Kingbright

SOT-23 SURFACE MOUNT LED LAMP

Part Number: KM-23LSGD

Super Bright Green

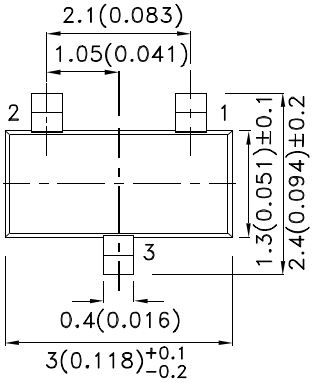
Features

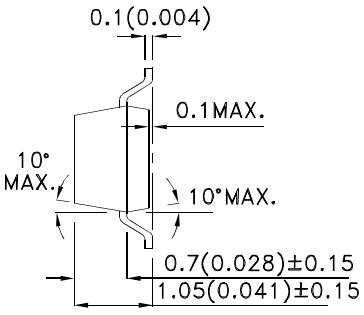
- SOT-23 package surface mount LED lamp.
- Low power consumption.
- Long life - solid state reliability.
- Package: 2000pcs / reel.
- Moisture sensitivity level : level 3.
- Low current IF=2mA operating.
- RoHS compliant.

Description

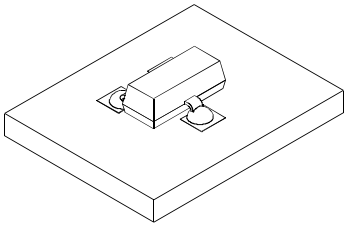
The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

Package Dimensions





1 ANODE
2 N.C.
3 CATHODE



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 lead 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.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 2mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KM-23LSGD	Super Bright Green (GaP)	Green Diffused	0.2	0.4	140°

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%.
3. Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

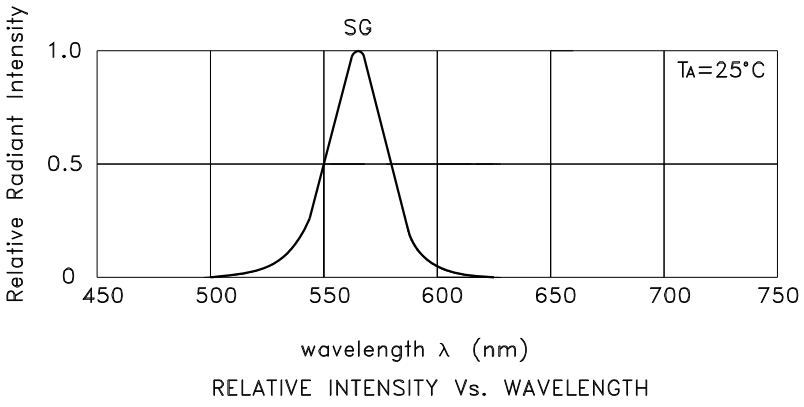
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Super Bright Green	565		nm	I_F=2mA
λD [1]	Dominant Wavelength	Super Bright Green	568		nm	I_F=2mA
Δλ1/2	Spectral Line Half-width	Super Bright Green	30		nm	I_F=2mA
C	Capacitance	Super Bright Green	15		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	Super Bright Green	1.9	2.5	V	I_F=2mA
I_R	Reverse Current	Super Bright Green		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.
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

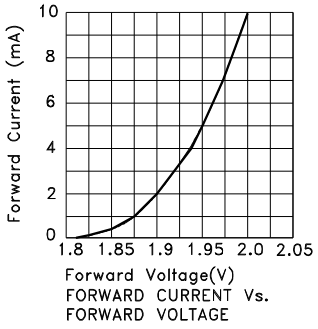
Parameter	Super Bright Green	Units
Power dissipation	62.5	mW
DC Forward Current	25	mA
Peak Forward Current [1]	140	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

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

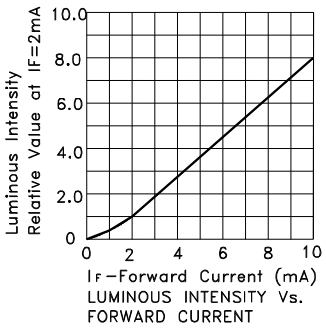


RELATIVE INTENSITY Vs. WAVELENGTH

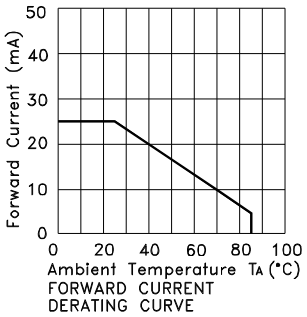
Super Bright Green KM-23LSGD



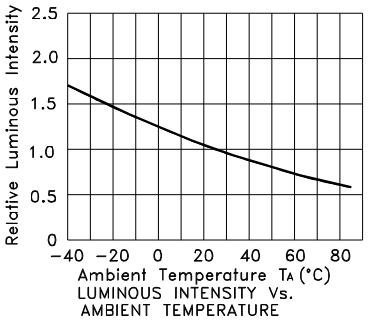
FORWARD CURRENT Vs. FORWARD VOLTAGE



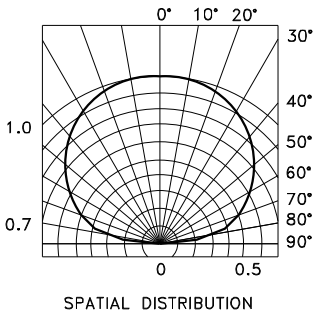
LUMINOUS INTENSITY Vs. FORWARD CURRENT



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

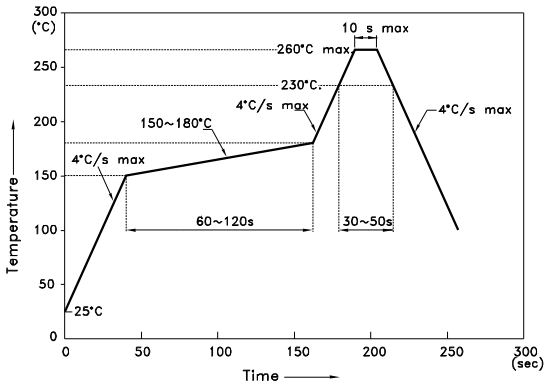


SPATIAL DISTRIBUTION

KM-23LSGD

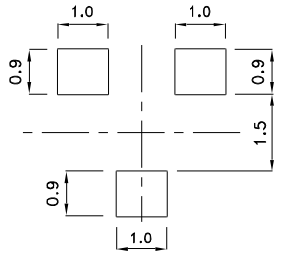
Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.

