

Part Number: KCSA03-107

Super Bright Yellow

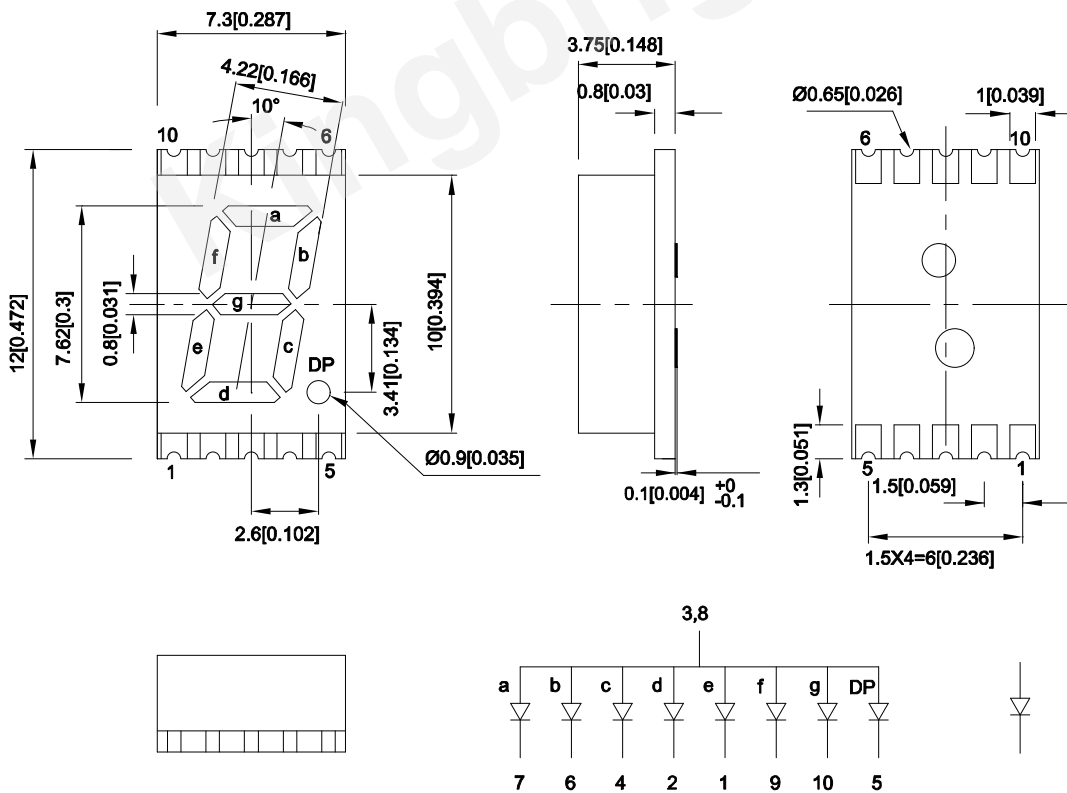
### Features

- 0.3 inch digit height.
- Low current operation.
- Excellent character appearance.
- Mechanically rugged.
- Gray face, white segment.
- Package : 550pcs / reel.
- Moisture sensitivity level : level 2a.
- RoHS compliant.

### Description

The Super Bright Yellow device is made with AlGaInP (on GaAs substrate) light emitting diode chip.

### Package Dimensions & Internal Circuit Diagram



#### Notes:

1. All dimensions are in millimeters (inches), Tolerance is  $\pm 0.25$  (0.01") unless otherwise noted.
2. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
3. The gap between the reflector and PCB shall not exceed 0.25mm



## Selection Guide

Part No.	Emitting Color (Material)	Lens Type	Iv (ucd) [1] @ 10mA		Description
			Min.	Typ.	
KCSA03-107	Super Bright Yellow (AlGaInP)	White Diffused	21000	36000	Common Anode, Rt. Hand Decimal.
			*5600	*13000	

Notes:

- Luminous intensity / luminous Flux: +/-15%.
- \* Luminous intensity value is traceable to CIE127-2007 standards.

## Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Emitting Color	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Super Bright Yellow	590		nm	I <sub>F</sub> =10mA
$\lambda_D$ [1]	Dominant Wavelength	Super Bright Yellow	590		nm	I <sub>F</sub> =10mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Super Bright Yellow	20		nm	I <sub>F</sub> =10mA
C	Capacitance	Super Bright Yellow	20		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Super Bright Yellow	1.95	2.5	V	I <sub>F</sub> =10mA
I <sub>R</sub>	Reverse Current	Super Bright Yellow		10	uA	V <sub>R</sub> =5V

Notes:

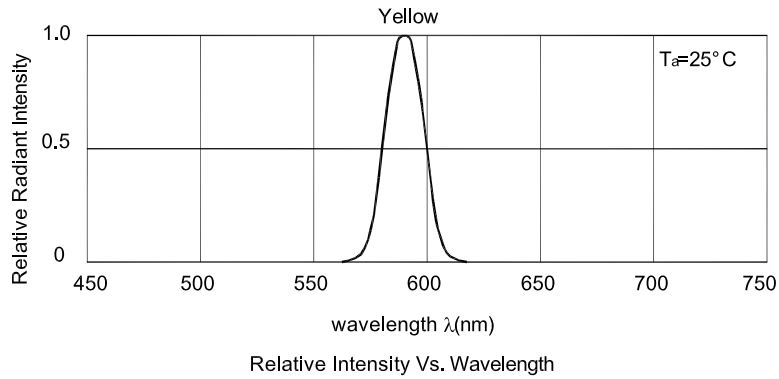
- Wavelength: +/-1nm.
- Forward Voltage: +/-0.1V.
- Wavelength value is traceable to CIE127-2007 standards.
- Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

## Absolute Maximum Ratings at TA=25°C

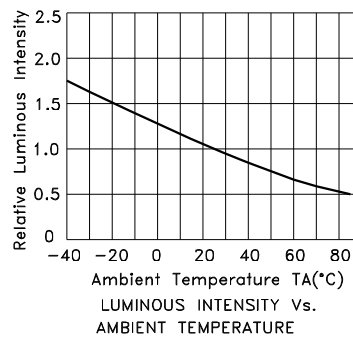
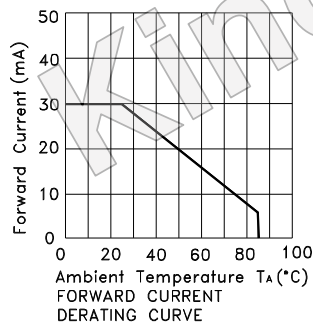
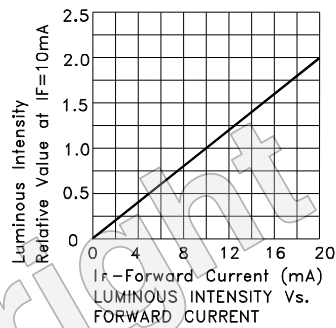
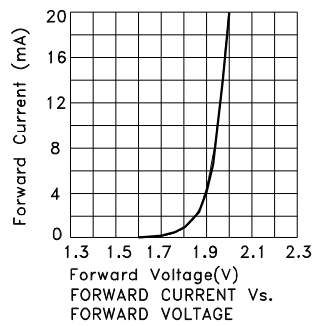
Parameter	Values	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	175	mA
Reverse Voltage	5	V
Operating / Storage Temperature	-40°C To +85°C	

Note:

- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 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.

