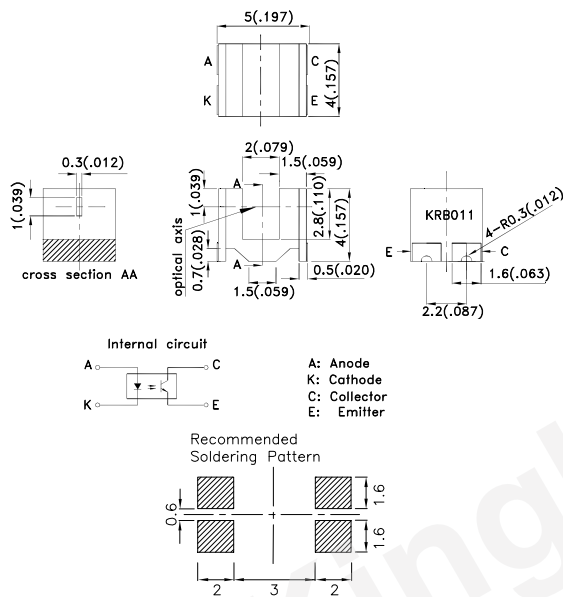


*Application

- 1.Floppy disk drives, Camera.
- 2.Various microcomputerized control equipment.

*Dimensions

Note:All units are in millimeters unless otherwise indicated.



Unless otherwise, the tolerances are $\pm 0.15\text{mm}$.

*Features

- 1.Ultra-compact.
- 2.High sensing accuracy(Slit width:0.3mm).
- 3.Gap between light emitter and detector:2mm.
- 4.Moisture Sensitivity Level : Level 4.
- 5.RoHS compliant.

*Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Parameter		Symbol	Rating	Unit
Input	Forward current[1]	I_F	25	mA
	Reverse voltage	V_R	5	V
	Power dissipation	P_d	35	mW
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}	$-30\sim+85$	$^\circ\text{C}$
Storage temperature		T_{stg}	$-40\sim+90$	$^\circ\text{C}$
Soldering temperature[2]		T_{sol}	260	$^\circ\text{C}$
Manual soldering[2]		T_{sol}	300	$^\circ\text{C}$

Notes:

- 1.Refer to the temperature rating chart 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 $T_a=25^\circ\text{C}$

Parameter		Symbol	Value			Conditions
			Min.	Typ.	Max.	
Input	Forward voltage	V_F	-	1.1V	1.3V	$I_F=5\text{mA}$
	Reverse current	I_R	-	-	$10\mu\text{A}$	$V_R=5\text{V}$
	Peak Wavelength	λ_p	-	940nm	-	-
Output	Collector current	I_C	$50\mu\text{A}$	$650\mu\text{A}$	-	$I_F=5\text{mA}, V_{CE}=5\text{V}$
	Collector dark current	I_D	-	-	100nA	$V_{CE}=10\text{V}$
	Collector-emitter saturation voltage	$V_{CE(sat)}$	-	0.1V	0.4V	$I_C=50\mu\text{A}, I_F=20\text{mA}$
	Peak spectral sensitivity wavelength	λ_p	-	920nm	-	-
Rise time		t_r	-	$8\mu\text{sec}$	-	$V_{CC}=5\text{V}, R_L=1\text{K}\Omega, I_C=100\mu\text{A}$
Fall time		t_f	-	$10\mu\text{sec}$	-	



Fig.1 Forward Current vs. Forward Voltage(Typical)

