

## Photo Interrupter

# KIA1002H

### Description

The KIA1002H 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<sub>a</sub>=25°C, Unless otherwise specified)

Characteristic		Symbol	Ratings	Unit
Input	Power Dissipation	P <sub>D</sub>	100	mW
	Forward Current	I <sub>F</sub>	60	mA
	Reverse Voltage	V <sub>R</sub>	5	V
	Peak Forward Current <sup>*1</sup>	I <sub>FP</sub>	1	A
Output	Power Dissipation	P <sub>D</sub>	100	mW
	Collector Current	I <sub>C</sub>	40	mA
	Collector-Emitter Voltage	V <sub>CEO</sub>	30	V
	Emitter-Collector Voltage	V <sub>ECO</sub>	5	V
Operating Temperature <sup>*2</sup>		T <sub>opr</sub>	-20 ~ +75	°C
Storage Temperature <sup>*2</sup>		T <sub>stg</sub>	-30 ~ +85	°C

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

\*2 : No icebond or dew.

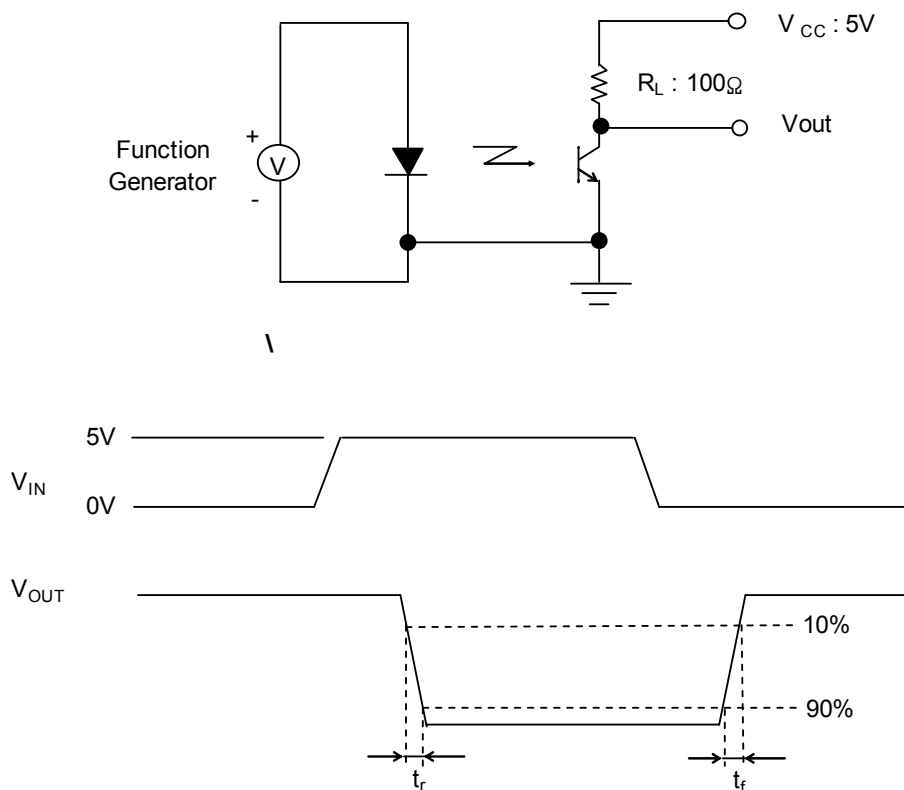
The contents of this data sheet are subject to change without advance notice for the purpose of improvement. When using this product, would you please refer to the latest specifications.

## Electrical Characteristics (T<sub>a</sub>=25°C)

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20mA	-	1.2	1.7	V
	Peak Wavelength	λ <sub>p</sub>	I <sub>F</sub> =20mA	-	940	-	nm
	Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	-	-	10	uA
Output	Dark Current	I <sub>CEO</sub>	V <sub>CE</sub> =10V, E=0lux	-	1	100	nA
	Peak Wavelength	λ <sub>p</sub>	-	-	880	-	nm
Transfer Characteristics	Collector Current	I <sub>C</sub>	V <sub>CE</sub> =5.0V, I <sub>F</sub> =20mA (Non shading)	0.5	-	15.0	mA
	Leakage current	I <sub>CEOD</sub>	I <sub>F</sub> =10mA, V <sub>CE</sub> =5V Shading	-	0.5	10	uA
	C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =0.1mA, I <sub>F</sub> =20mA	-	-	0.4	V
Response Time	Rise Time <sup>*3</sup>	t <sub>r</sub>	V <sub>CC</sub> =5.0V, I <sub>C</sub> =0.1mA RL=100Ω	-	5	-	usec
	Fall Time <sup>*3</sup>	t <sub>f</sub>		-	5	-	usec

