Kingbright

3.0x2.0mm RIGHT ANGLE SMD LED

Part Number: KPDA-3020LVSECK-J3-PF Hyper Red

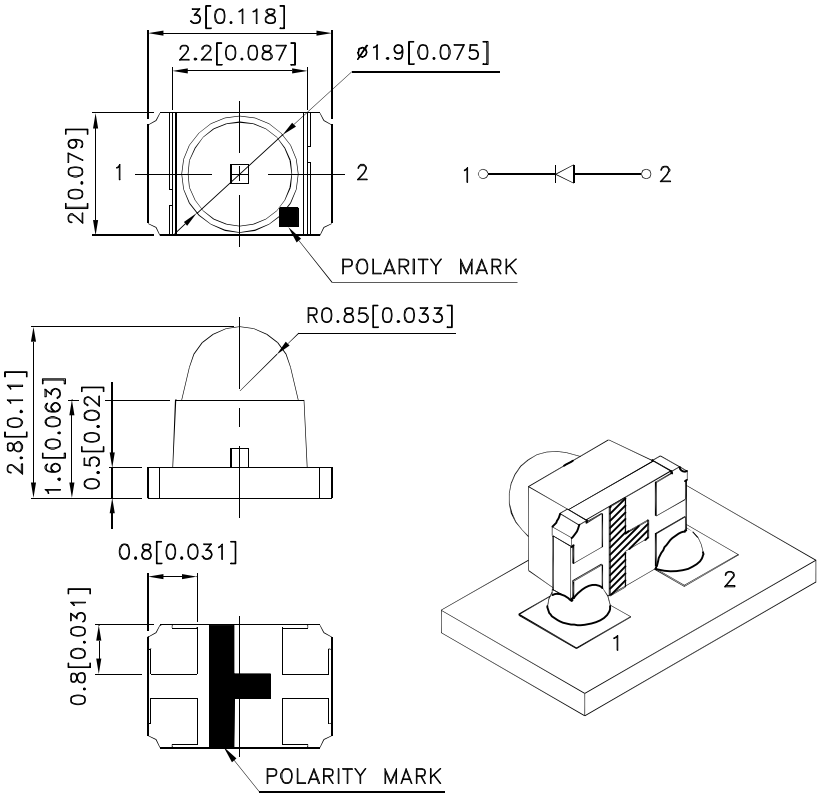
Features

- 3.0mmx2.0mm SMD LED,2.8mm thickness.
- Low power consumption.
- Ideal for back light and indicator
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- Tinned pads for improved solderability.
- Low current IF=2mA operating.
- RoHS compliant.

Description

The Hyper Red device is based on light emitting diode chip made from AlGaInP.

Package Dimensions



Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.2(0.008") 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.

Selection Guide

Part No.	Emitting Color (Material)	Lens Type	Iv (mcd) [2] @ 2mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KPDA-3020LVSECK-J3-PF	Hyper Red (AlGaInP)	Water Clear	700	1000	10°
			*250	*500	

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 CIE127-2007 standards.

Electrical / Optical Characteristics at TA=25°C

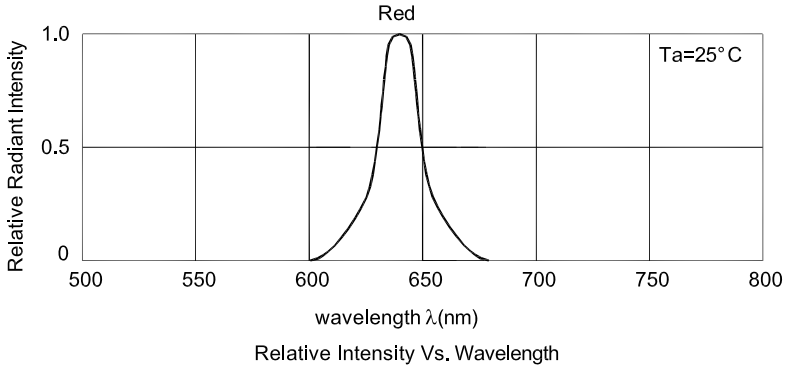
Symbol	Parameter	Emitting Color	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Hyper Red	640		nm	I_F=2mA
λD [1]	Dominant Wavelength	Hyper Red	625		nm	I_F=2mA
Δλ1/2	Spectral Line Half-width	Hyper Red	20		nm	I_F=2mA
C	Capacitance	Hyper Red	27		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	Hyper Red	1.8	2.1	V	I_F=2mA
I_R	Reverse Current	Hyper Red		10	uA	V_R=5V

