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1.6X0.8mm SMD CHIP LED LAMP

Part Number: KPT-1608EC   High Efficiency Red

Features

● 1.6mmX0.8mm SMT LED, 0.75mm thickness.

● Low power consumption.

● Wide viewing angle.

● Ideal for backlight and indicator.

● Various colors and lens types available.

● Package: 2000pcs / reel .

● Moisture sensitivity level : level 3.

● RoHS compliant.

Description

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

Package Dimensions
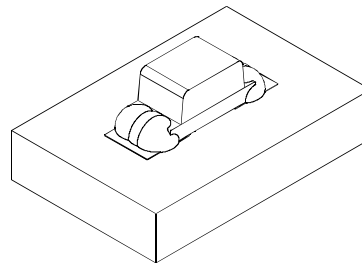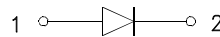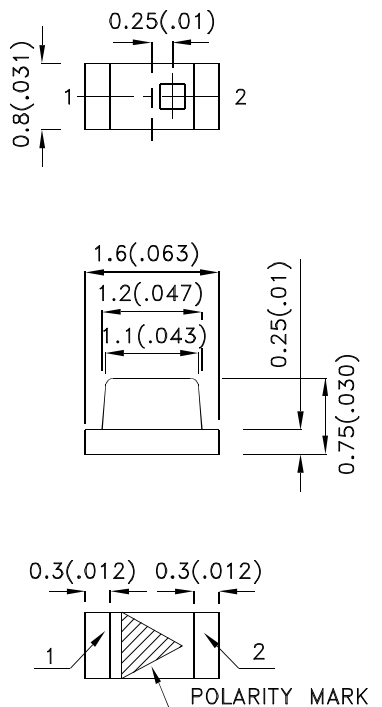
Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.1(0.004") unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.

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Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA Min.	Iv (mcd) [2] @ 20mA Typ.	Viewing Angle [1] 2θ1/2
KPT-1608EC	High Efficiency Red (GaAsP/GaP)	Water Clear	8	15	120°
			*3	*8	

Notes:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Luminous intensity/ luminous Flux: +/-15%.
 * Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

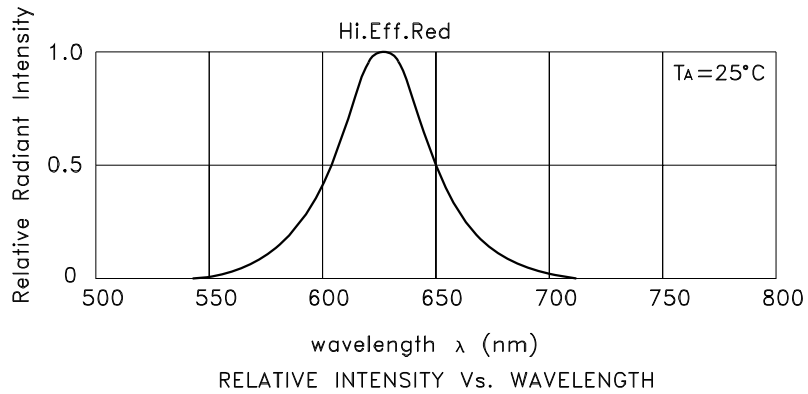| Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	High Efficiency Red	627		nm	I_F=20mA
λD [1]	Dominant Wavelength	High Efficiency Red	617		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	High Efficiency Red	45		nm	I_F=20mA
C	Capacitance	High Efficiency Red	15		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	High Efficiency Red	2	2.5	V	I_F=20mA
I_R	Reverse Current	High Efficiency Red		10	uA	V_R=5V

Notes:
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.
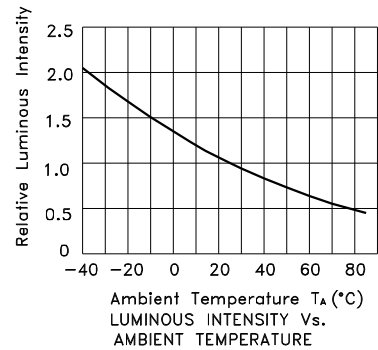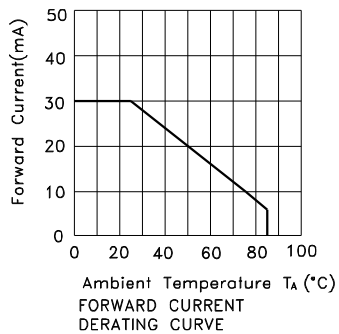
Absolute Maximum Ratings at TA=25°C

Parameter	High Efficiency Red	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	160	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

Note:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

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RELATIVE INTENSITY Vs. WAVELENGTH

High Efficiency Red   KPT-1608EC

FORWARD CURRENT Vs.
FORWARD VOLTAGE

LUMINOUS INTENSITY Vs.
FORWARD CURRENT

FORWARD CURRENT
DERATING CURVE

LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

SPATIAL DISTRIBUTION

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KPT-1608EC

Reflow soldering is recommended and the soldering profile is shown below.
**Other soldering methods are not recommended as they might cause damage to the product.**
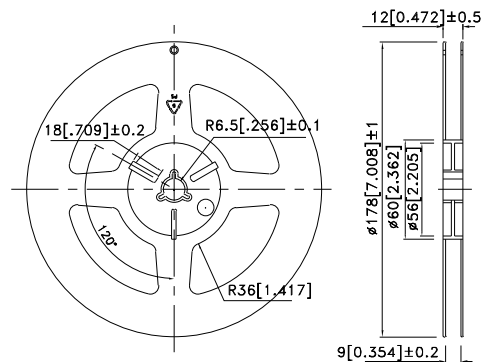
Reflow Soldering Profile For Lead-free SMT Process.

