## **Kingbright**

## **KPA-3010SGC**

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

Parameter	Symbol	Emitting Color	Value		Unit
Parameter	Symbol	Emitting Color	Emitting Color Typ. Max.	Max.	Unit
Wavelength at Peak Emission $I_F$ = 20mA	$\lambda_{peak}$	Super Bright Green	565	-	nm
Dominant Wavelength I <sub>F</sub> = 20mA	$\lambda_{dom}$ <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 $I_F = 20 \text{mA}$	V <sub>F</sub> <sup>[2]</sup>	Super Bright Green	2.2	2.5	V
Reverse Current (V <sub>R</sub> = 5V)	I <sub>R</sub>	Super Bright Green	-	10	μΑ

Notes:

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

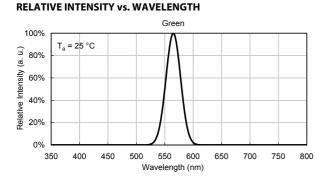
### ABSOLUTE MAXIMUM RATINGS at T<sub>A</sub>=25°C

Parameter	Symbol	Value	Unit
Power Dissipation	P <sub>D</sub>	62.5	mW
Reverse Voltage	V <sub>R</sub>	5	V
Junction Temperature	Tj	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

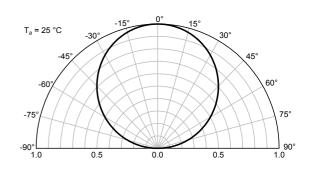
Notes: 1. 1/10 Duty Cycle, 0.1ms Pulse Width. 2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

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## **TECHNICAL DATA**



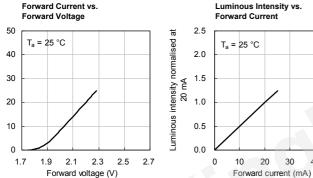
### SPATIAL DISTRIBUTION





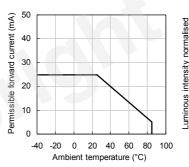
50

40



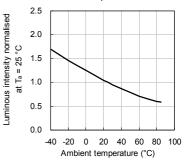
30

Forward Current Derating Curve

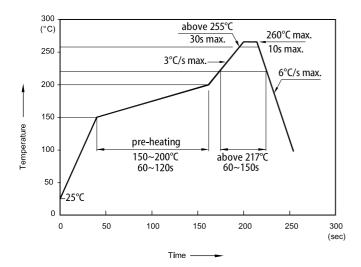


#### Luminous Intensity vs. Ambient Temperature

**KPA-3010SGC** 



#### **REFLOW SOLDERING PROFILE for LEAD-FREE SMD PROCESS**

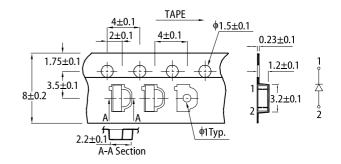


#### Notes

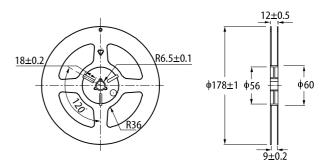
Forward current (mA)

Notes: 1. Don't cause stress to the LEDs while it is exposed to high temperature. 2. The maximum number of reflow soldering passes is 2 times. 3. Reflow soldering is recommended. Other soldering methods are not recommended as they might cause damage to the product.

#### TAPE SPECIFICATIONS (units : mm)



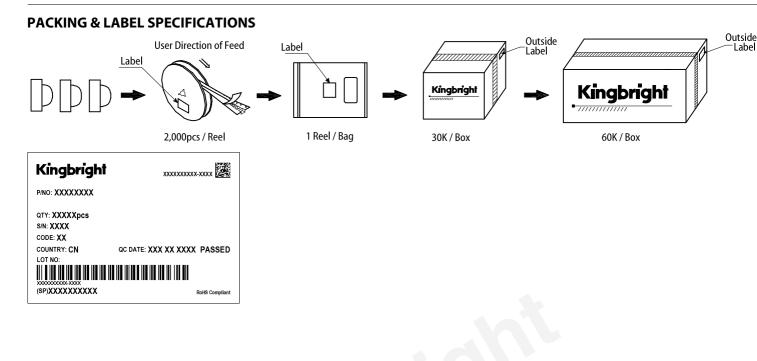
REEL DIMENSION (units : mm)



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### **PRECAUTIONARY NOTES**

- 1. 2.
- 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
- 3.
- The partitude 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 representative Kingbright com/application paters 4.
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