Photo Interrupter

KIT3018H

Description

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

RoHS

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℃, 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		Tsol	260	℃
Operating Temperature		Topr	-20 ~ +85	℃
Storage Temperature Range		Tstg	-30 ~ +85	℃

Notes : ※1. tw = 100μs, T=10ms.

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

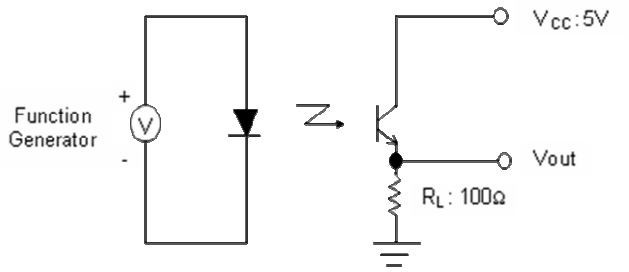
The contents of this data sheet are subject to change without advance notice for the purpose of improvement.
When using this product, would you please refer to the latest specifications.

Electrical-Optical Characteristics (T_a=25℃)

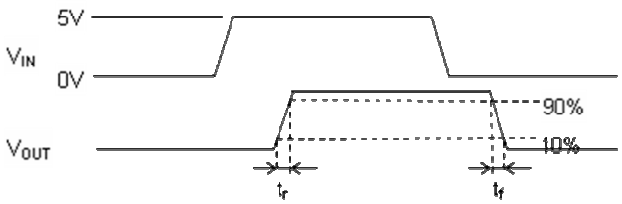
Parameter		Symbol	Conditions	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V_F	I_F=30mA	-	1.2	1.5	V
	Wavelength of Emission	λ		-	940	-	nm
	Reverse Current	I_R	V_R=4V	-	-	10	μA
Output	Dark Current	I_{CEO}	V_{CE}=10V, I_F=0 mA E_V=0 lux	-	-	0.1	μA
Transfer Charac-teristics	Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	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 Vout transitions from 10% to 90% of Vout 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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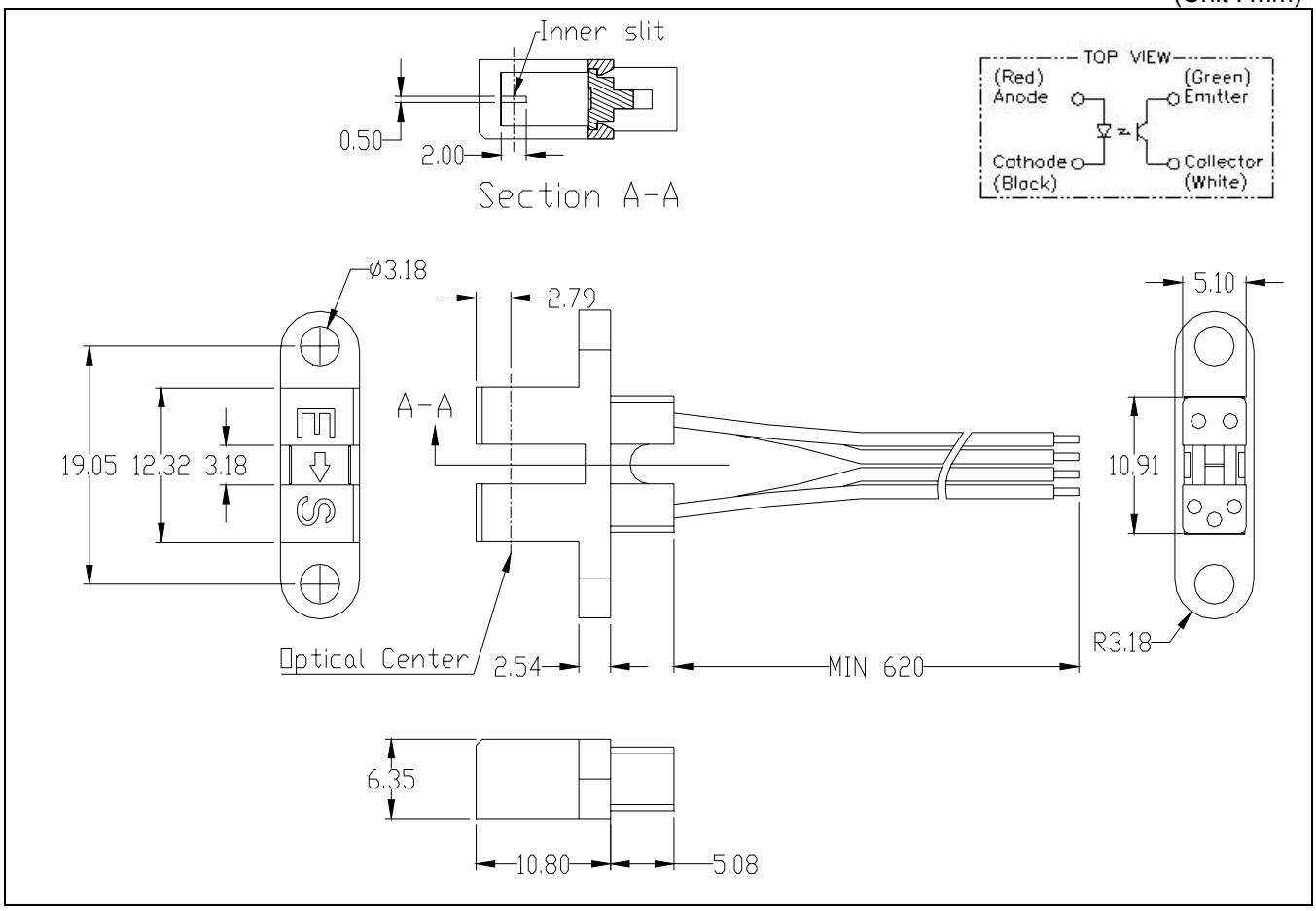
Package Outline Dimensions

(Unit : mm)



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