Notes:
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

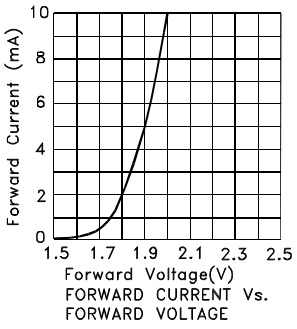
Parameter	Values	Units
Power dissipation	63	mW
DC Forward Current	30	mA
Peak Forward Current [1]	150	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

Notes:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 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.

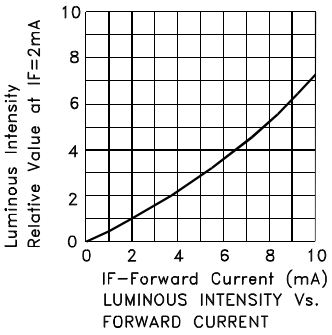


Relative Intensity Vs. Wavelength

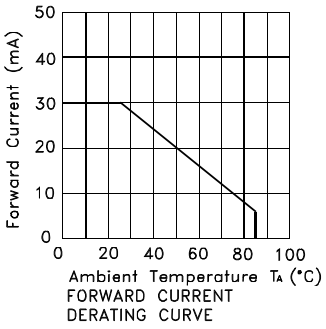
Hyper Red **KPDA-3020LVSECK-J3-PF**



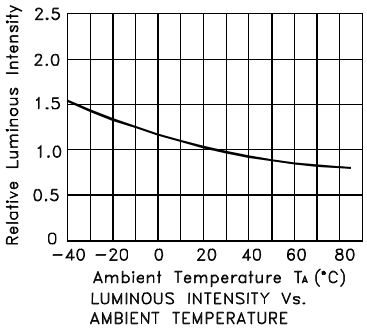
FORWARD CURRENT Vs.
FORWARD VOLTAGE



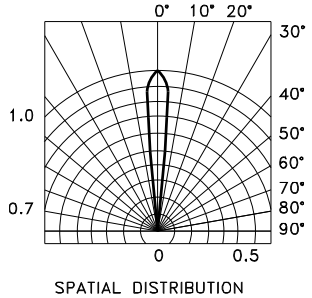
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

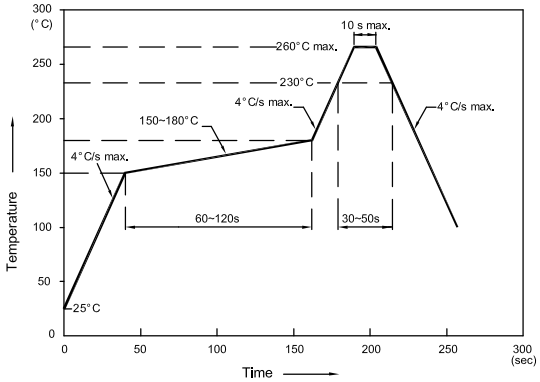


SPATIAL DISTRIBUTION

KPDA-3020LVSECK-J3-PF

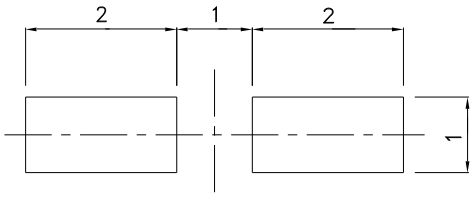
Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.

Reflow Soldering Profile For Lead-free SMT Process.

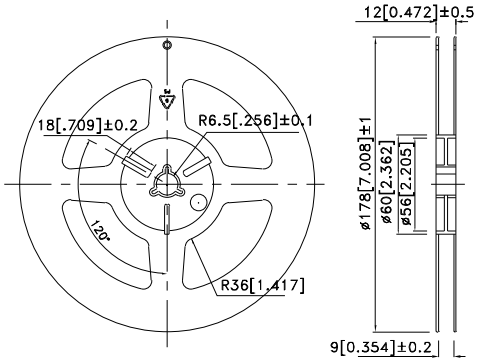


NOTES:
1. We recommend the reflow temperature 245°C(+/-5°C).The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

