

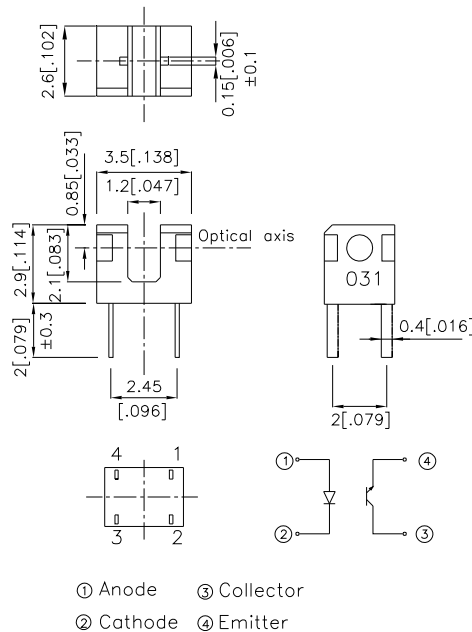
PRELIMINARY SPEC

*Application

1. Still Camera and Digital Still Camera.
2. Video Camera.
3. Personal Equipment and Small-sized OA Equipment.

*Dimensions

Note: All units are in millimeters unless otherwise indicated.



Notes: Detection slit width 0.15mm.

Tolerances are listed below unless otherwise specified

Dimensions	Tolerance
4mm or less	±0.1
Greater than 4mm	±0.2

*Features

1. Compact package.
2. High sensing accuracy (Slit width: 0.15mm).
3. High current transfer ratio.
4. Gap between light emitter and detector: 1.2mm.
5. Compliant with European RoHS directives.

*Absolute Maximum Ratings (T_a=25°C)

Parameter	Symbol	Rating	Unit
Input	Forward current[1]	I _F	30 mA
	Reverse voltage	V _R	5 V
	Power dissipation	P _d	35 mW
	Peak Forward Current [2]	I _{FP}	100 mA
Output	Collector-emitter voltage	V _{CEO}	35 V
	Emitter-collector voltage	V _{ECO}	5 V
	Collector current	I _C	50 mA
	Collector power dissipation	P _C	75 mW
Operating temperature		T _{opr}	-30~+85 °C
Storage temperature		T _{stg}	-40~+100 °C
Soldering temperature(5s) [3]		T _{sol}	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 T_A=25°C

Parameter		Symbol	Value			Conditions
			Min.	Typ.	Max.	
Input	Forward voltage	V _F	1.10V	-	1.40V	I _F =10mA
	Reverse current	I _R	-	-	10μA	V _R =5V
	Peak Wavelength	λ _p	-	940nm	-	I _F =10mA
Output	Collector current	I _C /I _F	3%	-	24%	I _F =5mA, V _{CE} =2V
	Collector dark current	I _D	-	-	100nA	V _{CE} =24V, I _F =0
	Cullector-emitter saturation voltage	V _{CE(sat)}	-	0.1V	0.4V	I _C =0.15mA, I _F =10mA
	Peak spectral sensitivity wavelength	λ _p	-	920nm	-	-
Rise time		t _r	-	15μsec	50μsec	V _{CC} =5V, R _L =1KΩ I _C =1mA
Fall time		t _f	-	15μsec	50μsec	



