Kingbright

Part Number: KRA021

PRELIMINARY SPEC

*Application

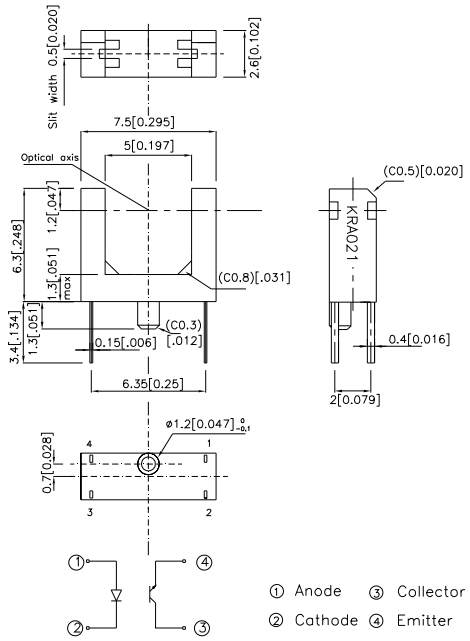
1.Copiers,printers and Fax Machines.
2.VCRs and CD players.
3.Various position detection sensor.

*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.

*Dimensions

Note:All units are in millimeters unless otherwise indicated.



Unless otherwise.,the tolerances are ±0.15mm.

*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
	Cullector-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

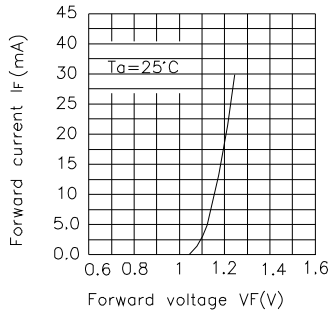


Fig.2 Collector Current vs. Forward Current

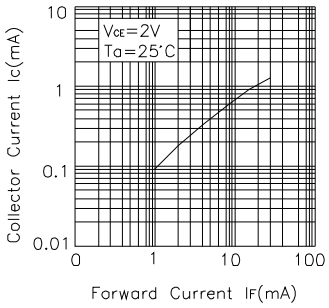


Fig.3 Collector Current vs. Ambient Temperature

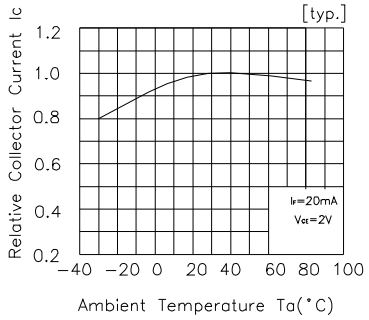


Fig.4 Collector−Emitter Saturation Voltage vs.Ambient Temperature

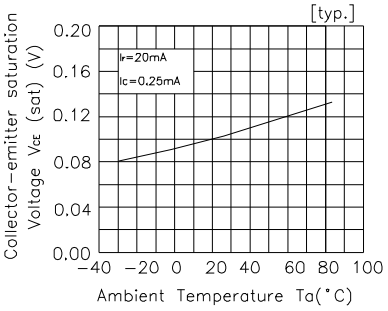


Fig.5 Forward Current vs. Collector Dissipation Temperature Rating

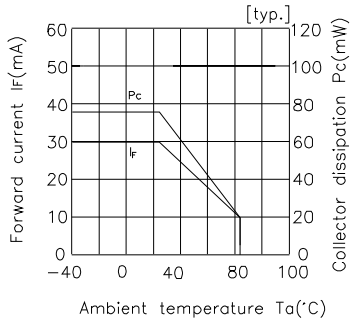


Fig.6 Forward Current vs. Collector−Emitter Voltage

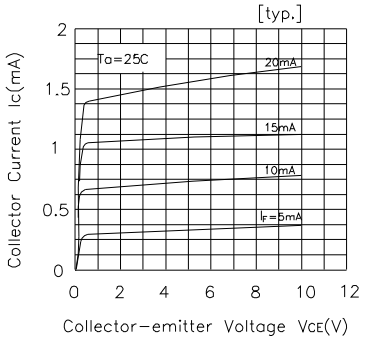


Fig.7 Relative Collector Current vs. Shield Distance(1)

