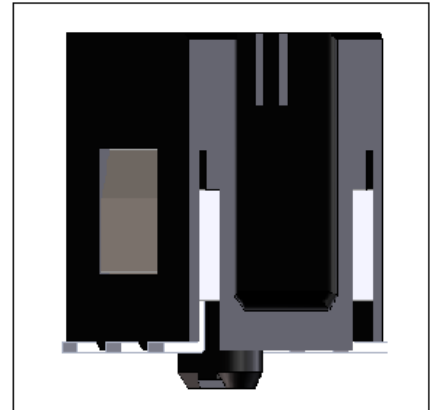


Photo Interrupter

KIT3025S

Description

The KIT3025S a compact transmission type photointerrupter, which combine high-output GaAs IRED with high sensitive dual photo transistors.



Features

- Surface mount package
- Slit : 0.3mm (Channel Distance : 0.8mm).
- Moisture Sensitive Level(MSL)3.
- GAP : 3.0mm.
- RoHS Compliance.

Applications

- Motor Control.
- Position Encoder.
- Printers.
- Ticket Vending Machines.



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}	20	V
	E-C Voltage	V _{ECO}	7	V
Operating Temperature *2		Topr.	-40 ~ +105	°C
Storage Temperature *2		Tstg.	-40 ~ +105	°C
Soldering Temperature *3		Tsol.	260	°C
Reflow Soldering Temperature		Tsol.	260	°C

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

*2 : No icebound or dew

*3 : For 5s or less

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

Characteristic		Symbol	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	μA	$V_R=5\text{V}$
	Peak Wavelength	λ_P	-	940	-	nm	$I_F=15\text{ mA}$
Output	Dark Current	I_{CEO}	-	1	100	nA	$V_{CE} = 20\text{V}, 0\text{Lux}$
Collector Current		I_C	0.3	-	-	mA	$I_F=15\text{ mA}, V_{CE} = 5\text{V}$
Response Time	Rise Time	t_r	-	4	15	μs	$V_{CC}=5\text{V}, I_C=0.3\text{ mA}$ $R_L=100\Omega$
	Fall Time	t_f	-	5	20	μs	

