



KM2520SGC01

Subminiature Solid State Lamp

DESCRIPTION

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

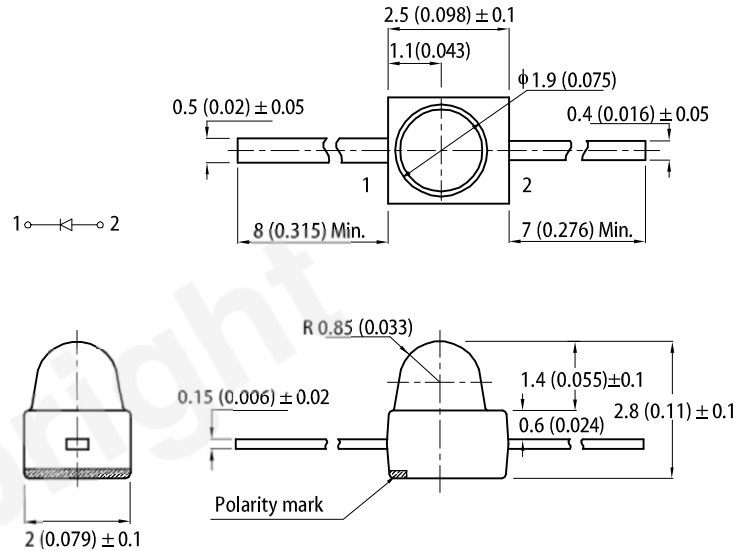
FEATURES

- 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:

- All dimensions are in millimeters (inches).
- Tolerance is $\pm 0.25(0.01")$ unless otherwise noted.
- Lead spacing is measured where the leads emerge from the package.
- 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 ^[2]		Viewing Angle ^[1]
			Min.	Typ.	2θ1/2
KM2520SGC01	■ Super Bright Green (GaP)	Water Clear	40	90	20°

Notes:

- θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
- Luminous intensity / luminous flux: $\pm 15\%$.
- Luminous intensity value is traceable to CIE127-2007 standards.

ELECTRICAL / OPTICAL CHARACTERISTICS at T_A=25°C

Parameter	Symbol	Emitting Color	Value		Unit
			Typ.	Max.	
Wavelength at Peak Emission I _F = 20mA	λ _{peak}	Super Bright Green	565	-	nm
Dominant Wavelength I _F = 20mA	λ _{dom} ^[1]	Super Bright Green	568	-	nm
Spectral Bandwidth at 50% Φ REL MAX I _F = 20mA	Δλ	Super Bright Green	30	-	nm
Capacitance	C	Super Bright Green	15	-	pF
Forward Voltage I _F = 20mA	V _F ^[2]	Super Bright Green	2.2	2.5	V
Reverse Current (V _R = 5V)	I _R	Super Bright Green	-	10	uA

Notes:

1. The dominant wavelength (λ_d) above is the setup value of the sorting machine. (Tolerance λ_d : ±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.

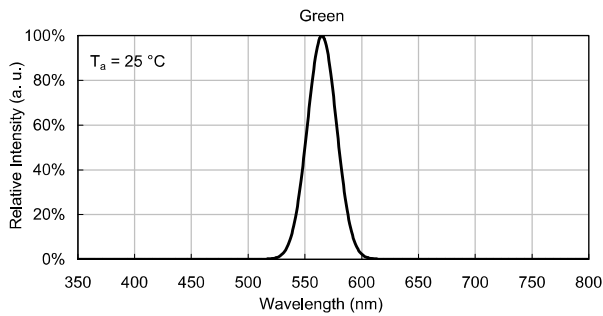
ABSOLUTE MAXIMUM RATINGS at T_A=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	62.5	mW
Reverse Voltage	V _R	5	V
Junction Temperature	T _j	110	°C
Operating Temperature	T _{op}	-40 to +85	°C
Storage Temperature	T _{stg}	-40 to +85	°C
DC Forward Current	I _F	25	mA
Peak Forward Current	I _{FM} ^[1]	140	mA
Electrostatic Discharge Threshold (HBM)	-	8000	V