Fig.1 Forward Current vs. Forward Voltage

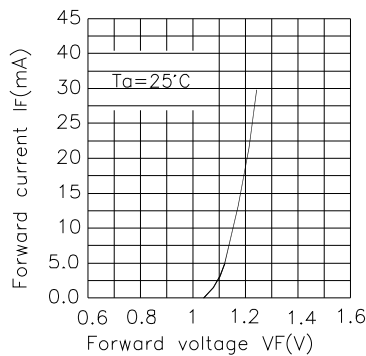


Fig.2 Collector Current vs. Forward Current

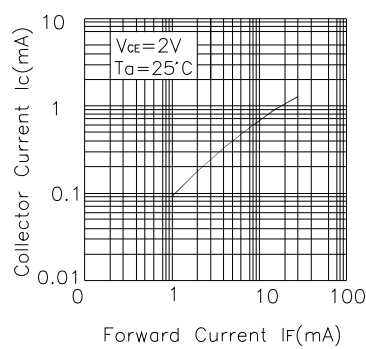


Fig.3 Collector Current vs. Ambient Temperature

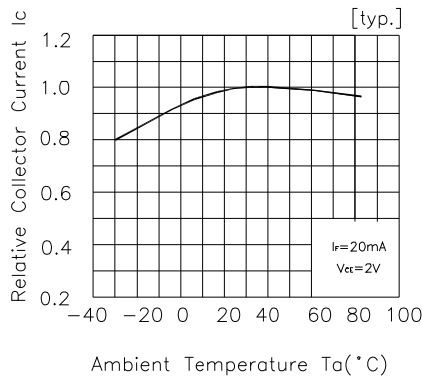


Fig.4 Collector-Emitter Saturation Voltage vs. Ambient Temperature

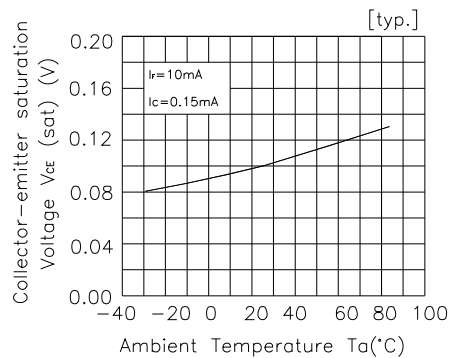


Fig.5 Forward Current vs. Collector Dissipation Temperature Rating

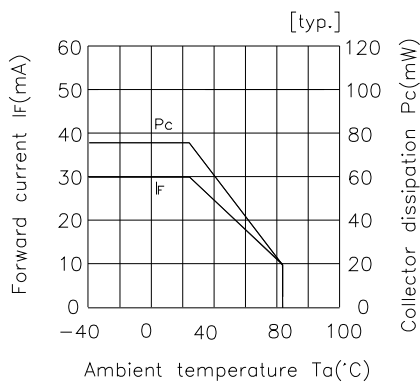


Fig.6 Forward Current vs. Collector-Emitter Voltage

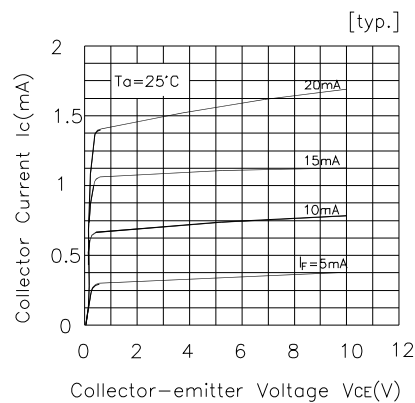


Fig.7 Relative Collector Current vs. Shield Distance(1)

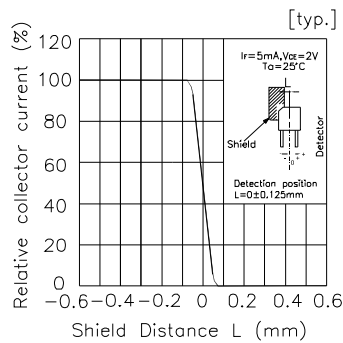


Fig.8 Relative Collector Current vs. Shield Distance(2)

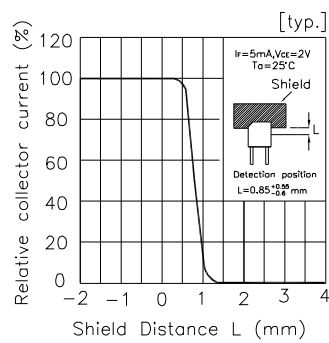
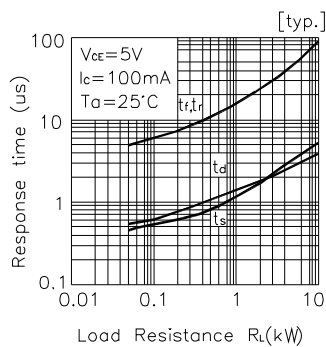
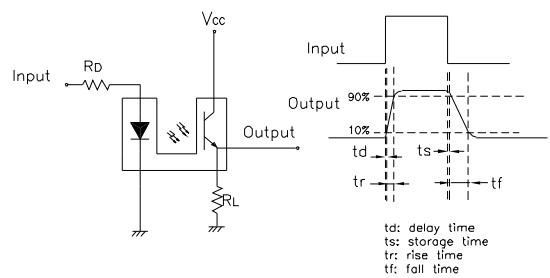