- Circuit for measuring response time

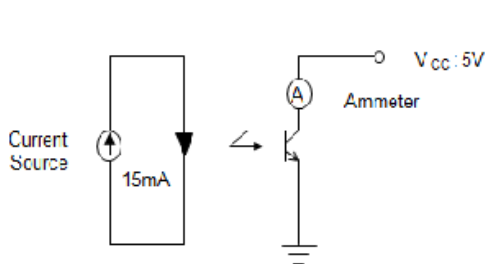


Fig 1. Test Circuit for I_C

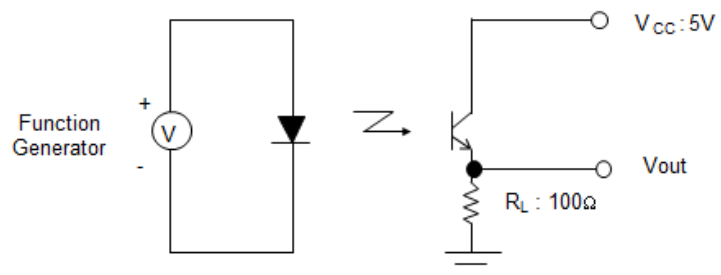


Fig 2. Test Circuit for Rise and Fall Time

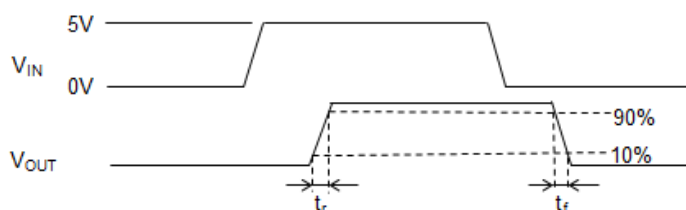
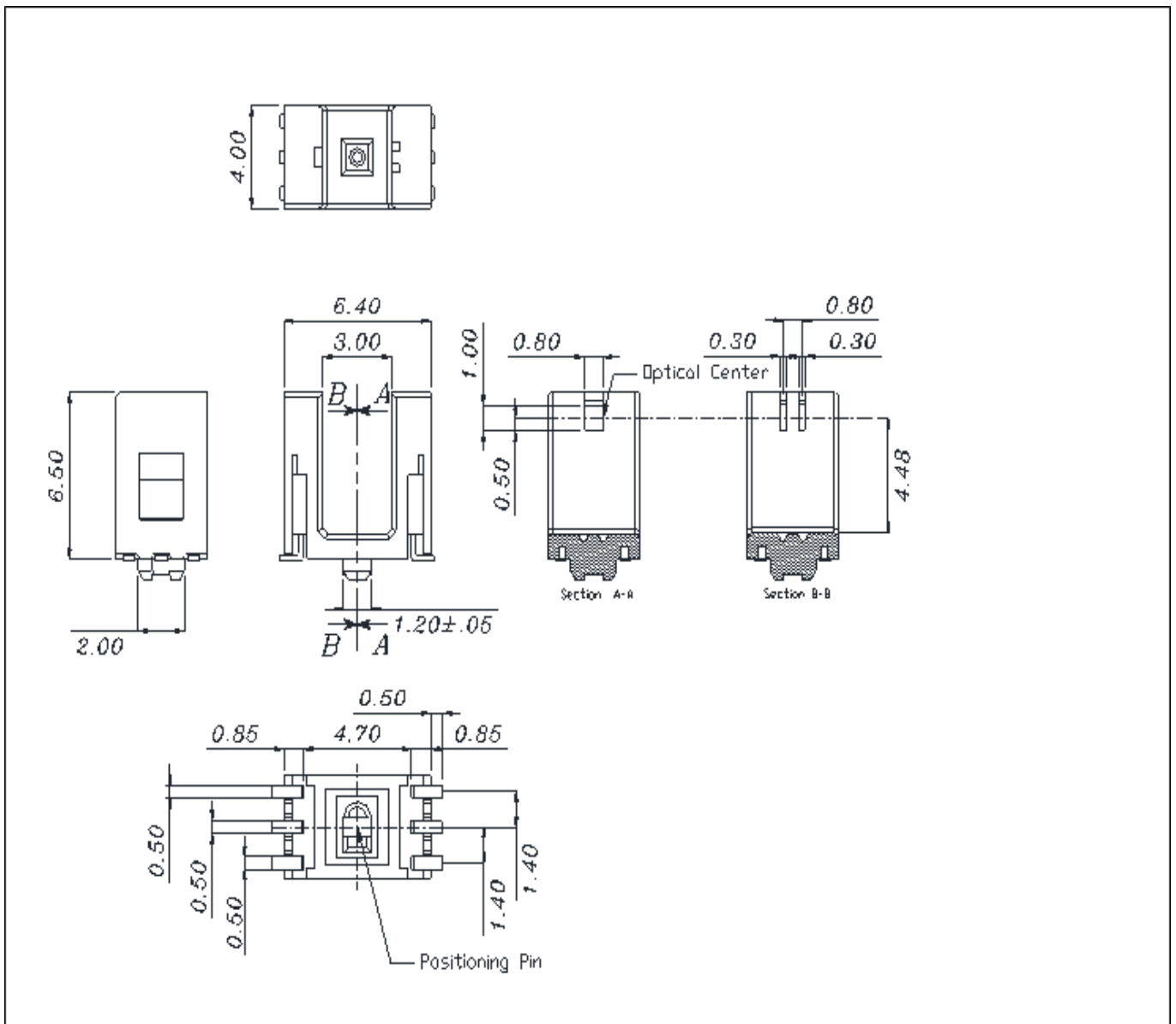


Fig 3. Definitions for Response Times

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Package Outline Dimensions



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