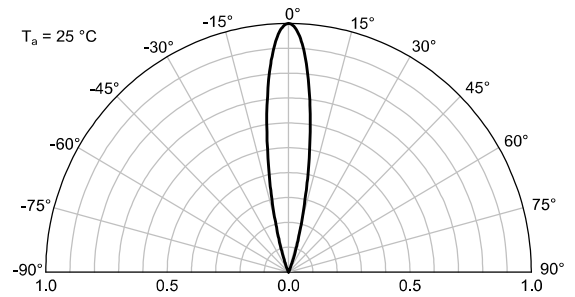
- Notes:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
 2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

TECHNICAL DATA

RELATIVE INTENSITY vs. WAVELENGTH

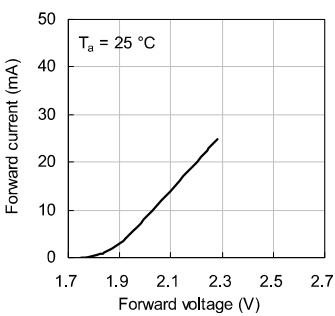


SPATIAL DISTRIBUTION

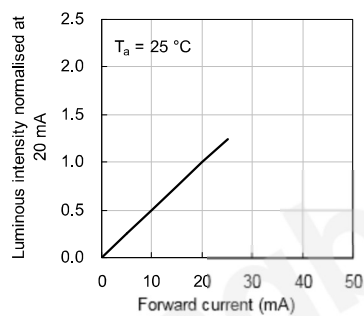


SUPER BRIGHT GREEN

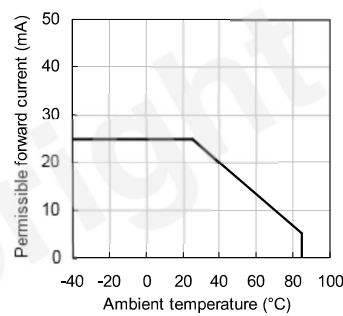
Forward Current vs. Forward Voltage



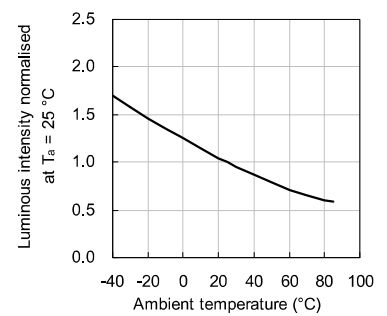
Luminous Intensity vs. Forward Current



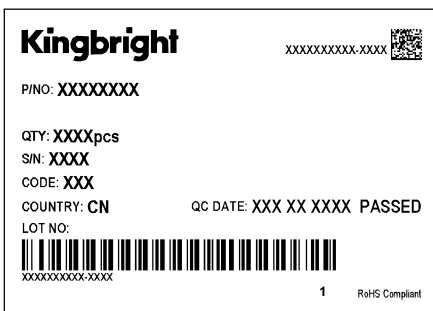
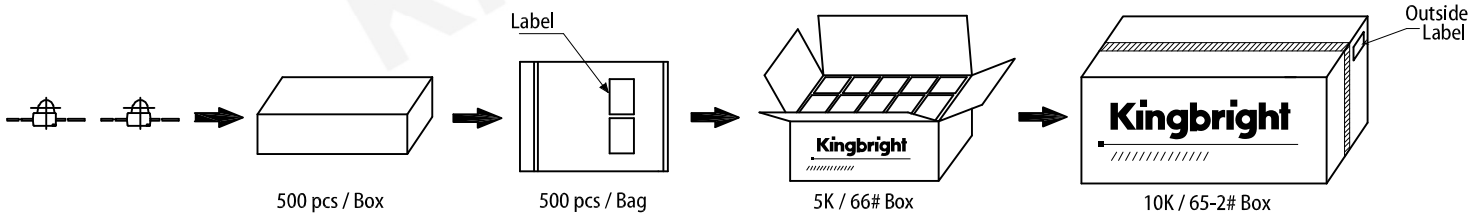
Forward Current Derating Curve



Luminous Intensity vs. Ambient Temperature



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.
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