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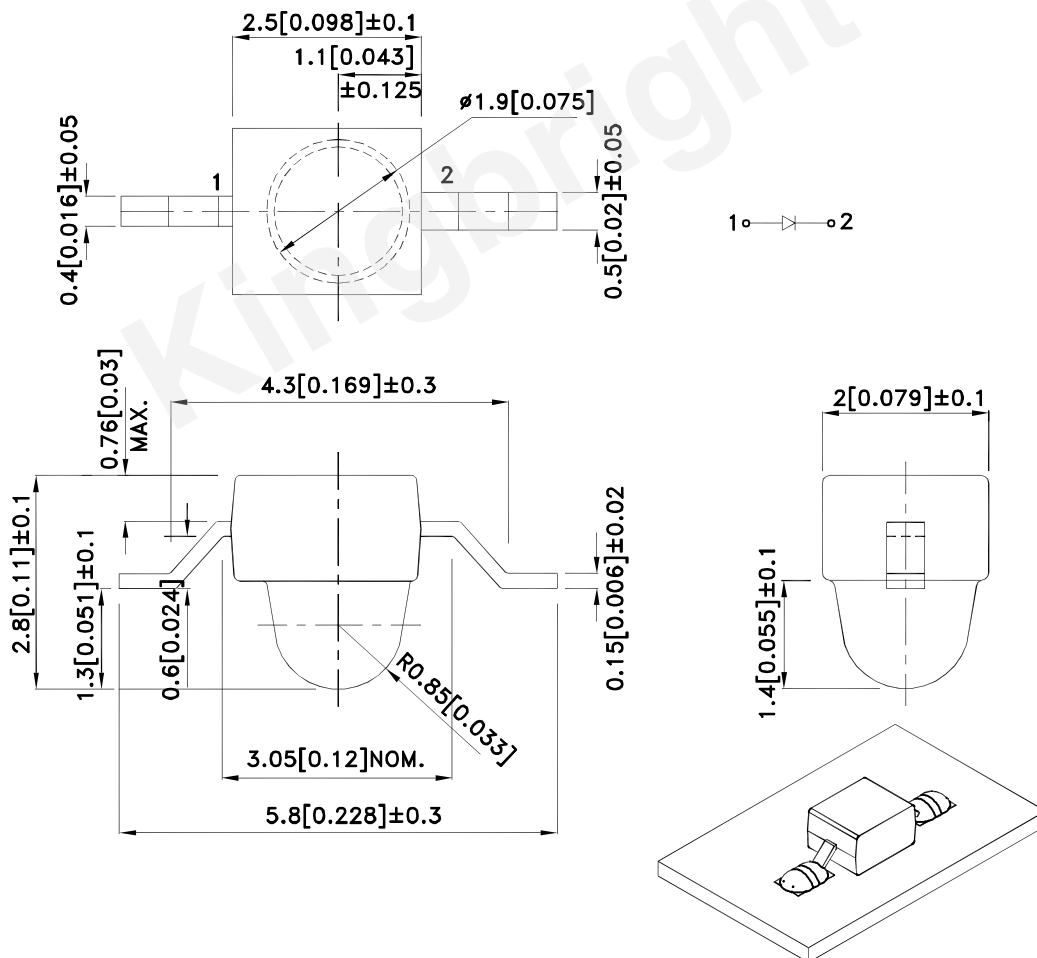Part Number: KM2520SURCK09   Hyper Red

Features

- Subminiature package.
- Z-bend lead.
- Long life - solid state reliability.
- Low package profile.
- Moisture sensitivity level : level 3.
- Package : 1000pcs / reel.
- RoHS compliant.

Description

The Hyper Red source color devices are made with Al-GaInP on GaAs substrate Light Emitting Diode.

