

Photo Interrupter

KIT3018H

Description

The KIT3018H is a high performance standard type photo interrupter, combines high-output GaAs IRED with high sensitive phototransistor.



Features

- High speed response.
- 3.0mm gap.
- Bottom surface sealed from dust.
- Protected from dust and contamination.
- RoHS compliant.

Applications

- Media detection sensor.
- Timing sensor.
- Edge sensor.

Absolute Maximum Ratings (T_a=25°C, Unless otherwise specified)

Parameter		Symbol	Rating	Unit
Input	Reverse Voltage	V _R	5	V
	Forward Current	I _F	60	mA
	Peak Forward Current *1	I _{FP}	1	A
	Power Dissipation	P _D	100	mW
Output	Collector-Emitter Voltage	V _{CEO}	30	V
	Emitter-Collector Voltage	V _{ECO}	5	V
	DC Collector Current	I _C	40	mA
	Collector Power Dissipation	P _C	100	mW
Soldering Temperature for 5 Seconds *2		T _{sol}	260	°C
Operating Temperature		T _{opr}	-20 ~ +85	°C
Storage Temperature Range		T _{stg}	-30 ~ +85	°C

Notes : ※1. $t_w = 100\mu s$, $T = 10ms$.

※2. Distance from end of the package = 2.0mm, time = 5sec, MAX.

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.

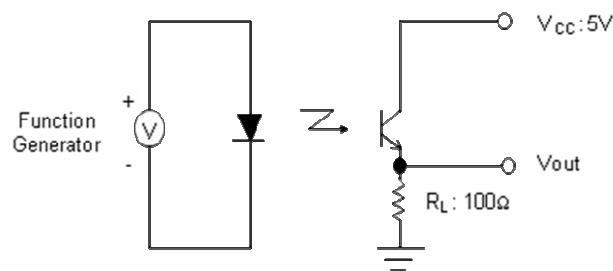
Electrical-Optical Characteristics (T_a=25°C)

Parameter		Symbol	Conditions	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V _F	I _F =30mA	-	1.2	1.5	V
	Wavelength of Emission	λ		-	940	-	nm
	Reverse Current	I _R	V _R =4V	-	-	10	μA
Output	Dark Current	I _{CEO}	V _{CE} =10V, I _F =0 mA E _V =0 lux	-	-	0.1	μA
Transfer Characteristics	Collector - Emitter Saturation Voltage	V _{CE(sat)}	I _C =0.1 mA, I _F =30 mA	-	-	0.4	V
	Collector Current *3	I _C	V _{CE} =5.0V, I _F =20mA	0.1	-	-	mA
Response Time	Rise Time *4	t _r	Below Schematic	-	5	-	μS
	Fall Time *4	t _f		-	5	-	μS

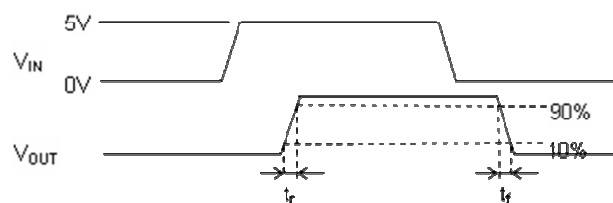
Note 3. Light beam uninterrupted condition : Unblocked is normal condition.

Note 4. Adjust amplitude and offset of square wave so that V_{out} transitions from 10% to 90% of V_{out} range of the Device Under Test(DUT)

* Circuit for measuring response time



Test Circuit for Rise and Fall Time

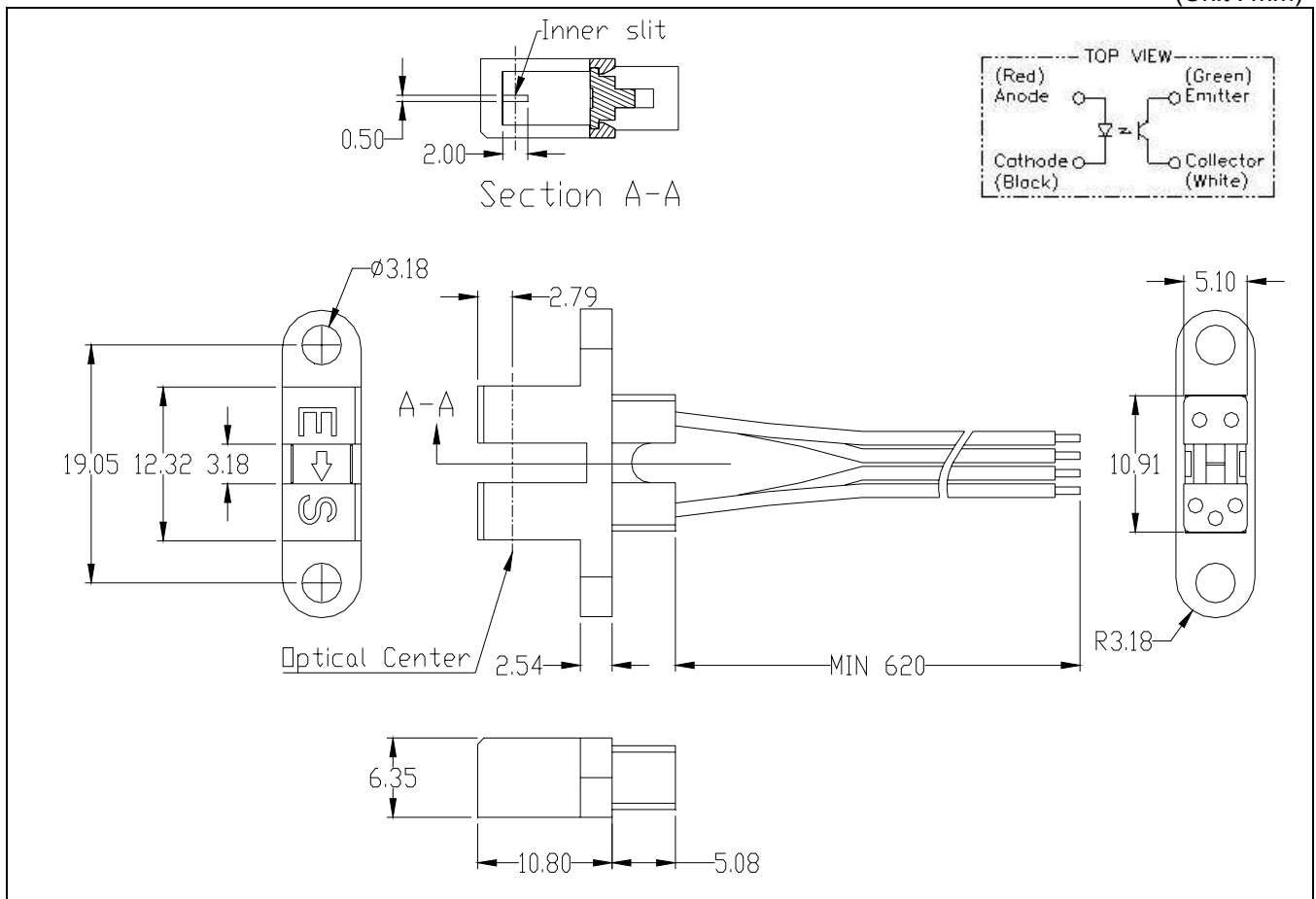


Definitions for Response Times

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Package Outline Dimensions

(Unit : mm)



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