

Photo Interrupter

KIA1001H

Description

The KIA1001H actuator type photointerrupter combined GaAs IRED, high sensitive phototransistor and actuator is ideal for copiers, facsimiles.

Features

- Snap in mount type.
- Widely applicable.
- Wide choice of levers.
- RoHS compliant.

Applications

- Copiers.
- Printers.
- Ticket vending machines.



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

Characteristic		Symbol	Ratings	Unit
Input	Power Dissipation	P _D	100	mW
	Forward Current	I _F	60	mA
	Reverse Voltage	V _R	5	V
	Peak Forward Current ^{*1}	I _{FP}	1	A
Output	Power Dissipation	P _D	100	mW
	Collector Current	I _C	40	mA
	Collector-Emitter Voltage	V _{CEO}	30	V
	Emitter-Collector Voltage	V _{ECO}	5	V
Operating Temperature ^{*2}		T _{opr}	-20 ~ +75	°C
Storage Temperature ^{*2}		T _{stg}	-30 ~ +85	°C

*1 : Pulse width (tw) ≤ 100μs, Period (T) = 10msec.

*2 : No icebond or dew.

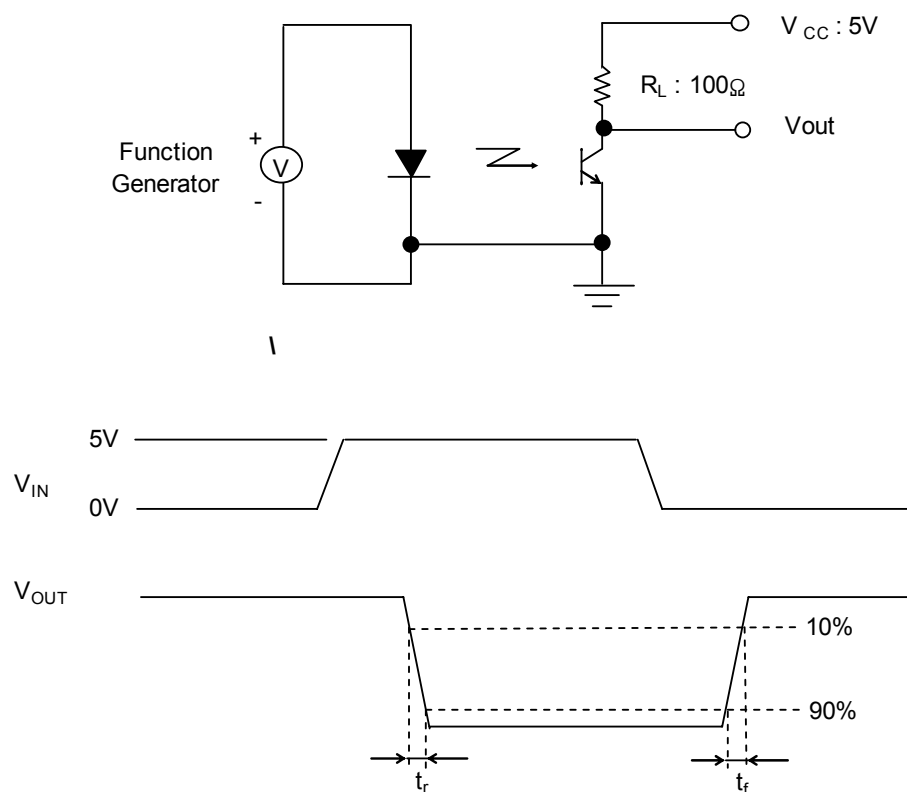
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When using this product, would you please refer to the latest specifications.

Electrical Characteristics (T_a=25°C)

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V _F	I _F =20mA	-	1.2	1.7	V
	Peak Wavelength	λ _p	I _F =20mA	-	940	-	nm
	Reverse Current	I _R	V _R =5V	-	-	10	uA
Output	Dark Current	I _{CEO}	V _{CE} =10V, E=0lux	-	1	100	nA
	Peak Wavelength	λ _p	-	-	880	-	nm
Transfer Characteristics	Collector Current	I _C	V _{CE} =5.0V, I _F =20mA (Non shading)	0.5	-	15.0	mA
	Leakage current	I _{CEOD}	I _F =10mA, V _{CE} =5V Shading	-	0.5	10	uA
	C-E Saturation Voltage	V _{CE(sat)}	I _C =0.1mA, I _F =20mA	-	-	0.4	V
Response Time	Rise Time ^{*3}	t _r	V _{CC} =5.0V, I _C =0.1mA RL=100Ω	-	5	-	usec
	Fall Time ^{*3}	t _f		-	5	-	usec

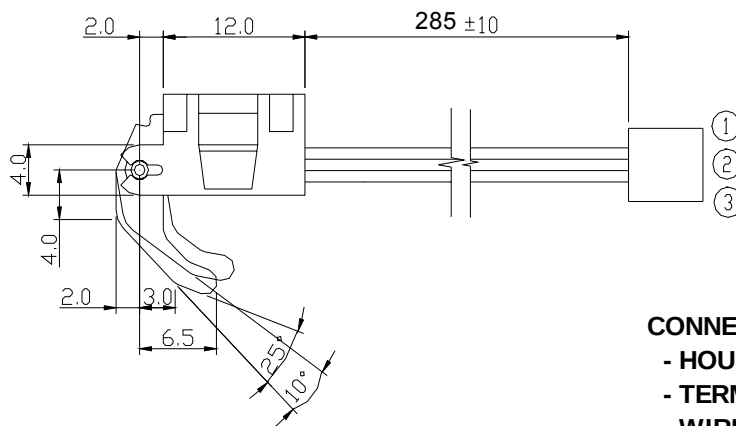
*3 : Adjust amplitude and offset of square wave so that V_{out} transitions from 10% to 90% of V_{out} range of the The Device Under Test(DUT)

● Circuit for Measuring Response Time



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Package Outline Dimensions



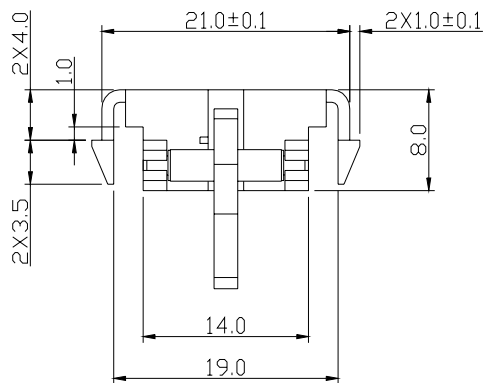
(ALL DIMENSIONS IN MILLIMETERS)

PINOUT

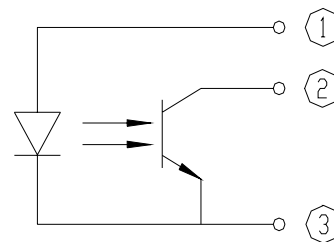
- ① : ANODE (Red)
- ② : COLLECTOR (Blue)
- ③ : GND (Black)

CONNECTOR

- HOUSING : JAE IL-S-3S-S2C2(3PIN)
- TERMINAL : JAL IL-S-C2-10000
- WIRE : UL1061 AWG #26(3 Color)



CONNECTION DIAGRAM



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