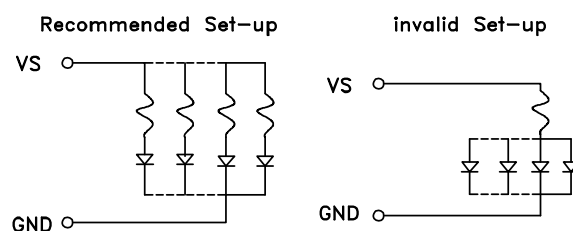


## Super Bright Yellow KCSA03-107



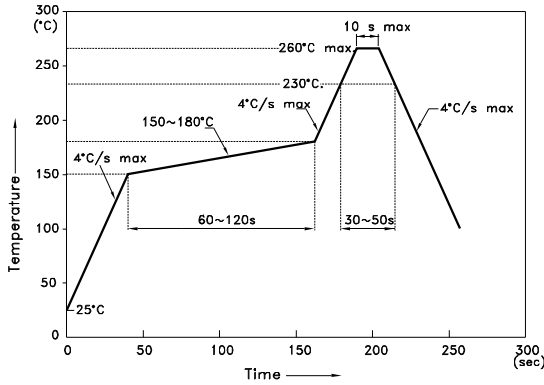
## CIRCUIT DESIGN NOTES

1. Protective current-limiting resistors may be necessary to operate the Displays.
2. LEDs mounted in parallel should each be placed in series with its own current-limiting resistor.



KCSA03-107

Reflow Soldering Profile For Lead-free SMT Process.

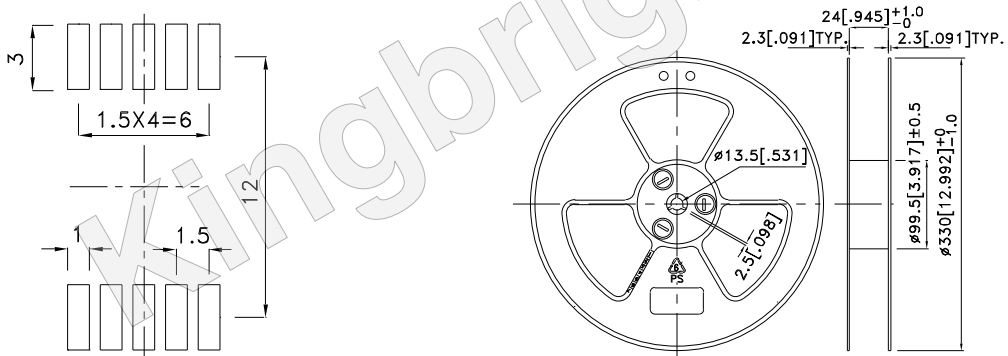


NOTES:

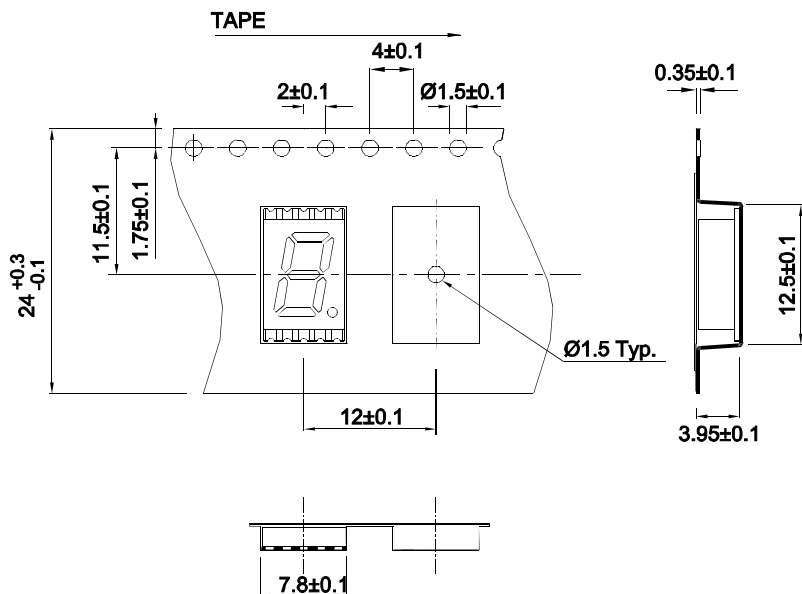
1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

