















# SURFACE MOUNT DEVICE LED

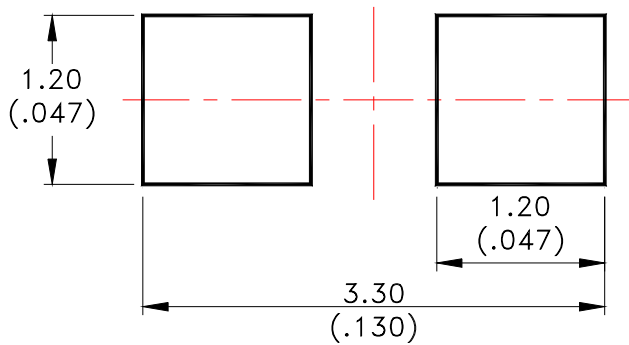
Part No. : 0805KRCT

REV:A / 0

## ● Cleaning

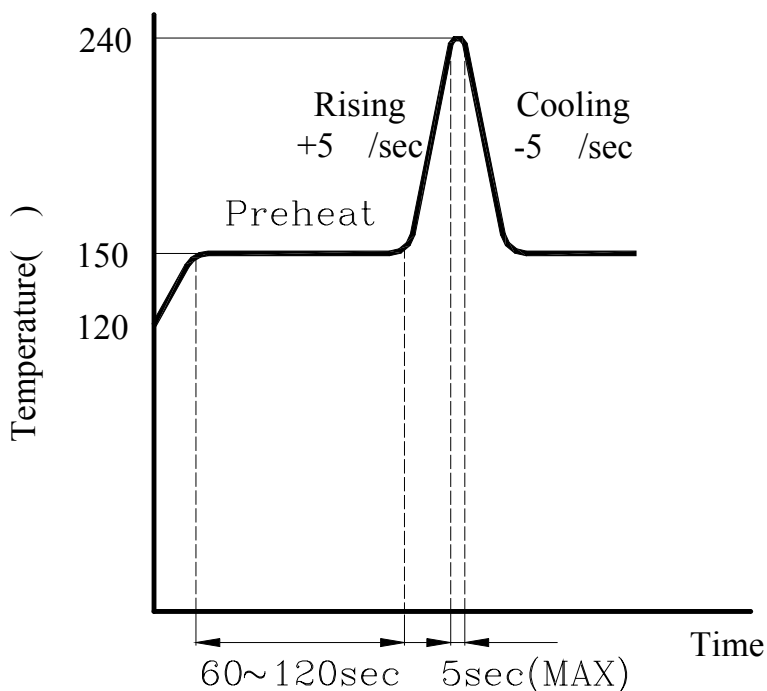
- \* If cleaning is required , use the following solutions for less than 1 minute and less than 40 .
- \* Appropriate chemicals: Ethyl alcohol and isopropyl alcohol.
- \* Effect of ultrasonic cleaning on the LED resin body differs depending on such factors as the oscillator output, size of PCB and LED mounting method. The use of ultrasonic cleaning should be enforced at proper output after confirming there is no problem.

## ● Suggest Soldering Pad Dimensions



Direction of PWB camber  
and go to reflow furnace

## ● Suggest IR Reflow Soldering Profile Condition:





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## ● Bin Code List

Luminous Intensity(IV), Unit:mcd@20mA		
Bin Code	Min	Max
L	100	145

Including test tolerance

## ● CAUTIONS

### 1.Application Limitation :

The LED's described here are intended to be used for ordinary electronic equipment (such as office equipment, communication equipment and household application).Consult HB's sales in advance for information on application in which exceptional quality and reliability are required, particularly when the failure or malfunction of the LED's may directly jeopardize life or health (such as airplanes, automobiles, traffic control equipment, life support system and safety devices).

### 2.Storage :

Before opening the package :

The LEDs should be kept at 30°C or less and 85%RH or less. The LEDs should be used within a year.

After opening the package :

The LEDs should be kept at 30°C or less and 70%RH or less. The LEDs should be soldered within 168 hours(7 days) after opening the package.