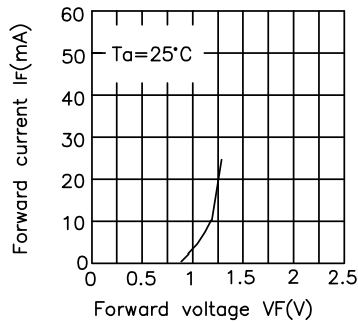


Fig.2 Collector Current vs. Forward Current

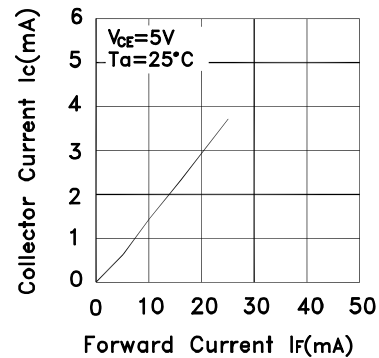


Fig.3 Collector Current vs. Ambient Temperature

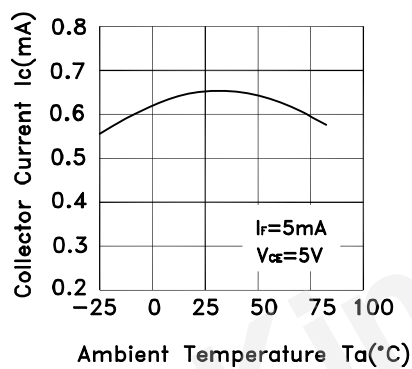


Fig.4 Collector-Emitter Saturation Voltage vs. Ambient Temperature

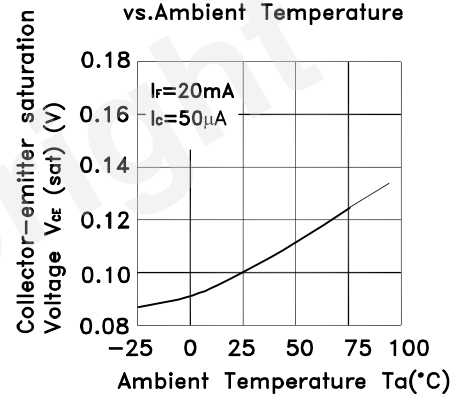


Fig.5 Forward Current vs. Collector Dissipation Temperature Rating (Typical)

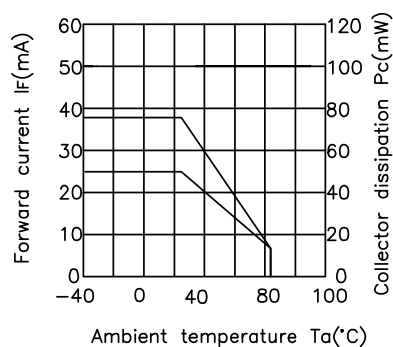


Fig.6 Collector Current vs. Collector-Emitter Voltage (Typical)

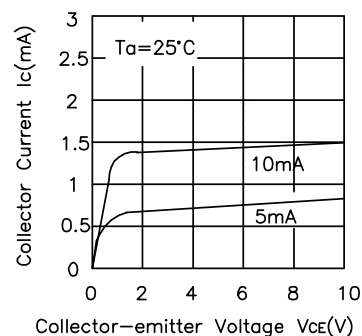


Fig.7 Relative Collector Current vs. Shield Distance(1) (Typical)

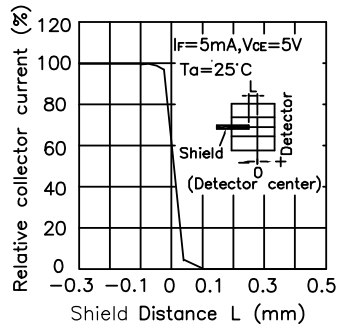


Fig.8 Relative Collector Current vs. Shield Distance(2) (Typical)

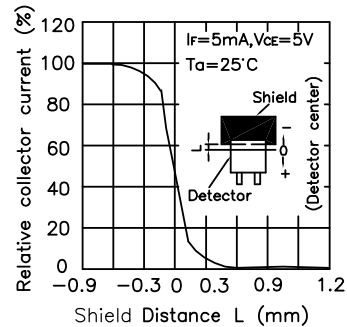
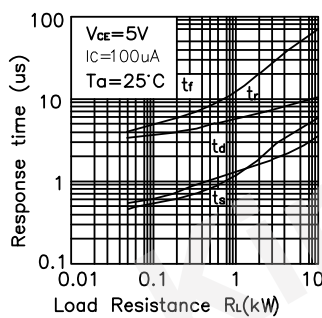
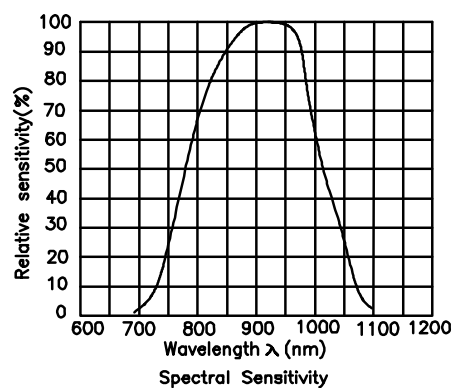
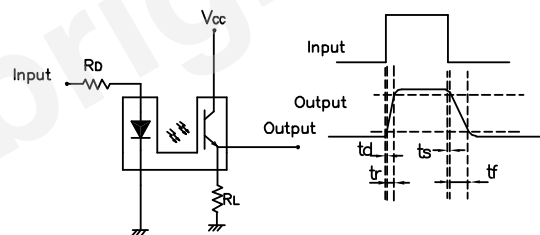
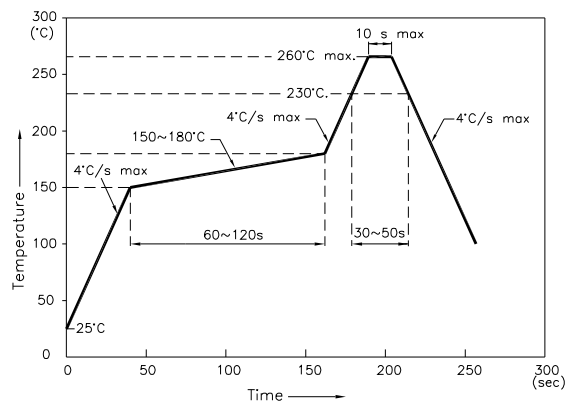


