Kingbright

SUBMINIATURE SOLID STATE LAMP

Part Number: KM2520EH/1SGD

Super Bright Green

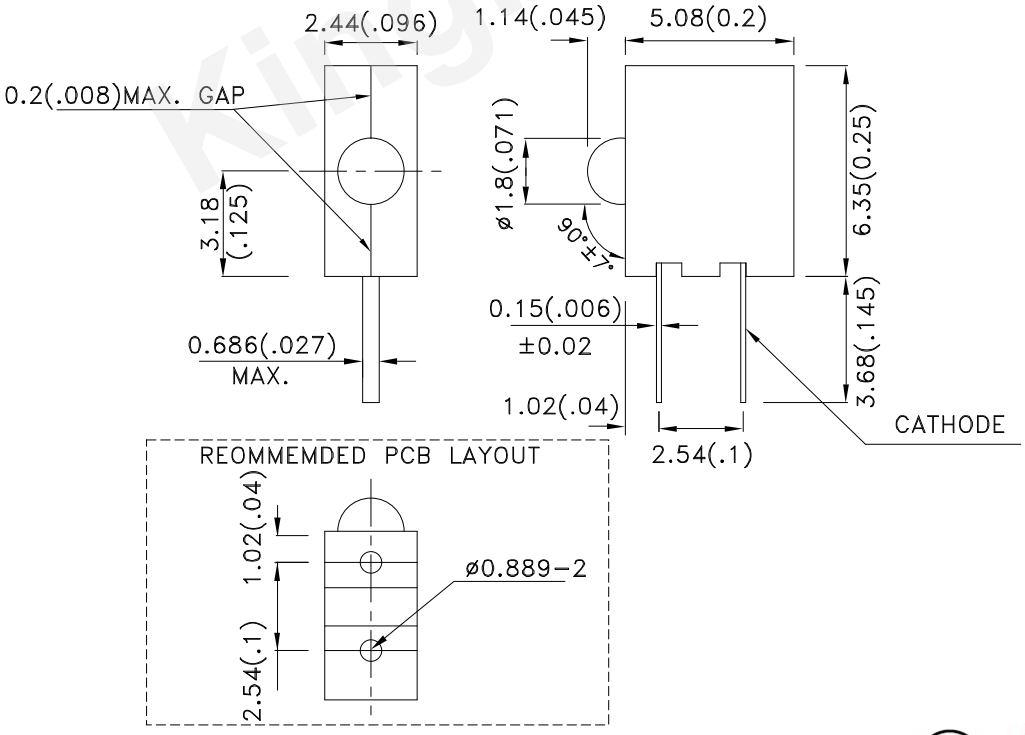
Features

- Black case enhances contrast.
- Vibration and shock resistant.
- Housing UL rating:94V-0.
- Housing material: type 66 nylon.
- RoHS compliant.

Description

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

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
KM2520EH/1SGD	Super Bright Green (GaP)	Green Diffused	5	12	40°

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

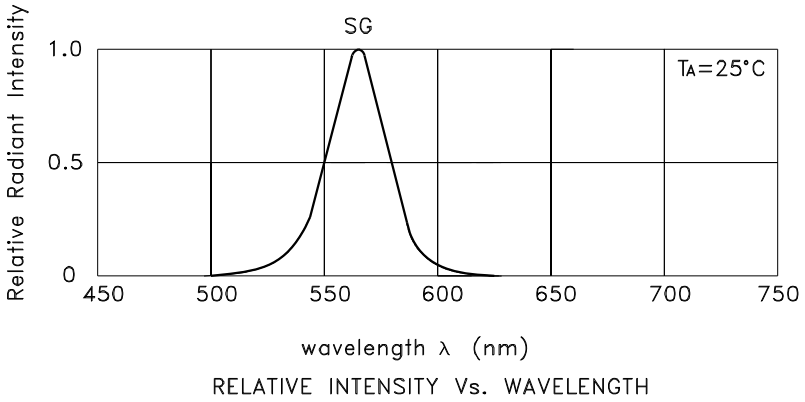
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Super Bright Green	565		nm	I_F=20mA
λD [1]	Dominant Wavelength	Super Bright Green	568		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	Super Bright Green	30		nm	I_F=20mA
C	Capacitance	Super Bright Green	15		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	Super Bright Green	2.2	2.5	V	I_F=20mA
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.