Package Dimensions

Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
5. 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		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KM2520SURCK09	Hyper Red (AlGaInP)	Water Clear	1500	2400	20°
			*500	*1000	

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	Hyper Red	645		nm	IF=20mA
λD [1]	Dominant Wavelength	Hyper Red	630		nm	IF=20mA
$\Delta\lambda$1/2	Spectral Line Half-width	Hyper Red	28		nm	IF=20mA
C	Capacitance	Hyper Red	35		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Hyper Red	1.95	2.5	V	IF=20mA
IR	Reverse Current	Hyper Red		10	uA	VR=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

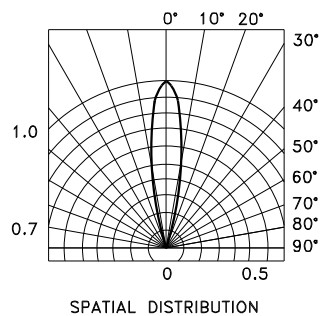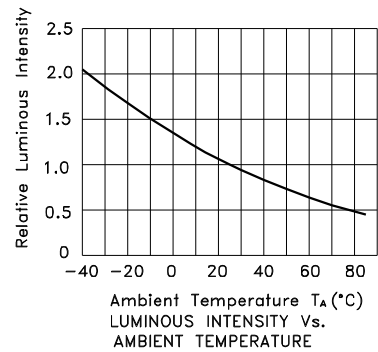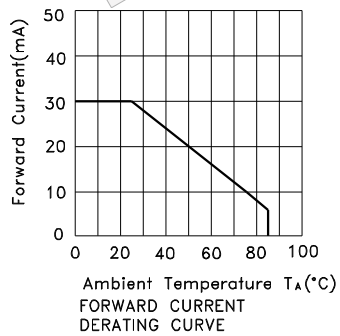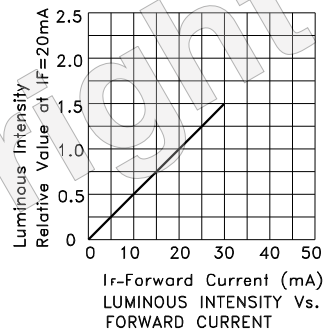| Parameter	Hyper Red	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	185	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

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

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Relative Radiant Intensity vs. **wavelength λ (nm)**

SURK
Ta=25°C

RELATIVE INTENSITY Vs. WAVELENGTH

Hyper Red   **KM2520SURCK09**

Forward Current(mA) vs. Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE

Luminous Intensity Relative Value at IF=20mA vs. Ir-Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT

Forward Current(mA) vs. Ambient Temperature TA(°C)
FORWARD CURRENT
DERATING CURVE

Relative Luminous Intensity vs. Ambient Temperature TA(°C)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

SPATIAL DISTRIBUTION

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KM2520SURCK09

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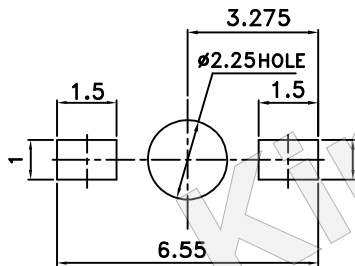**Other soldering methods are not recommended as they might cause damage to the product.**
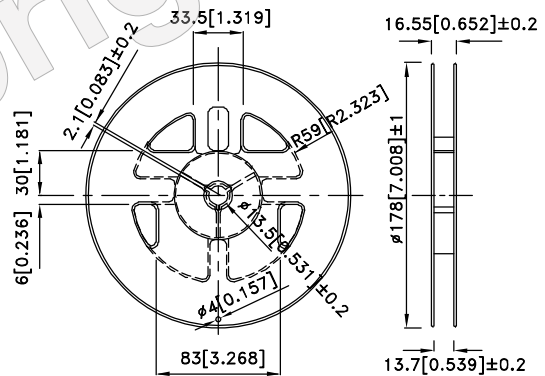
Reflow Soldering Profile For Lead-free SMT Process.