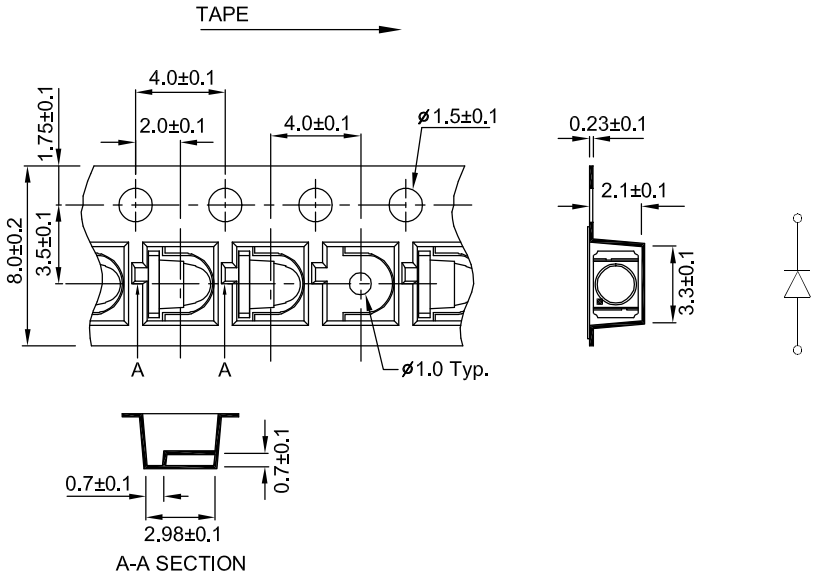
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension



Tape Dimensions (Units : mm)



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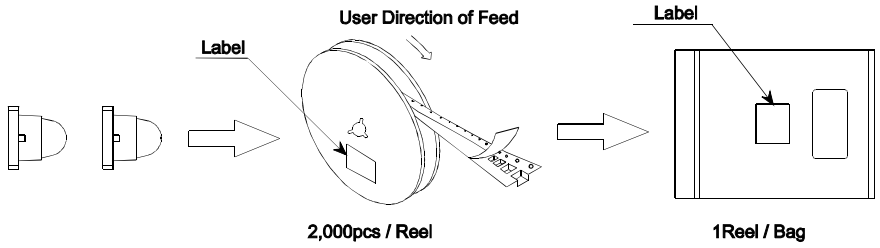
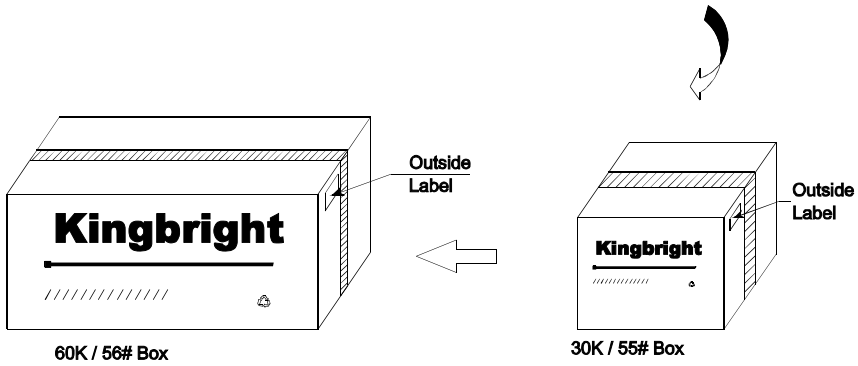
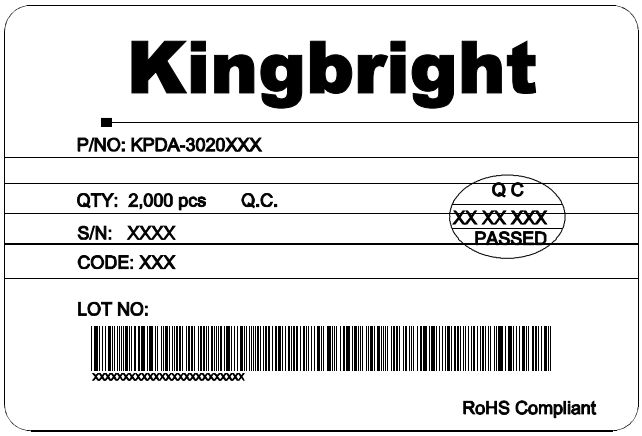
PACKING & LABEL SPECIFICATIONS

KPDA-3020LVSECK-J3-PF







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