Fig.9 Response Time vs. Load Resistance

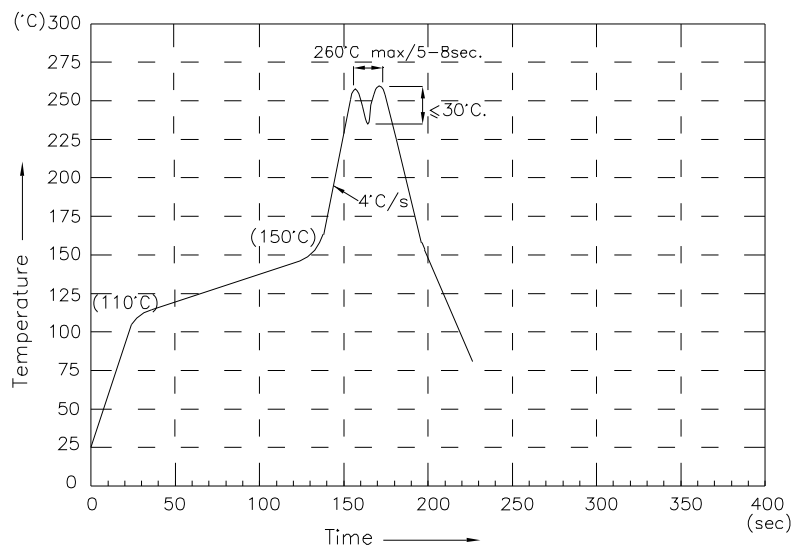


Test Circuit for Response Time



KRA031

Wave Soldering Profile For Lead-free Through-hole LED.

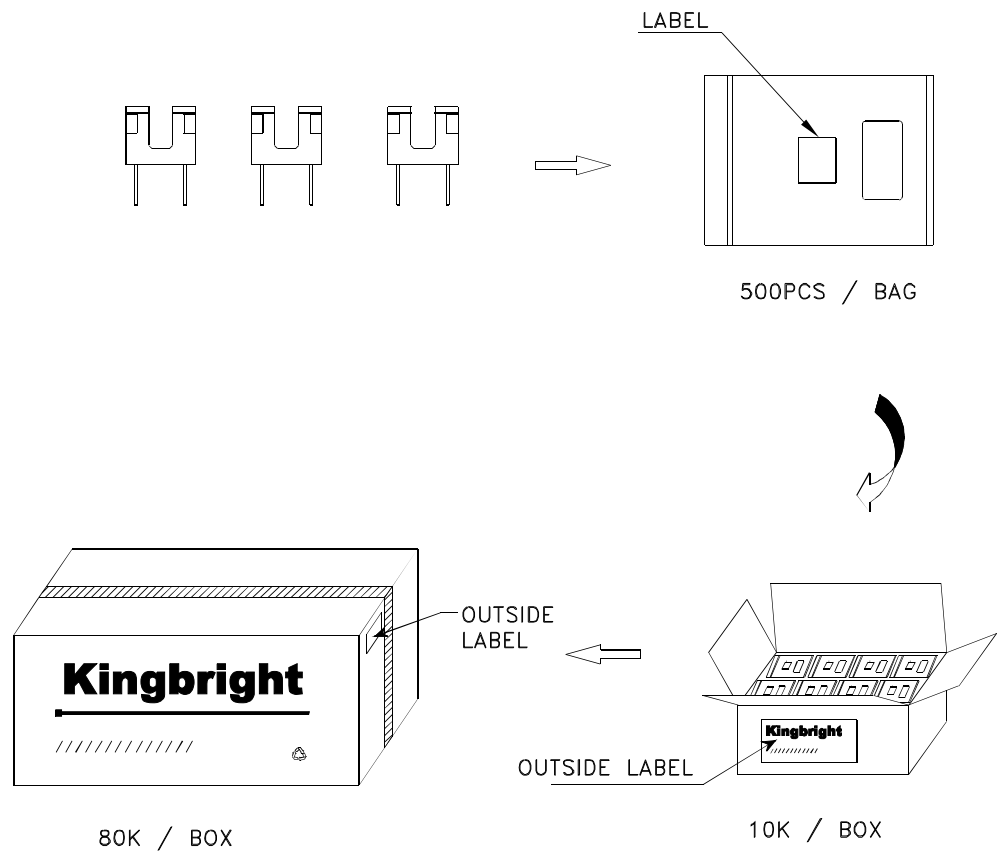


NOTES:

1. Recommend the wave temperature 245°C~260°C. The maximum soldering temperature should be less than 260°C.
2. Do not apply stress on epoxy resins when temperature is over 85 degree°C.
3. The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).
4. No more than once.

PACKING & LABEL SPECIFICATIONS

KRA031



Kingbright	
P/NO: KRAxxx	
QTY: 500 pcs	Q.C. Q C xx xx xxxx PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 xxxxxxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	