\*3 : Adjust amplitude and offset of square wave so that V<sub>out</sub> transitions from 10% to 90% of V<sub>out</sub> range of the The Device Under Test(DUT)

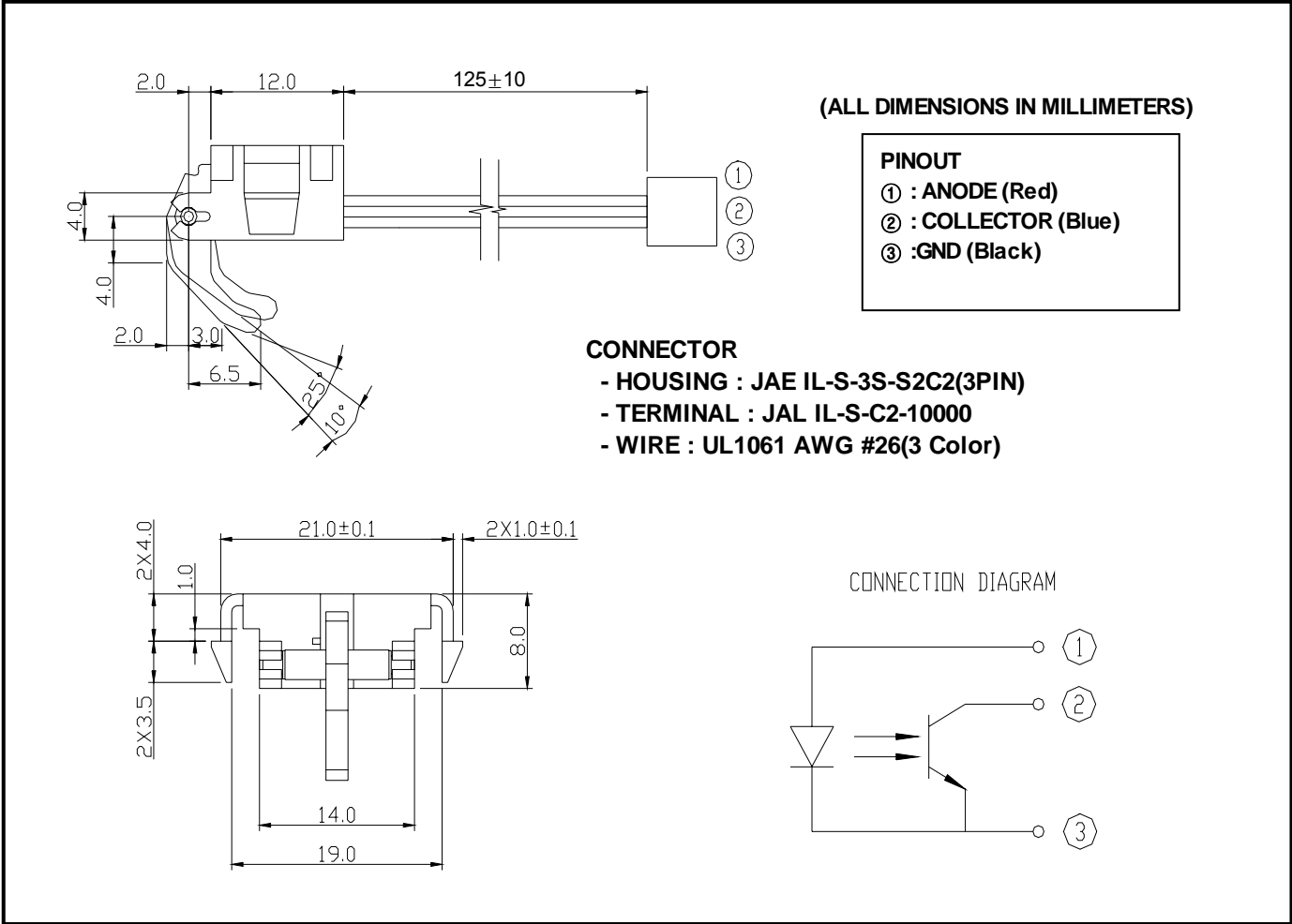
- Circuit for Measuring Response Time



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## Package Outline Dimensions(Unit : mm)



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