

ARB011

Photointerrupter - Transmissive Type

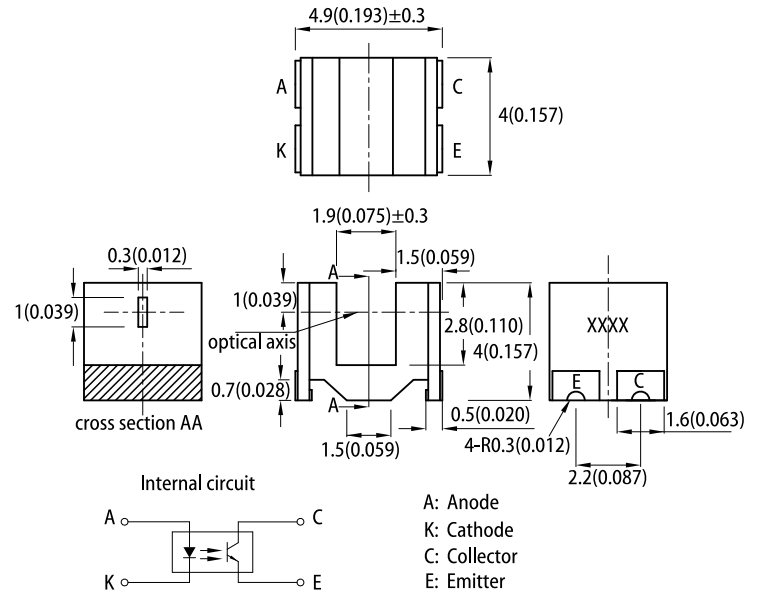
FEATURES

- Ultra-compact
- High sensing accuracy (Slit width: 0.3mm)
- Gap between light emitter and detector: 1.9mm
- Moisture sensitivity level: 4
- Package: 1500 pcs / reel
- RoHS compliant

APPLICATIONS

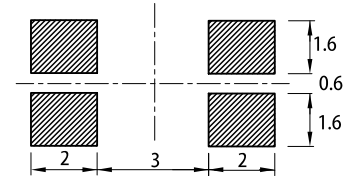
- Floppy disk drives, Camera
- Various microcomputerized control equipment

PACKAGE DIMENSIONS



RECOMMENDED SOLDERING PATTERN

(units : mm; tolerance : ± 0.15)



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.15(0.006")$ unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.

ELECTRICAL / OPTICAL CHARACTERISTICS at $T_A=25^\circ\text{C}$

Parameter		Symbol	Value			Unit	Conditions
			Min.	Typ.	Max.		
Input	Forward voltage	V_F	-	1.1	1.3	V	$I_F=5\text{mA}$
	Reverse current	I_R	-	-	10	μA	$V_R=5\text{V}$
Output	Collector current	I_C	50	650	-	μA	$I_F=5\text{mA}, V_{CE}=5\text{V}$
	Collector dark current	I_D	-	-	100	nA	$V_{CE}=10\text{V}, 0\text{LX}$
	Collector-emitter saturation voltage	$V_{CE(sat)}$	-	0.1	0.4	V	$I_C=50\mu\text{A}, I_F=20\text{mA}$
Rise time		t_r	-	8	-	μs	$V_{CE}=5\text{V}, R_L=1\text{K}\Omega, I_C=100\mu\text{A}$
Fall time		t_f	-	10	-		

Note:

1. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

ABSOLUTE MAXIMUM RATINGS at $T_A=25^{\circ}\text{C}$

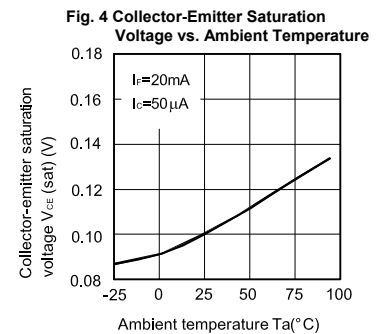
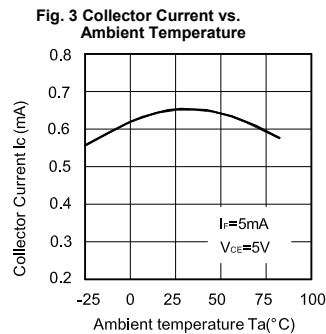
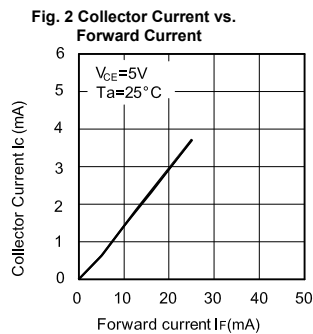
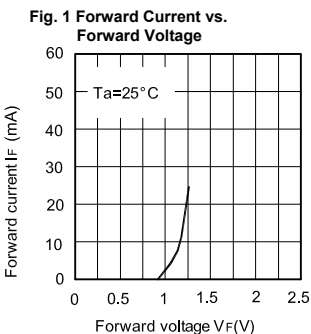
Parameter		Symbol	Rating	Unit
Input	Forward current ^[1]	I_F	25	mA
	Reverse voltage	V_R	5	V
	Power dissipation	P_D	35	mW
Output	Collector-emitter voltage	V_{CEO}	20	V
	Emitter-collector voltage	V_{ECO}	5	V
	Collector current	I_C	20	mA
	Collector power dissipation	P_C	75	mW
Operating temperature		T_{opr}	-30~+85	$^{\circ}\text{C}$
Storage temperature		T_{stg}	-40~+90	$^{\circ}\text{C}$
Manual soldering ^[2]		T_{sol}	300	$^{\circ}\text{C}$

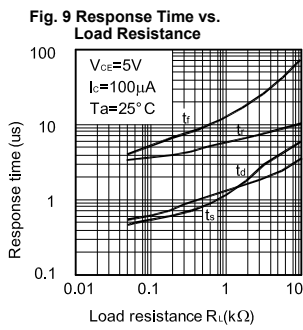
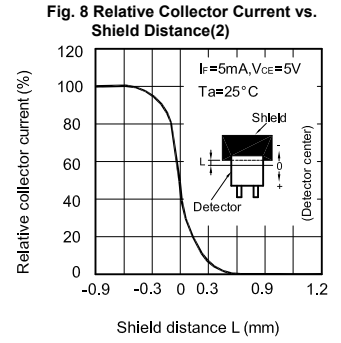
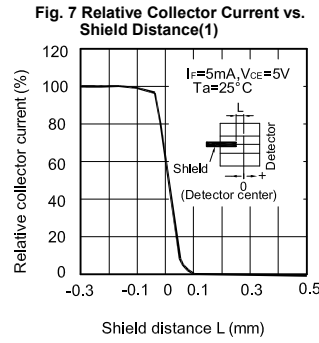
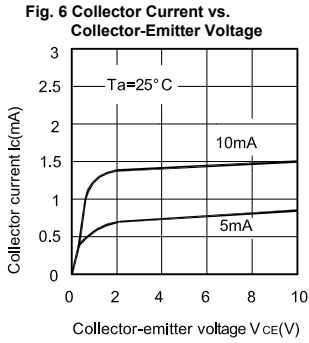
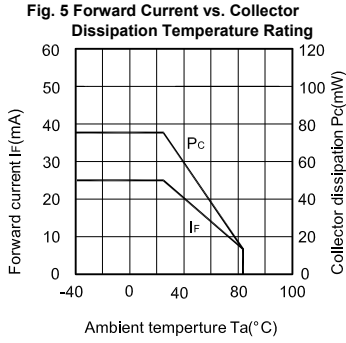
Notes:

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

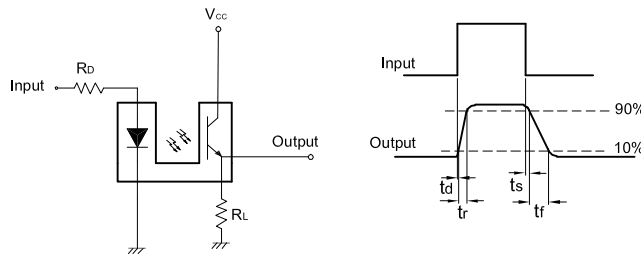
2. Complete soldering within 3 seconds.

3. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

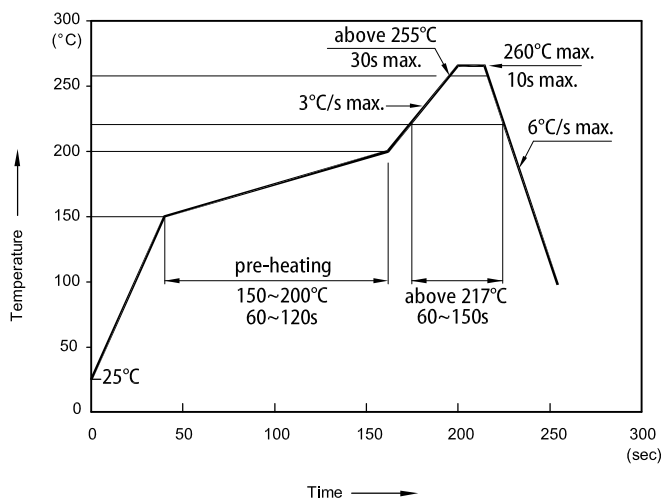
TECHNICAL DATA



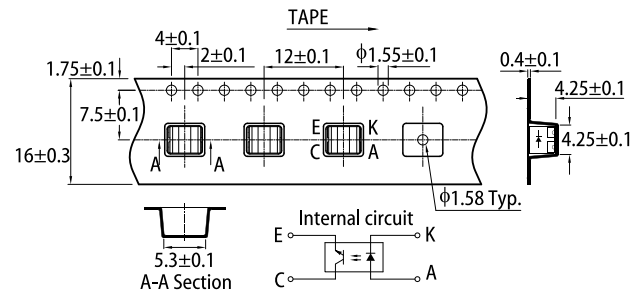
Test Circuit for Response Time



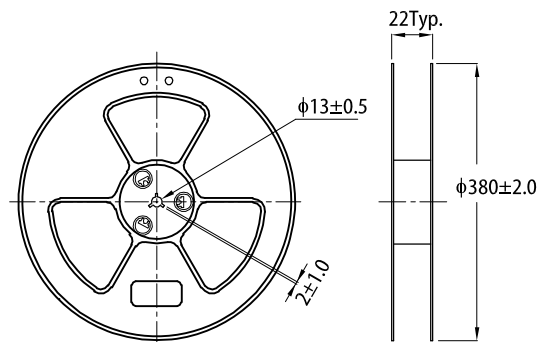
REFLOW SOLDERING PROFILE for LEAD-FREE SMD PROCESS



TAPE SPECIFICATIONS (units : mm)



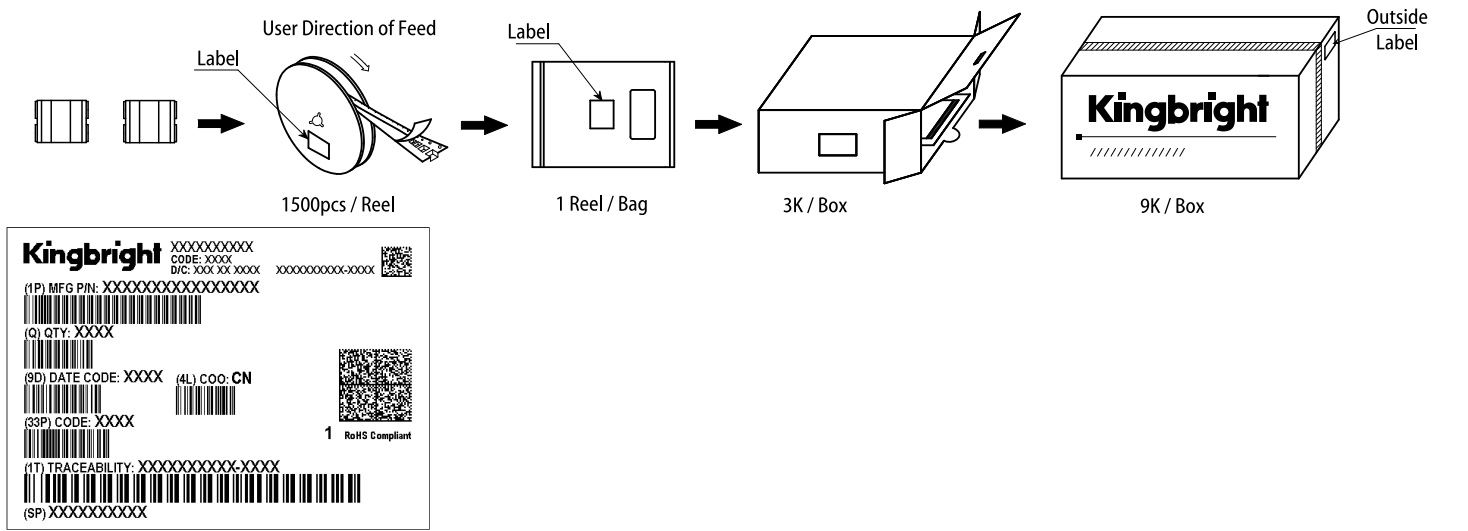
REEL DIMENSION (units : mm)



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.

PACKING & LABEL SPECIFICATIONS



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