

Photo Interrupter

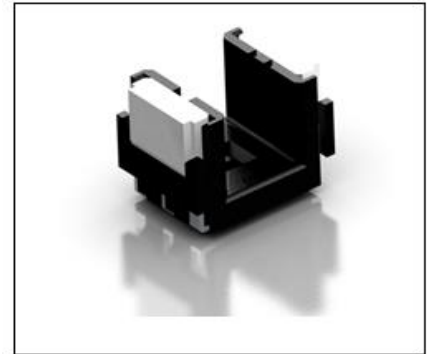
KIT3032S

Description

The KIT3032S is a compact transmission type photo interrupter, which combines 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)2a.
- 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}	30	V
	E-C Voltage	V _{ECO}	7	V
Operating Temperature *2		T _{opr.}	-40 ~ +105	°C
Storage Temperature *2		T _{stg.}	-40 ~ +105	°C
Soldering Temperature *3		T _{sol.}	260	°C
Reflow Soldering Temperature		T _{sol.}	255	°C

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

*2 : No icebound or dew

*3 : For 5s or less

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When using this product, would you please refer to the latest specifications.

Electrical Characteristics (T_a=25°C)

Characteristic		Symbol	Min.	Typ.	Max.	Unit	Condition
Input	Forward Voltage	V _F	-	1.2	1.4	V	I _F =20 mA
	Reverse Current	I _R	-	-	10	μA	V _R =5V
	Peak Wavelength	λ _P	-	940	-	nm	I _F =15 mA
Output	Dark Current	I _{CEO}	-	1	100	nA	V _{CE} = 20V, 0 Lux
Collector Current		I _C	0.3	-	-	mA	I _F =15 mA, V _{CE} = 5V
Collector-Emitter Saturation Voltage		V _{CE(sat)}	-	-	0.4	V	I _F =15 mA, I _C = 0.05mA
Response Time	Rise Time	t _r	-	4	15	μs	V _{CC} =5V, I _C =0.3 mA R _L =100Ω
	Fall Time	t _f	-	5	20	μs	