Absolute Maximum Ratings at TA=25°C

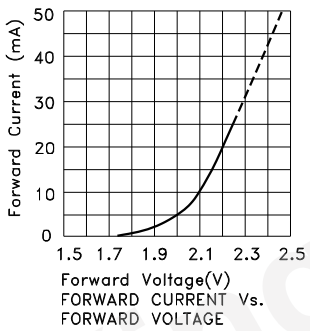
Parameter	Super Bright Green	Units
Power dissipation	62.5	mW
DC Forward Current	25	mA
Peak Forward Current [1]	140	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	
Lead Solder Temperature [2]	260°C For 3 Seconds	
Lead Solder Temperature [3]	260°C For 5 Seconds	

Notes:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.

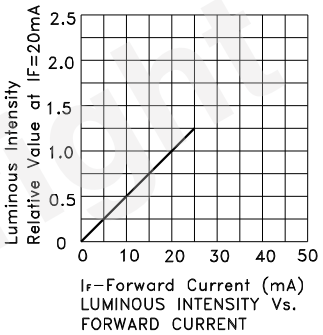


RELATIVE INTENSITY Vs. WAVELENGTH

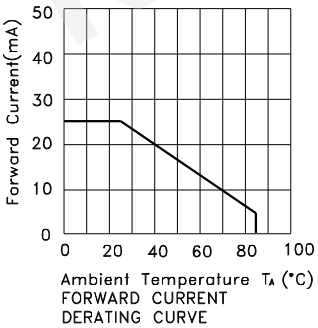
Super Bright Green KM2520EH/1SGD



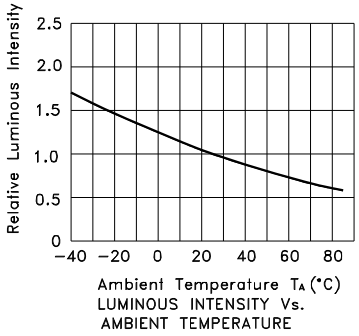
FORWARD CURRENT Vs.
FORWARD VOLTAGE



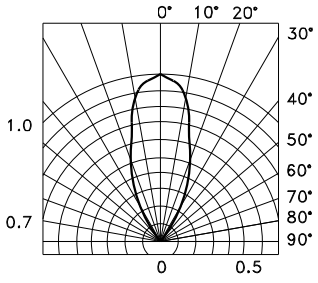
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

