

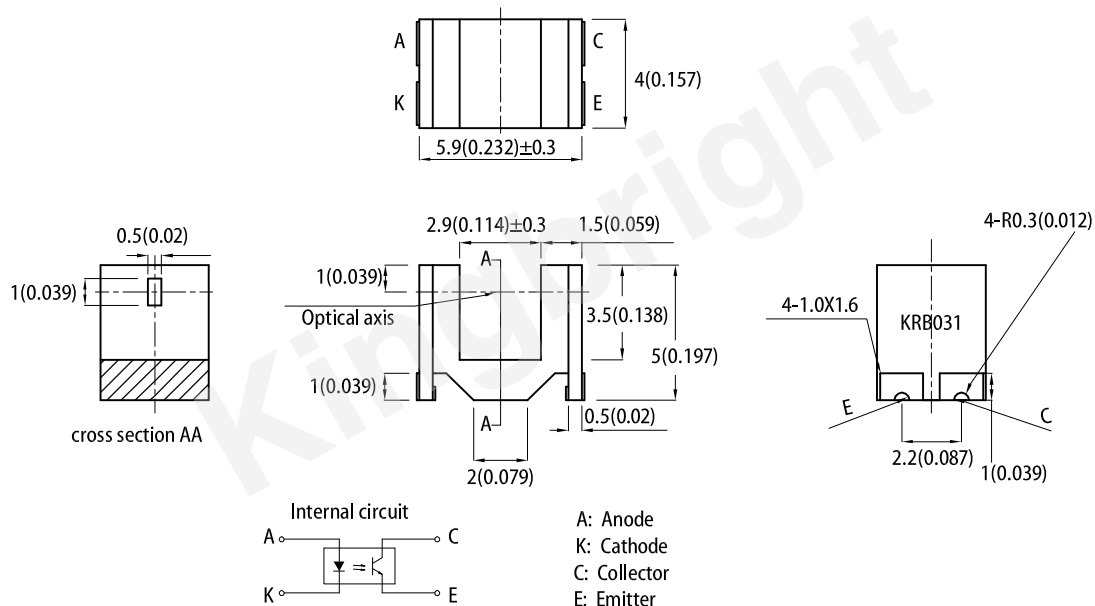
PCB TYPE PHOTOINTERRUPTER

*Features

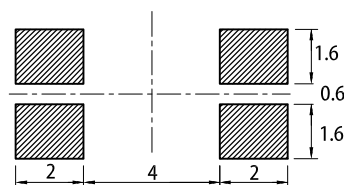
- Ultra-compact with a 6.0mm width photointerrupter and 3mm width slot.
- PCB surface mounting type.
- High resolution with a 0.5mm width aperture.
- Moisture sensitivity level : level 4.
- RoHS compliant.

*Dimensions

Note:All units are in millimeters unless otherwise indicated.



Recommended soldering pattern



Unless otherwise, the tolerances are ± 0.15 mm.



*Absolute Maximum Ratings (T_a=25°C)

Parameter		Symbol	Rating	Unit
Input	Forward current[1]	I _F	25	mA
	Reverse voltage	V _R	5	V
	Power dissipation	P _D	35	mW
	Peak Forward Current (Pulse Width ≤100uS, Duty Cycle=1%)	I _{FP}	1	A
Output	Collector-emitter voltage	V _{CEO}	20	V
	Emitter-collector voltage	V _{ECO}	5	V
	Collector current	I _C	20	mA
	Collector power dissipation	P _C	75	mW
Operating temperature		T _{opr}	-40~+85	°C
Storage temperature		T _{stg}	-40~+90	°C
Soldering temperature[2]		T _{sol}	260	°C
Manual soldering[2]		T _{sol}	300	°C

Notes:

1.Refer to the temperature ratingchart if the ambient temperature exceeds 25°C.

2.Complete soldering within 10 seconds for reflow soldering and within 3 seconds for manual soldering.