Reflow Soldering Profile For Lead-free SMT Process.

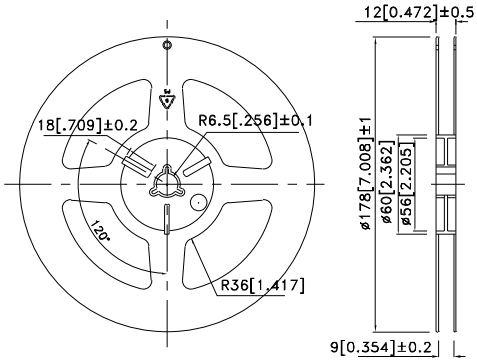


NOTES:
1. We recommend the reflow temperature 245°C(+/-5°C).The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

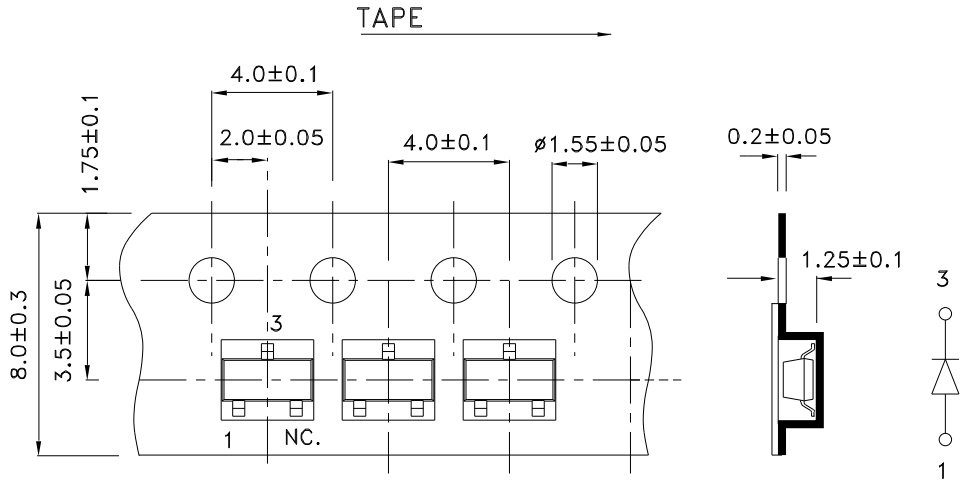
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension



Tape Dimensions (Units : mm)



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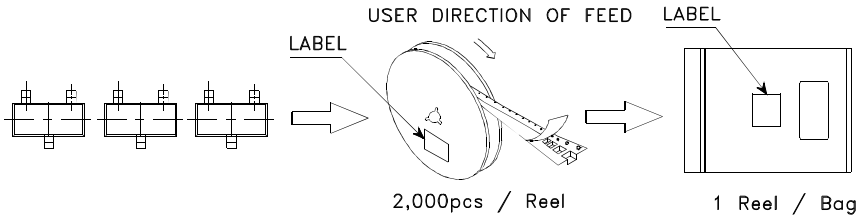
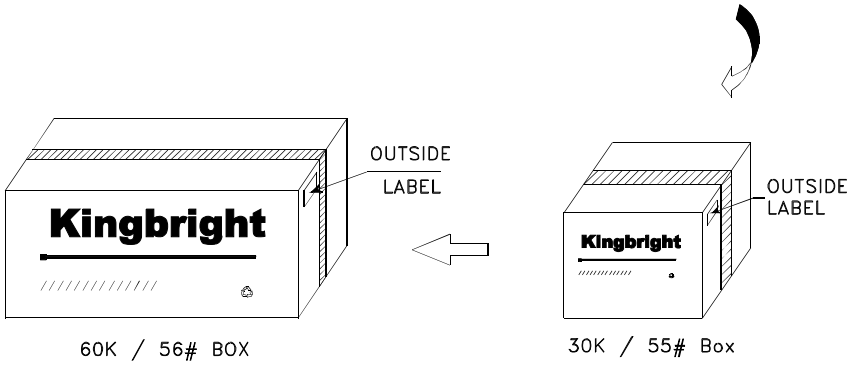
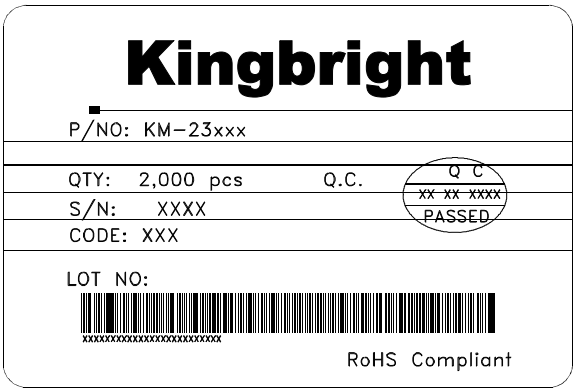
PACKING & LABEL SPECIFICATIONS **KM-23LSGD**







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