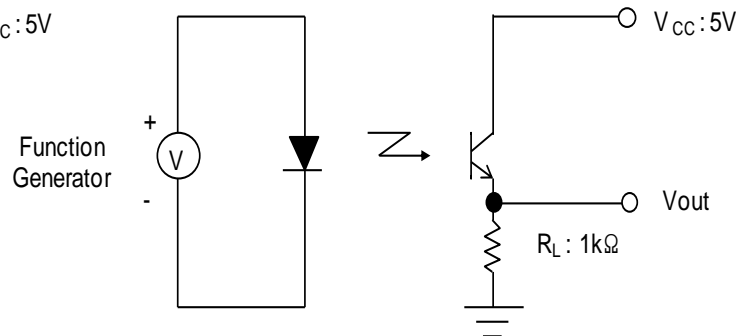


Fig 2. Test Circuit for Rise and Fall Time

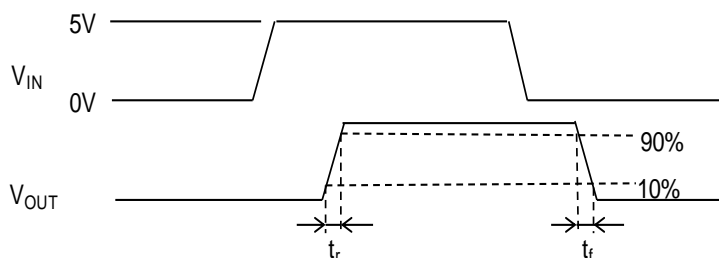
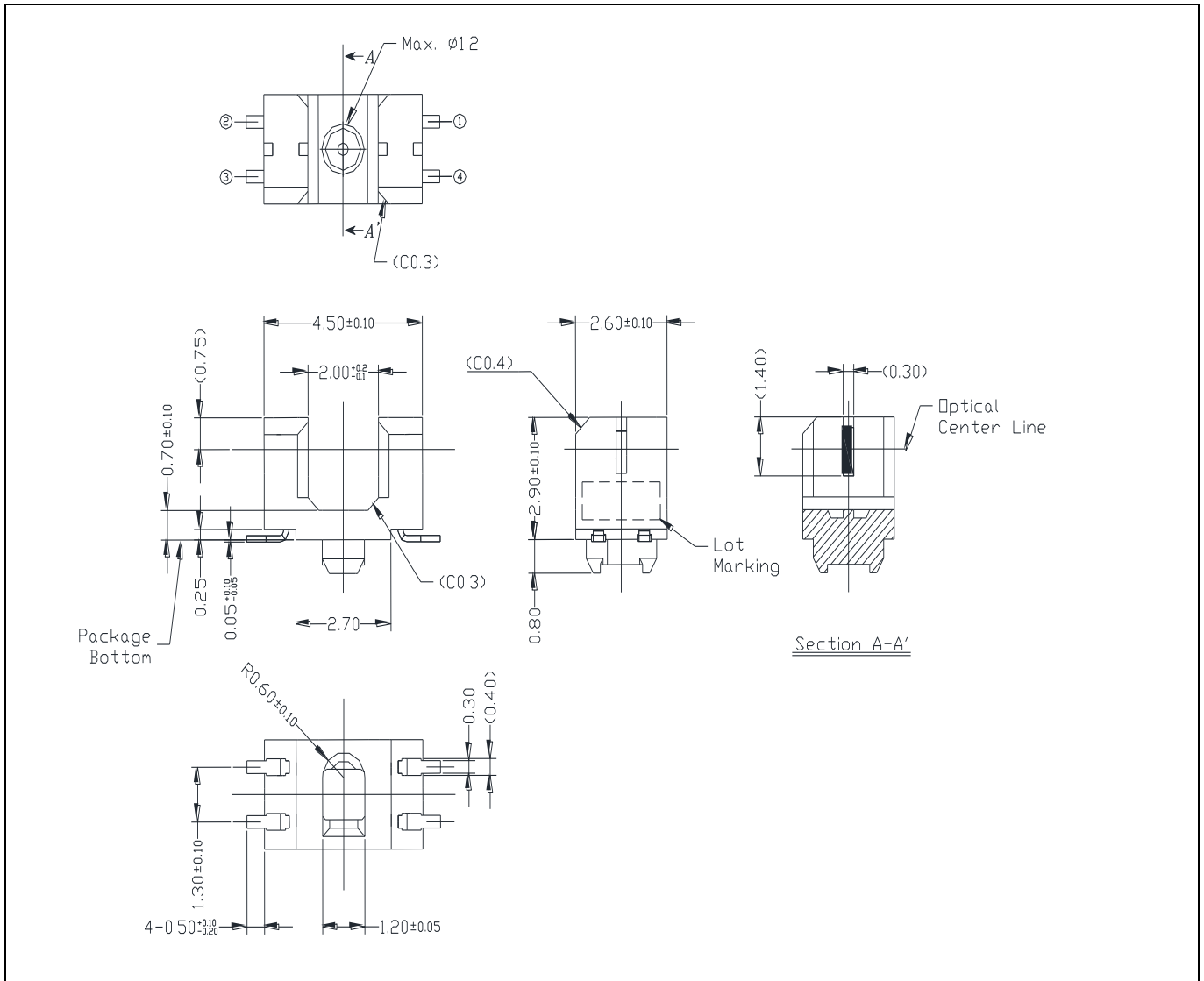


Fig 3. Definitions for Response Times

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Package Outline Dimensions



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