NOTES:
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.
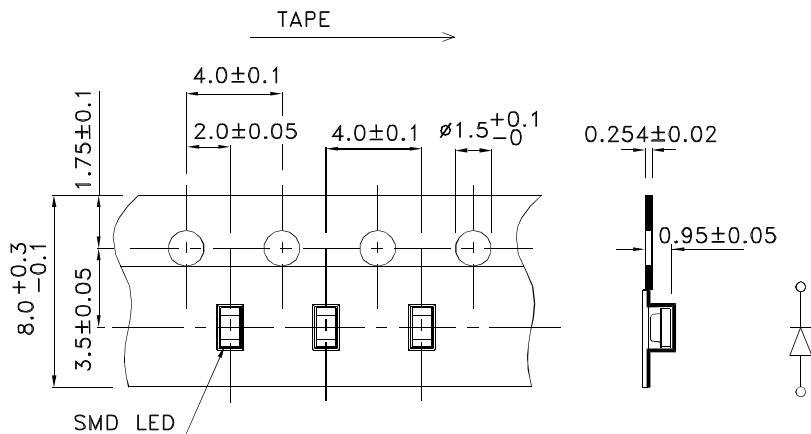3. Number of reflow process shall be 2 times or less.

Recommended Soldering Pattern
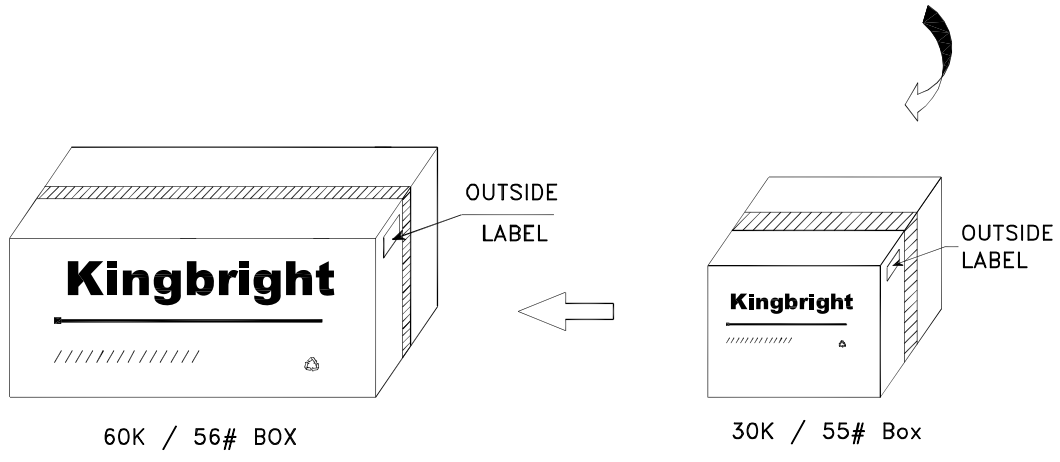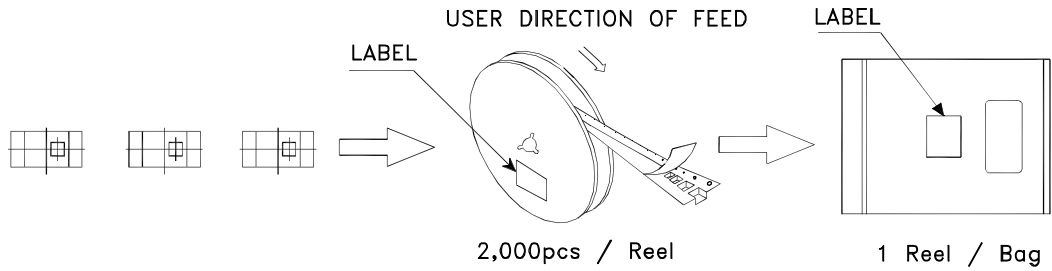### (Units : mm; Tolerance: ± 0.1)
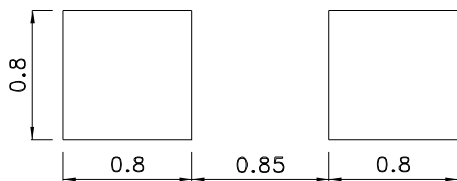
Reel Dimension

Tape Dimensions
(Units : mm)

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PACKING & LABEL SPECIFICATIONS   **KPT-1608EC**

USER DIRECTION OF FEED

LABEL   LABEL

2,000pcs / Reel   1 Reel / Bag

OUTSIDE LABEL

OUTSIDE LABEL

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60K / 56# BOX   30K / 55# Box

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P/NO: KPT-1608xxx

QTY: 2,000 pcs   Q.C.

Q C
XX XX XXXX
PASSED

S/N: XXXX

CODE: XXX

LOT NO:

xxxxxxxxxxxxxxxxxxxxxxxxx

RoHS Compliant

Detailed application notes are listed on our website.
http://www.kingbright.com/application_notes