*Electrical / Optical Characteristics at T_A=25°C

Parameter		Symbol	Value			Conditions
			Min.	Typ.	Max.	
Input	Forward voltage	V _F	-	1.1V	1.3V	I _F =5mA
	Reverse current	I _R	-	-	10μA	V _R =5V
	Peak Wavelength	λ _p	-	940nm	-	I _F =20mA
Output	Collector current	I _C	50μA	150μA	500μA	I _F =5mA, V _{CE} =5V
	Collector dark current	I _D	-	-	100nA	V _{CE} =10V, 0LX
	Collector-emitter saturation voltage	V _{CE(sat)}	-	0.1V	0.4V	I _C =50μA, I _F =20mA
	Peak spectral sensitivity wavelength	λ _p	-	920nm	-	-
Rise time		t _r	-	8μsec	-	V _{CC} =5V, R _L =1KΩ I _C =100μA
Fall time		t _f	-	10μsec	-	

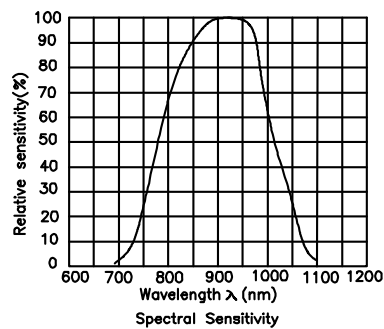


Fig.1 Forward Current vs. Forward Voltage

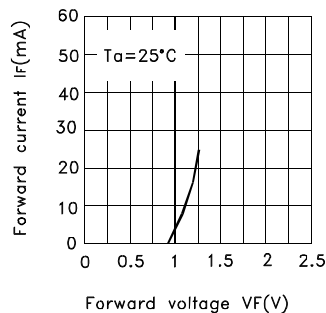


Fig.2 Collector Current vs. Forward Current

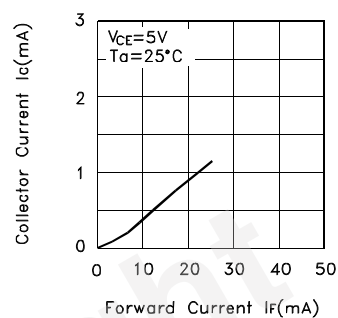


Fig.3 Collector Current vs. Ambient Temperature

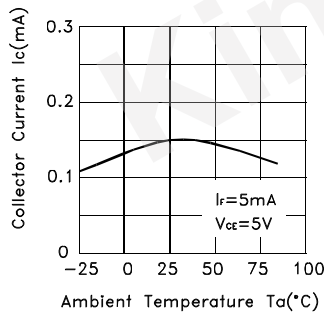


Fig.4 Collector-Emitter Saturation Voltage vs. Ambient Temperature

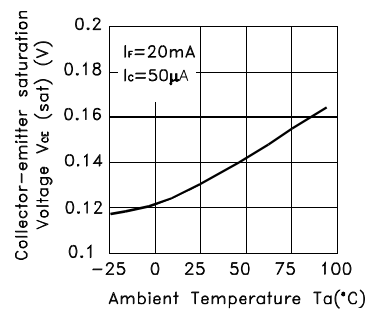


Fig.5 Forward Current vs. Collector Dissipation Temperature Rating

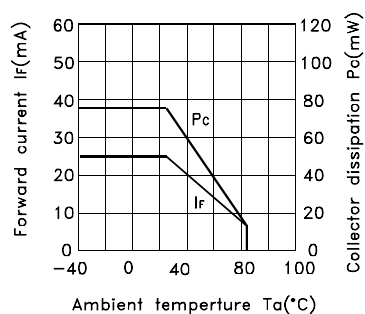


Fig.6 Forward Current vs. Collector-Emitter Voltage

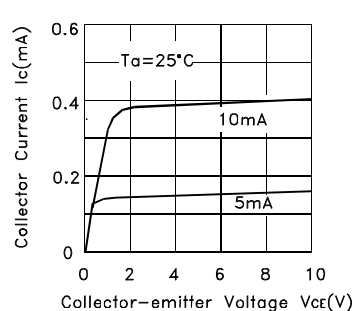


Fig.7 Relative Collector Current vs. Shield Distance(1)