Recommended Soldering Pattern  
(Units : mm; Tolerance: ± 0.15)

Reel Dimension

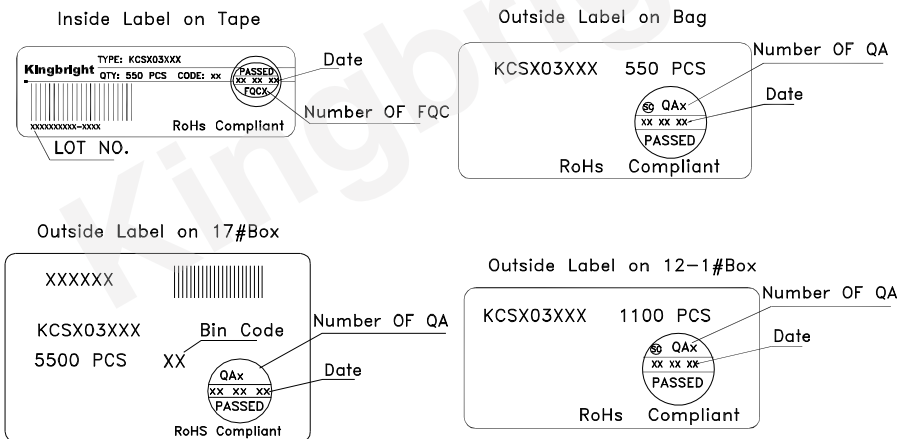
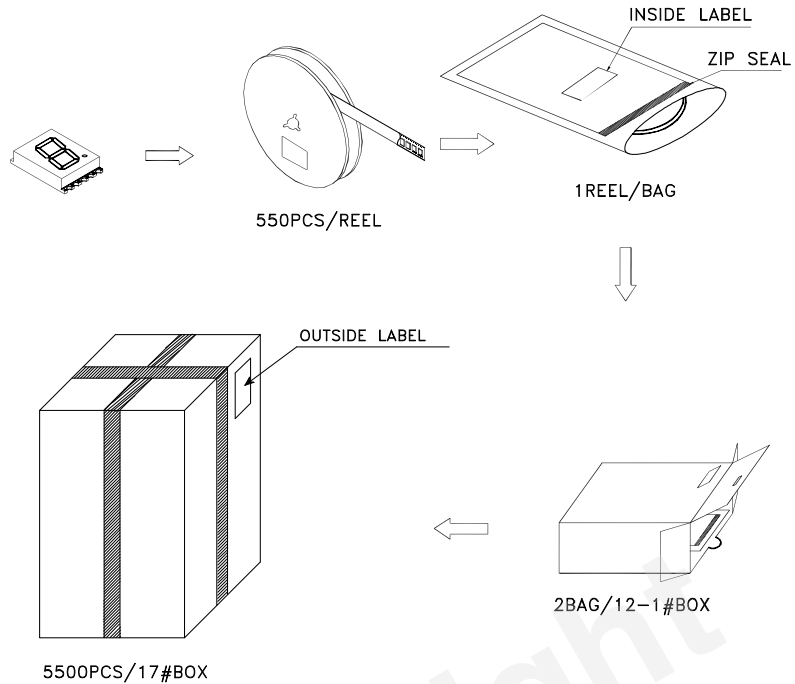


Tape Specifications  
(Units : mm)



## PACKING & LABEL SPECIFICATIONS

## KCSA03-107



### Terms and conditions for the usage of this document

1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.
2. 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.
3. 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.
4. 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.
5. The contents and information of this document may not be reproduced or re-transmitted without permission by Kingbright.
6. All design applications should refer to Kingbright application notes available at [http://www.kingbright.com/application\\_notes](http://www.kingbright.com/application_notes)