

# KM2520SGC01

Subminiature Solid State Lamp

# **DESCRIPTION**

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

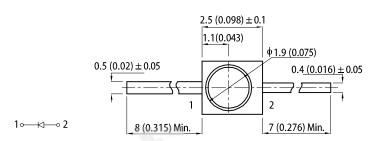
## **FEATURES**

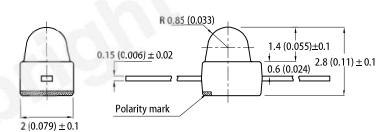
- Subminiature package
- · Long life solid state reliability
- · Low package profile
- Moisture sensitivity level: 3
- RoHS compliant

# **APPLICATIONS**

- Backlight
- · Status indicator
- · Home and smart appliances
- Wearable and portable devices
- · Healthcare applications

# **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 Number	Emitting Color (Material)	Lens Type	Iv (mcd) @ 20mA <sup>[2]</sup>		Viewing Angle [1]
			Min.	Тур.	201/2
KM2520SGC01	Super Bright Green (GaP)	Water Clear	40	90	20°

- Notes.

  1. 61/2 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 CIE127-2007 standards.





# **ELECTRICAL / OPTICAL CHARACTERISTICS at T<sub>A</sub>=25°C**

Parameter	Symbol	Emitting Color	Value		Unit
Parameter		Emitting Color	Тур.	Max.	Unit
Wavelength at Peak Emission I <sub>F</sub> = 20mA	$\lambda_{peak}$	Super Bright Green	565	-	nm
Dominant Wavelength I <sub>F</sub> = 20mA	λ <sub>dom</sub> <sup>[1]</sup>	Super Bright Green	568	-	nm
Spectral Bandwidth at 50% $\Phi$ REL MAX I <sub>F</sub> = 20mA	Δλ	Super Bright Green	30	-	nm
Capacitance	С	Super Bright Green	15	-	pF
Forward Voltage I <sub>F</sub> = 20mA	V <sub>F</sub> <sup>[2]</sup>	Super Bright Green	2.2	2.5	V
Reverse Current (V <sub>R</sub> = 5V)	<b>I</b> <sub>R</sub>	Super Bright Green	-	10	uA

# ABSOLUTE MAXIMUM RATINGS at T₄=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	P <sub>D</sub>	62.5	mW
Reverse Voltage	V <sub>R</sub>	5	V
Junction Temperature	T <sub>j</sub>	110	°C
Operating Temperature	T <sub>op</sub>	-40 to +85	°C
Storage Temperature	T <sub>stg</sub>	-40 to +85	°C
DC Forward Current	I <sub>F</sub>	25	mA
Peak Forward Current	I <sub>FM</sub> <sup>[1]</sup>	140	mA
Electrostatic Discharge Threshold (HBM)	-	8000	V

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.

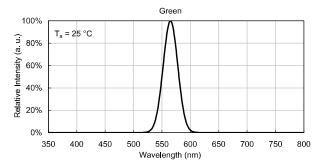


<sup>1.</sup> The dominant wavelength (\(\lambda\)) above is the setup value of the sorting machine. (Tolerance \(\lambda\)d: \(\pm \)1.mm.)
2. Forward voltage: \(\pm \)0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

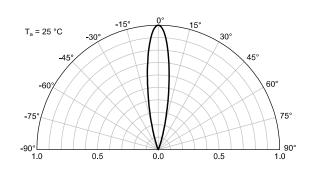


## **TECHNICAL DATA**

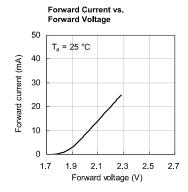
## **RELATIVE INTENSITY vs. WAVELENGTH**

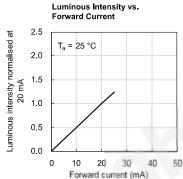


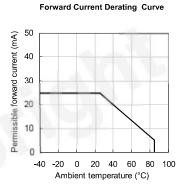
# **SPATIAL DISTRIBUTION**

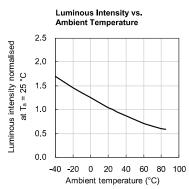




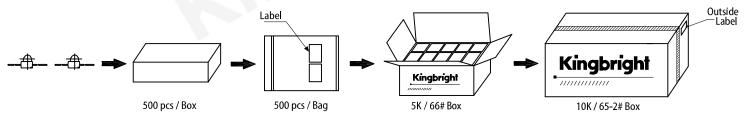








# **PACKING & LABEL SPECIFICATIONS**





### PRECAUTIONARY NOTES

- The information included in this document reflects representative usage scenarios and is intended for technical reference only.
- The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications.
- When using the products referenced in this document, please make sure the product is being operated within the environmental and electrical limits specified in the datasheet. If customer usage exceeds the specified limits, Kingbright will not be responsible for any subsequent issues.
- The information in this document applies to typical usage in consumer electronics applications. If customer's application has special reliability requirements or have life-threatening liabilities, such as automotive or medical usage, please consult with Kingbright representative for further assistance.
- The contents and information of this document may not be reproduced or re-transmitted without permission by Kingbright. All design applications should refer to Kingbright application notes available at <a href="https://www.Kingbright.com/application">https://www.Kingbright.com/application</a> notes