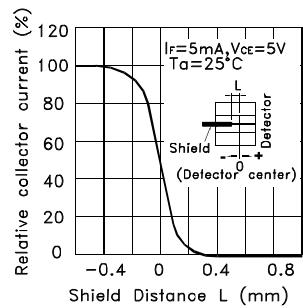


Fig.8 Relative Collector Current vs. Shield Distance(2)

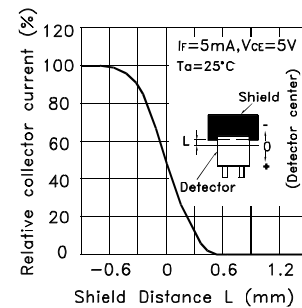
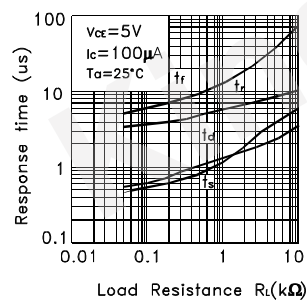
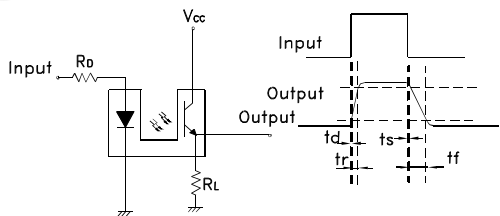


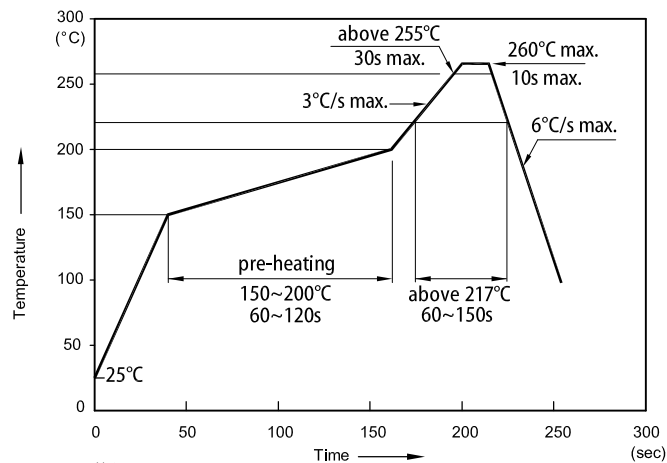
Fig.9 Response Time vs. Load Resistance



Test Circuit for Response Time



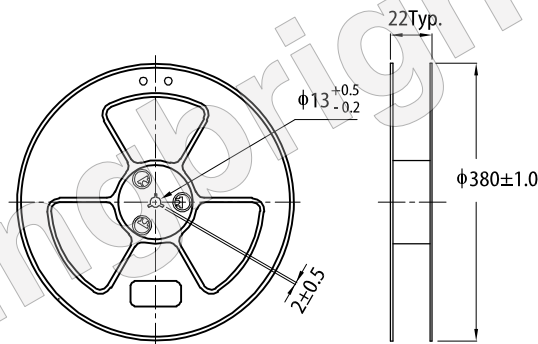
Reflow Soldering Profile for Lead-free SMD Process