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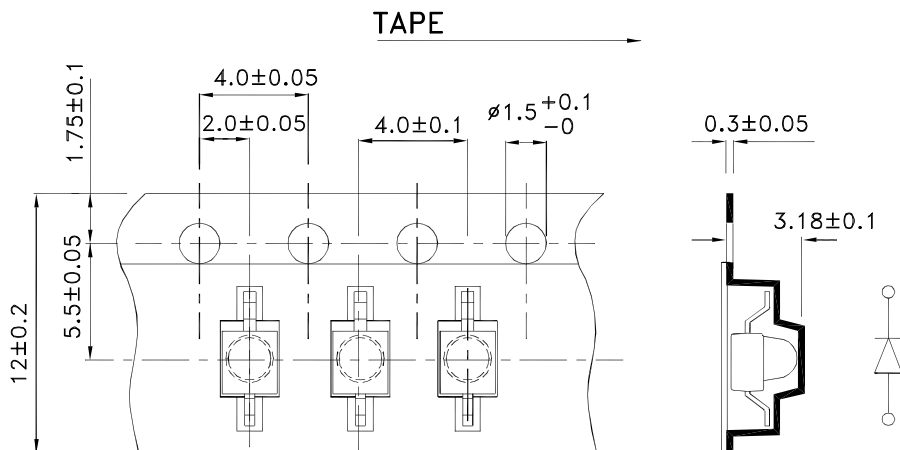3. Number of reflow process shall be 2 times or less.

Recommended Soldering Pattern
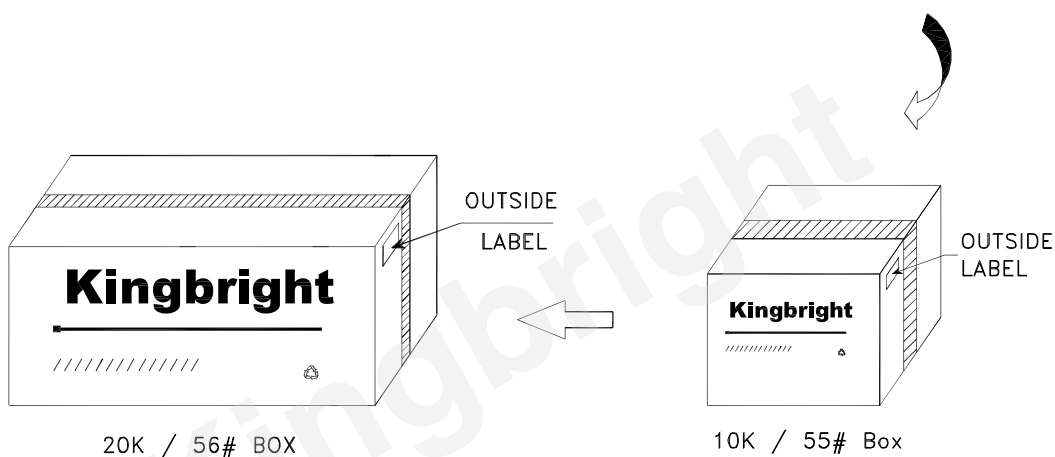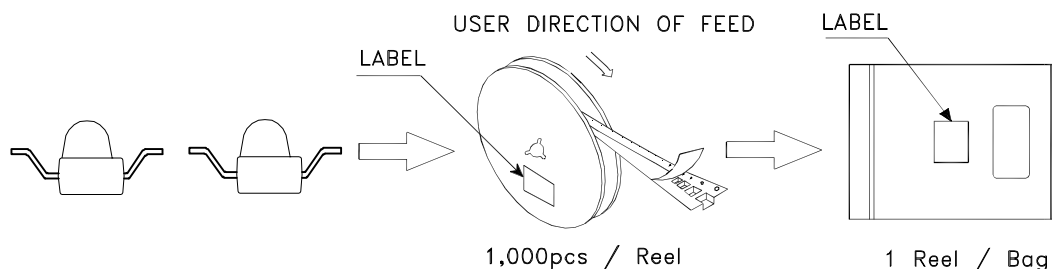**(Units : mm; Tolerance: ± 0.1)**

Reel Dimension

Tape Dimensions
(Units : mm)

TAPE

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USER DIRECTION OF FEED

LABEL   LABEL

1,000pcs / Reel   1 Reel / Bag

OUTSIDE LABEL

OUTSIDE LABEL

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20K / 56# BOX   10K / 55# Box

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P/NO: KM2520xxx09

QTY: 1,000 pcs   Q.C.   Q C
S/N: XXXX   XX XX XXXX
CODE: XXX   PASSED

LOT NO:

xxxxxxxxxxxxxxxxxxxxxxxx

RoHS Compliant

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