Fig.9 Response Time. vs Load Resistance(Typical)



Test Circuit for Response Time





1. We recommend the reflow temperature 245°C(+/-5°C).The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

Technical drawing of a 4-spoke wheel with dimensions in mm. The drawing includes a top view and a side view.

Top View Dimensions:

- Central bore diameter: $\varnothing 99.5 [3.917] \pm 0.5$
- Central hub diameter: $\varnothing 149.72 [-0.0]$
- Central hub thickness: $32 [1.26]$
- Central hub width: $70 [2.758]$
- Central hub depth: $30 [1.182]$

Side View Dimensions:

- Total width: 30 TYP.
- Central hub thickness: $16 [.63] \pm 0.0$

Technical drawing of a tape reel showing dimensions and internal circuit details.

Dimensions:

- Overall width: 16 ± 0.3
- Top flange width: 7.5 ± 0.1
- Top flange thickness: 1.75 ± 0.1
- Top flange hole diameter: 2.0 ± 0.1
- Top flange hole spacing: 4.0 ± 0.1
- Top flange hole diameter: 12.0 ± 0.1
- Top flange hole diameter: $\varnothing 1.55 \pm 0.1$
- Top flange hole diameter: 0.4 ± 0.1
- Top flange hole diameter: 4.25 ± 0.1
- Top flange hole diameter: 4.25 ± 0.1
- Bottom flange width: 5.3 ± 0.1

Internal circuit details:

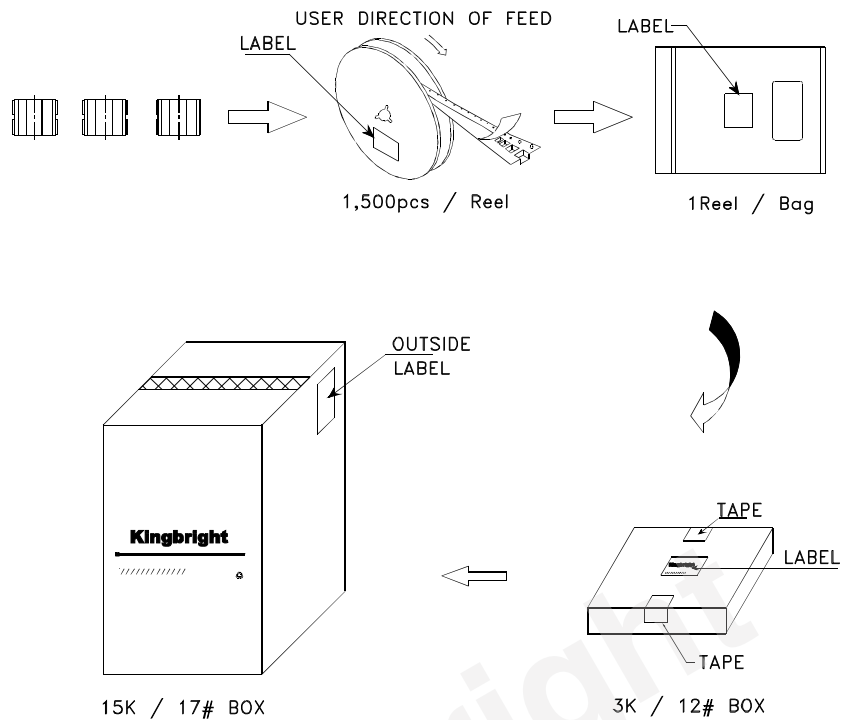
- Internal circuit diagram showing connections E, K, C, and A.
- Internal circuit diagram showing connections E, K, C, and A.
- Internal circuit diagram showing connections E, K, C, and A.
- Internal circuit diagram showing connections E, K, C, and A.


Other information:

- Tape quantity 1500pcs/reel
- $\varnothing 1.58$ Typ.

PACKING & LABEL SPECIFICATIONS

KRB011



Kingbright	
P/NO: KRB011	
QTY: 1,500 pcs	Q.C. Q C XX XX XXXX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
	
RoHS Compliant	

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