

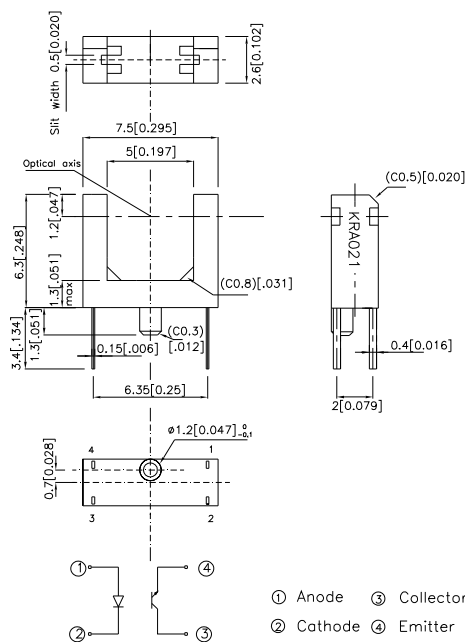
PRELIMINARY SPEC

**\*Application**

- 1.Copiers,printers and Fax Machines.
- 2.VCRs and CD players.
- 3.Various position detection sensor.

**\*Dimensions**

Note:All units are in millimeters unless otherwise indicated.



Unless otherwise, the tolerances are ±0.15mm.

**\*Features**

- 1.Compact package.
- 2.High sensing accuracy(Slit width:0.5mm).
- 3.Printed wiring board direct mounting type(with a locating pin).
- 3.Gap between light emitter and detector:5mm.
- 4.Compliant with European RoHS directives.
- 5.RoHS compliant.

**\*Absolute Maximum Ratings (Ta=25°C)**

Parameter		Symbol	Rating	Unit
Input	Forward current[1]	IF	30	mA
	Reverse voltage	VR	5	V
	Power dissipation	Pd	35	mW
	Peak Forward Current [2]	IFP	100	mA
Output	Collector-emitter voltage	VCEO	35	V
	Emitter-collector voltage	VECO	5	V
	Collector current	IC	50	mA
	Collector power dissipation	PC	75	mW
Operating temperature		Topr	-30~+85	°C
Storage temperature		Tstg	-40~+100	°C
Soldering temperature(5s) [3]		Tsol	260	°C

Notes:

- 1.Refer to the temperature rating chart if the ambient temperature exceeds 25°C.
- 2.Duty:1/100,Pulse Width:0.1mS.
- 3.At the location of 1.5mm from the package bottom.

**\*Electrical / Optical Characteristics at Ta=25°C**

Parameter	Symbol	Value			Conditions	
		Min.	Typ.	Max.		
Input	Forward voltage	VF	-	1.15V	1.40V	IF=10mA
	Reverse current	IR	-	-	10µA	VR=5V
	Peak Wavelength	λp	-	940nm	-	-
Output	Collector current	IC/IF	2.5%	-	50%	IF=10mA,VCE=2V
	Collector dark current	ID	-	-	100nA	VCE=24V, IF=0
	Collector-emitter saturation voltage	VCE(sat)	-	0.1V	0.4V	IC=0.25mA, IF=20mA
	Peak spectral sensitivity wavelength	λp	-	920nm	-	-
Rise time	tr	-	15µsec	50µsec	VCC=5V, RL=1KΩ IC=1mA	
Fall time	tf	-	15µsec	50µsec		



Fig.1 Forward Current vs. Forward Voltage

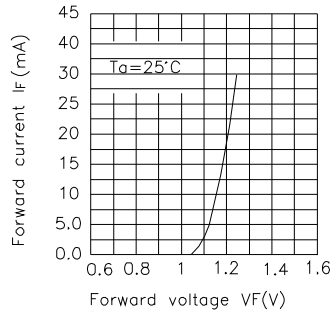


Fig.2 Collector Current vs. Forward Current

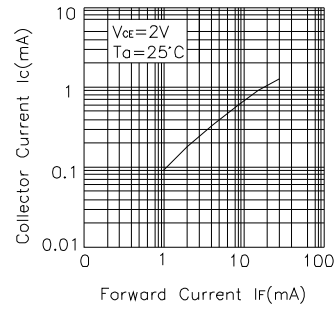


Fig.3 Collector Current vs. Ambient Temperature

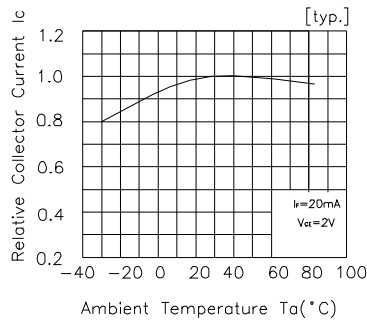


Fig.4 Collector-Emmitter Saturation Voltage vs. Ambient Temperature

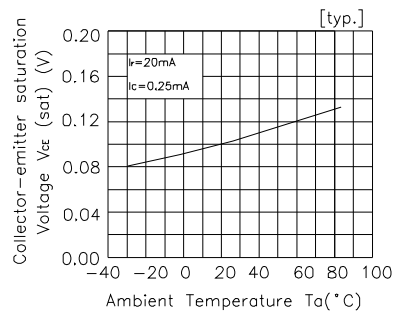


Fig.5 Forward Current vs. Collector Dissipation Temperature Rating

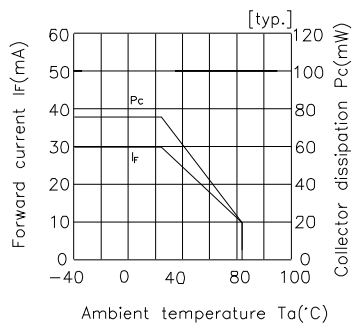


Fig.6 Forward Current vs. Collector-Emmitter Voltage

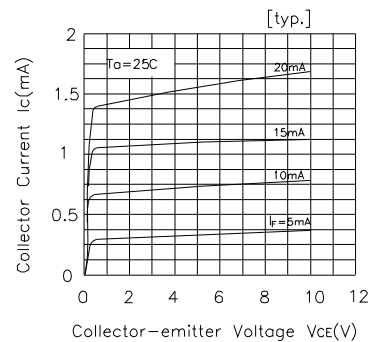


Fig.7 Relative Collector Current vs. Shield Distance(1)