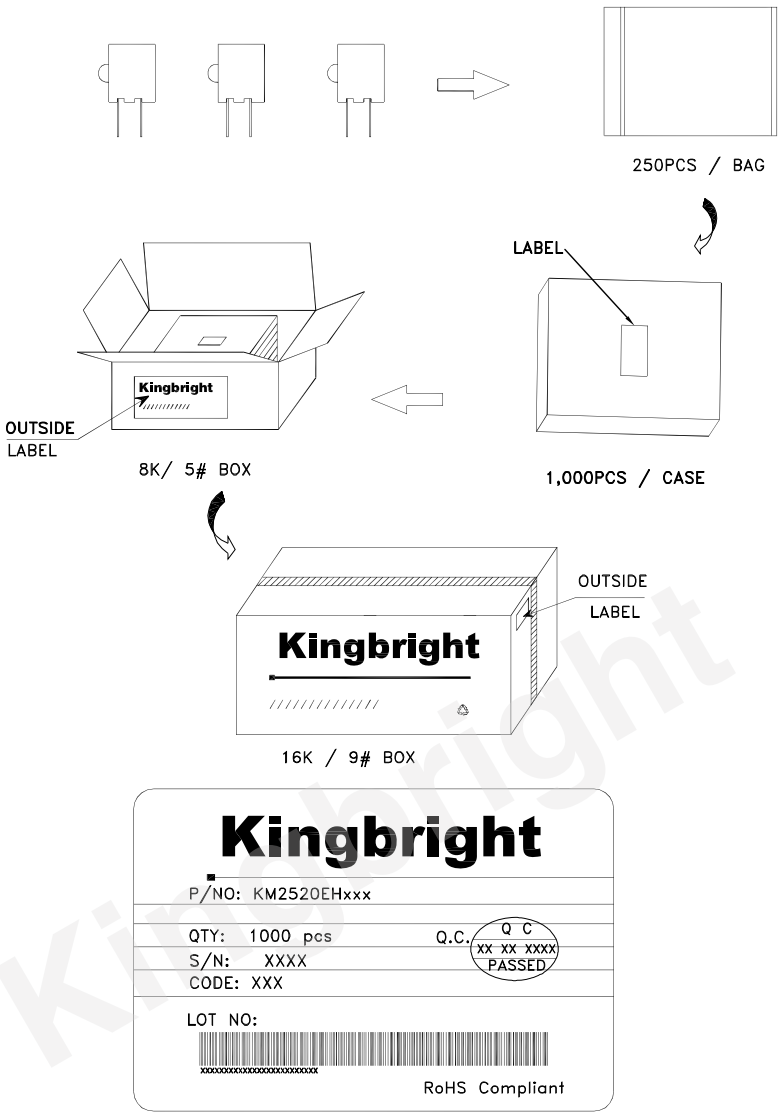


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

PACKING & LABEL SPECIFICATIONS **KM2520EH/1SGD**



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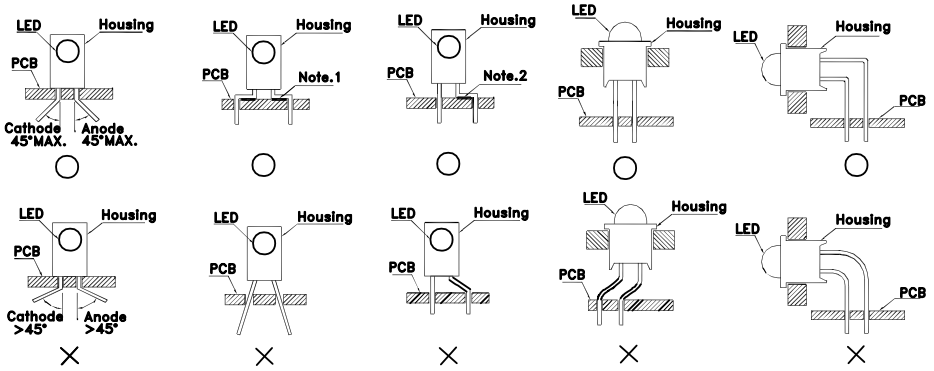
PRECAUTIONS

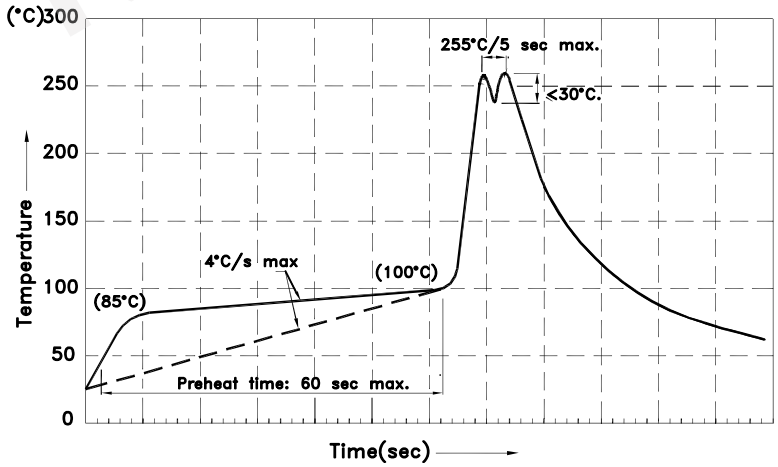
1. The lead pitch of the LED must match the pitch of the mounting holes on the PCB during component placement. Lead–forming may be required to insure the lead pitch matches the hole pitch. Refer to the figure below for proper lead forming procedures.



"○" Correct mounting method "×" Incorrect mounting method

2. During soldering, component covers and holders should leave clearance to avoid placing damaging stress on the LED during soldering.

3. The tip of the soldering iron should never touch the lens epoxy.
4. Through–hole LEDs are incompatible with reflow soldering.
5. If the LED will undergo multiple soldering passes or face other processes where the part may be subjected to intense heat, please check with Kingbright for compatibility.
6. Recommended Wave Soldering Profiles:



Notes:

1. Recommend pre–heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
2. Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).
3. Do not apply stress to the epoxy resin while the temperature is above 85°C.
4. Fixtures should not incur stress on the component when mounting and during soldering process.
5. SAC 305 solder alloy is recommended.
6. No more than one wave soldering pass.