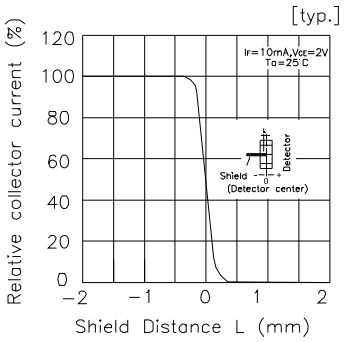


Fig.8 Relative Collector Current vs. Shield Distance(2)

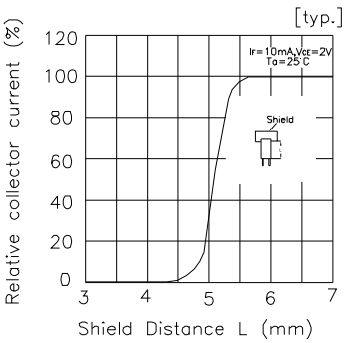
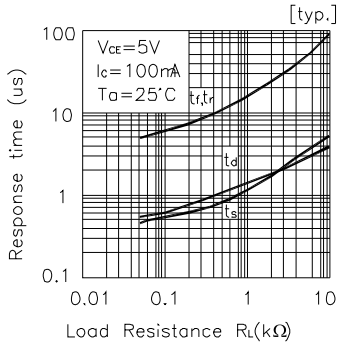
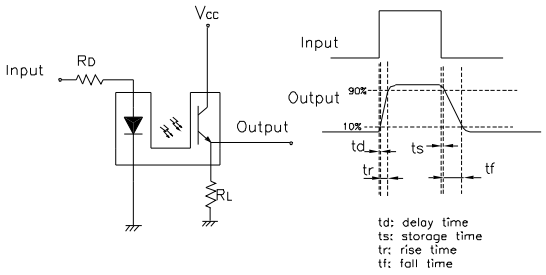


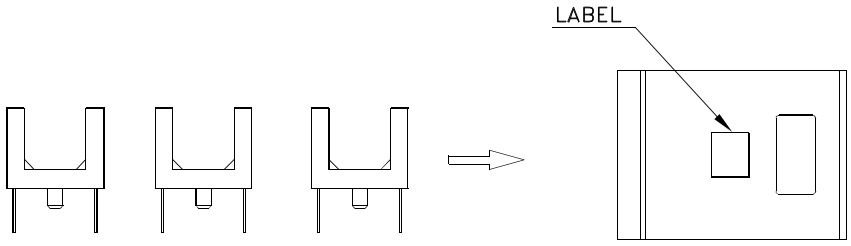
Fig.9 Response Time vs Load Resistance



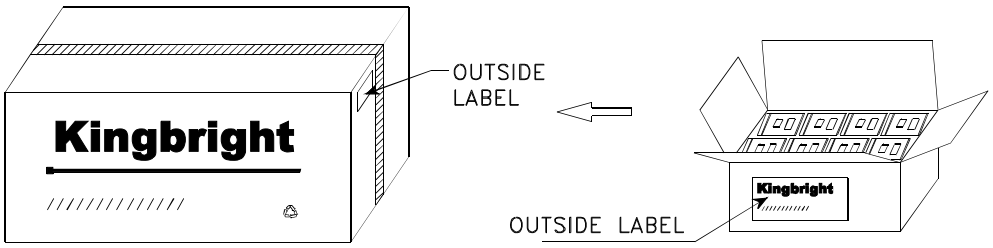
Test Circuit for Response Time



PACKING & LABEL SPECIFICATIONS **KRA021**



250PCS / BAG



40K / BOX

5K / BOX