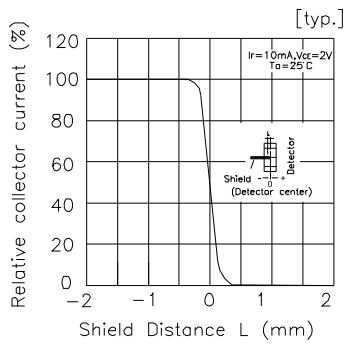


Fig.8 Relative Collector Current vs. Shield Distance(2)

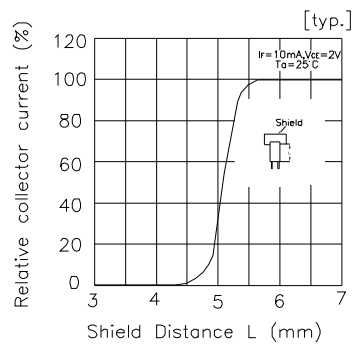
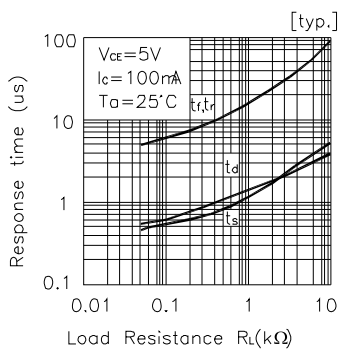
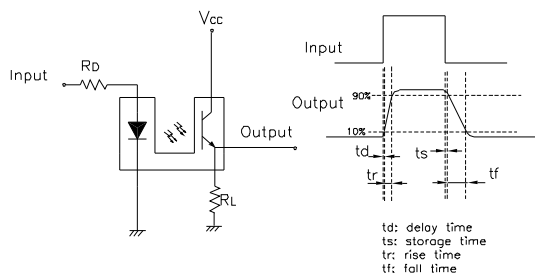


Fig.9 Response Time vs Load Resistance

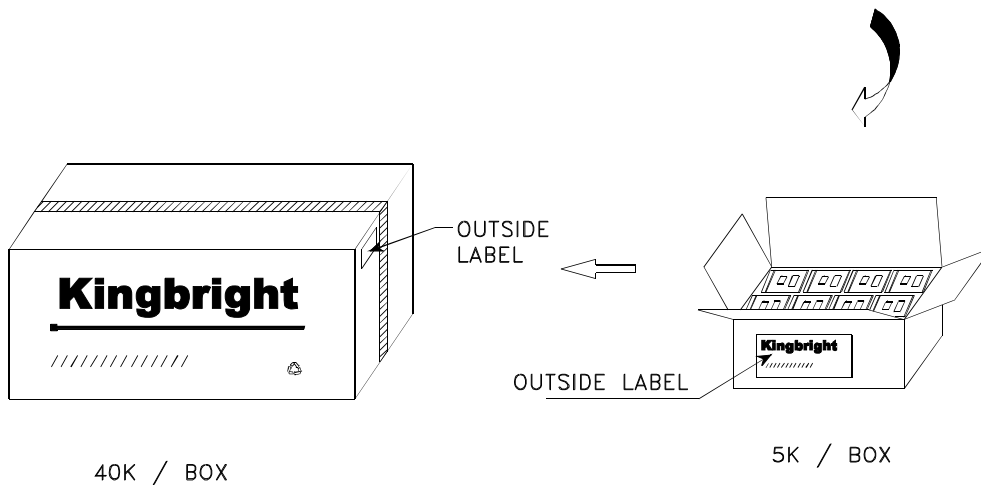
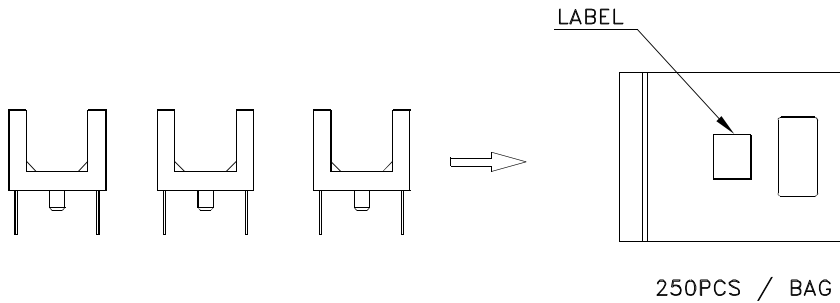



Test Circuit for Response Time



**PACKING & LABEL SPECIFICATIONS**

**KRA021**



<b>Kingbright</b>	
P/NO: KRA021	
QTY: 250 pcs	Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C xx xx xxxx PASSED</span>
S/N: XXXX	
CODE: XXX	
LOT NO:	
 xxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	

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