- Circuit for measuring response time

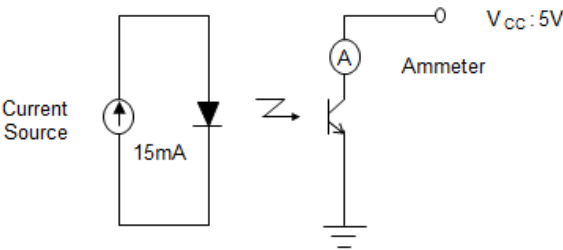


Fig 1. Test Circuit for I_C

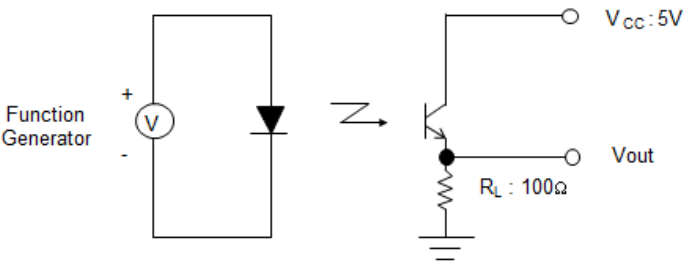


Fig 2. Test Circuit for Rise and Fall Time

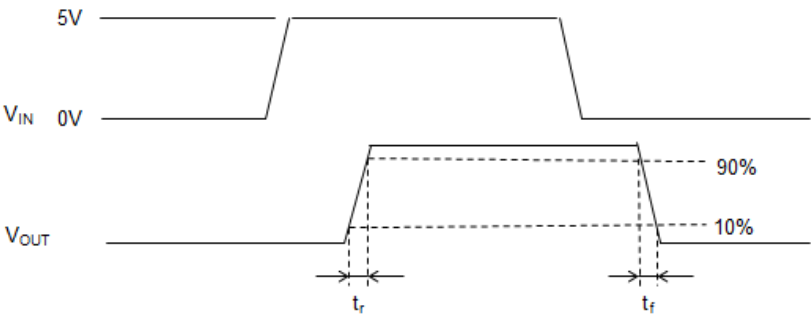
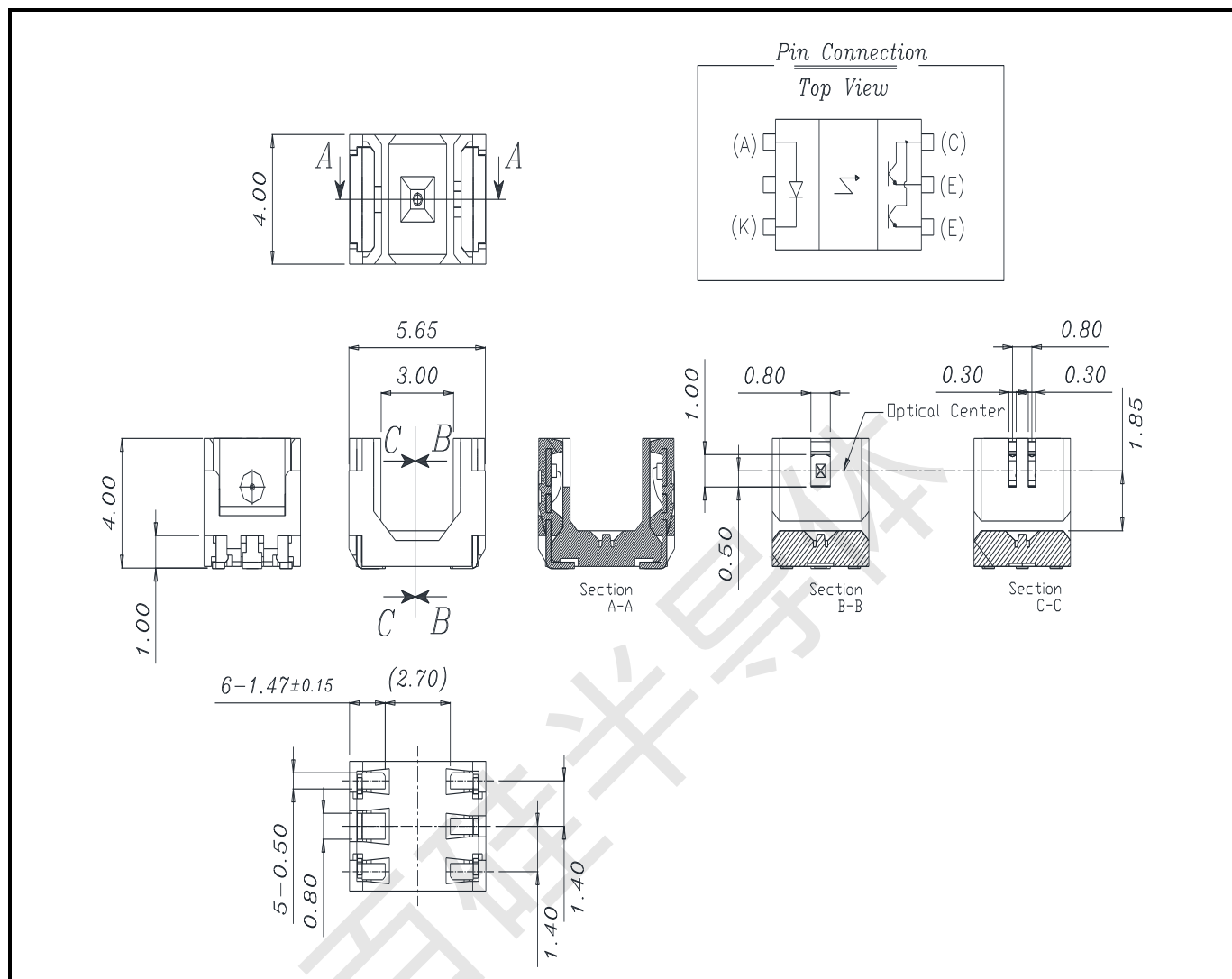


Fig 3. Definitions for Response Times

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Package Outline Dimensions



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