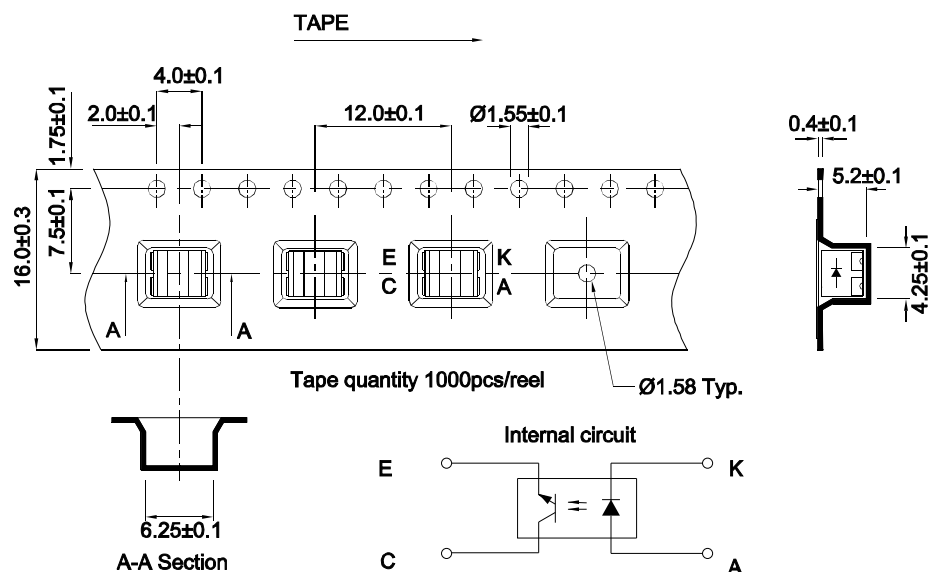
Notes:

1. Don't cause stress to the LEDs while it is exposed to high temperature.
2. The maximum number of reflow soldering passes is 2 times.
3. Reflow soldering is recommended. Other soldering methods are not recommended as they might cause damage to the product.

Reel Dimensions (Units: mm)

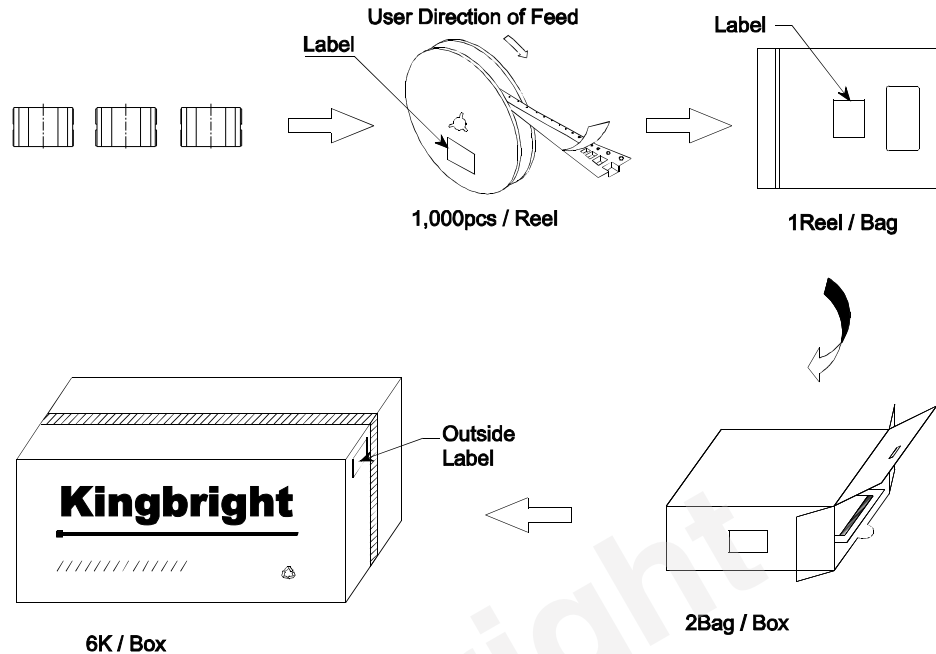


Tape Specifications (Units: mm)



PACKING & LABEL SPECIFICATIONS

KRB031



Kingbright		XXXXXXXX-XXXX	
P/NO: XXXXXXXX			
QTY: XXXXpcs			
S/N: XXXX			
CODE: XXX			
COUNTRY: CN		QC DATE: XXX XX XXXX PASSED	
LOT NO:			
XXXXXXXX-XXXX			
		1	RoHS Compliant

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