Please avoid rapid transitions in ambient temperature in high humidity environments where condensation may occur.

### 3.Soldering

Do not apply any stress to the lead frame during soldering while the LED is at high temperature. Recommended soldering condition.

Reflow Soldering :

Pre-heat 120~150°C, 120sec. MAX., Peak temperature : 240°C Max. Soldering time : 10 sec Max.

Soldering Iron : (Not recommended)

Temperature 300°C Max., Soldering time : 3 sec. Max.(one time only), power dissipation of iron : 20W Max. use SN60 solder of solder with silver content and don't to touch LED lens when soldering.

Wave soldering :

Pre-heat 100°C Max, Pre-heat time 60 sec. Max, Solder wave 260°C Max, Soldering time 5 sec. Max. preformed consecutively cooling process is required between 1<sup>st</sup> and 2<sup>nd</sup> soldering processes.

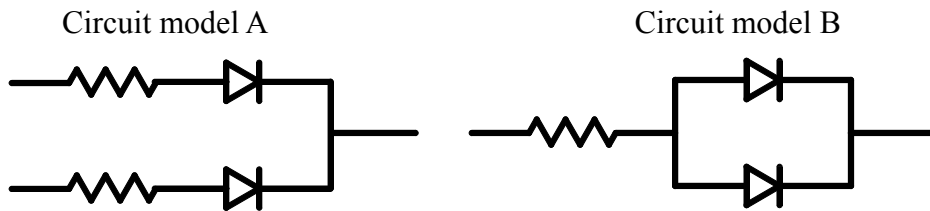


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## 4. Drive Method



(A) Recommended circuit.

(B) The difference of brightness between LED's could be found due to the Vf-If characteristics of LED.

## 5. Reliability Test

Classification	Test Item	Test Condition	Reference Standard
Endurance Test	Operation Life	Ta= Under Room Temperature As Per Data Sheet Maximum Rating *Test Time= 1000HRS (-24HRS,+72HRS)*@20mA.	MIL-STD-750D:1026 (1995) MIL-STD-883D:1005 (1991) JIS C 7021:B-1 (1982)
	High Temperature High Humidity Storage	IR-Reflow In-Board, 2 Times Ta= 65±5 ,RH= 90 ~ 95% *Test Time= 1000HRS±2HRS	MIL-STD-202F:103B(1980) JIS C 7021:B-11(1982)
	High Temperature Storage	Ta= 105±5 Test Time= 1000HRS (-24HRS,72HRS)	MIL-STD-883D:1008 (1991) JIS C 7021:B-10 (1982)
	Low Temperature Storage	Ta= -55±5 *Test Time=1000HRS (-24HRS,72HRS)	JIS C 7021:B-12 (1982)
Environmental Test	Temperature Cycling	105±5      -55±5 10mins    10mins    100    Cycles	MIL-STD-202F:107D (1980) MIL-STD-750D:1051(1995) MIL-STD-883D:1010 (1991) JIS C 7021:A-4(1982)
	Thermal Shock	IR-Reflow In-Board, 2 Times 105±5      -55 ±5 10mins    10mins    100    Cycles	MIL-STD-202F:107D(1980) MIL-STD-750D:1051(1995) MIL-STD-883D:1011 (1991)
	Solder Resistance	Tsol= 260 ± 5 Dwell Time= 10 ± 1sec	MIL-STD-202F:210A(1980) MIL-STD-750D:2031(1995) JIS C 7021:A-1(1982)
	Solder ability	Tsol= 235 ± 5 Immersion time 2±0.5 sec Immersion rate 25±2.5 mm/sec Coverage    95% of the dipped surface	MIL-STD-202F:208D(1980) MIL-STD-750D:2026(1995) MIL-STD-883D:2003(1991) IEC 68 Part 2-20 JIS C 7021:A-2(1982)

## 6. Others:

The appearance and specifications of the product may be modified for improvement without notice.