



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: KCSA56-107

Super Bright Yellow

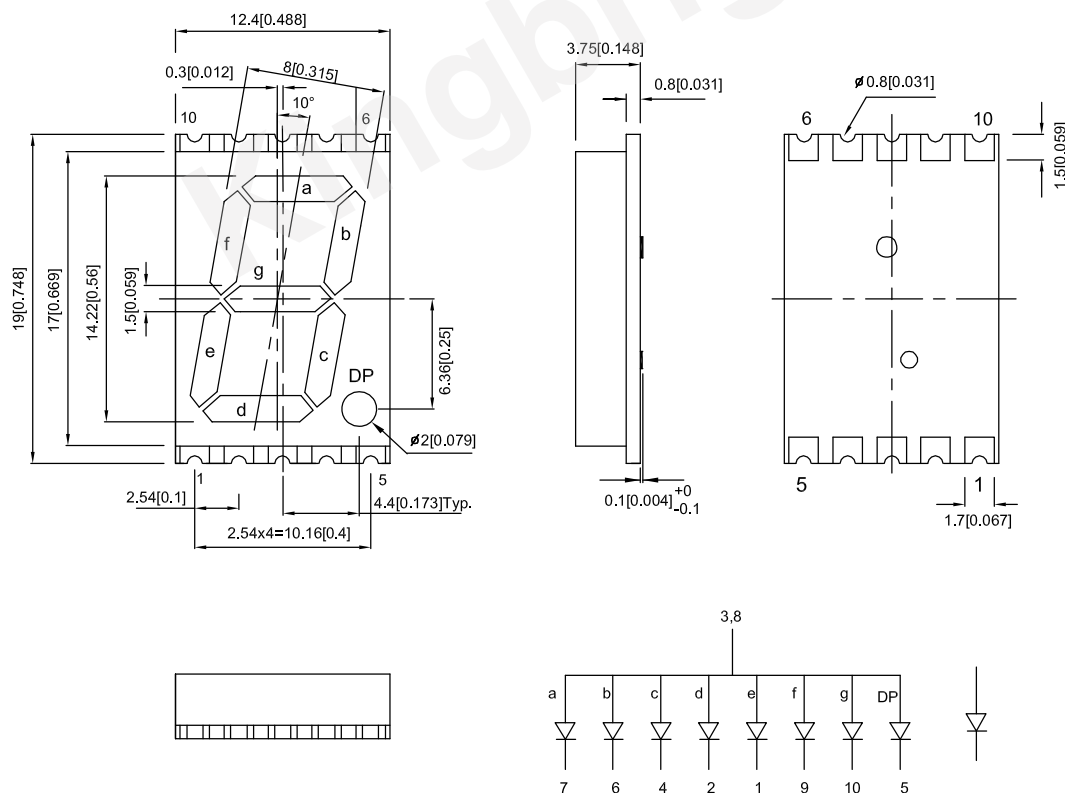
Features

- 0.56 inch digit height.
- Low current operation.
- Excellent character appearance.
- Mechanically rugged.
- Gray face, white segment.
- Package: 400pcs/ reel.
- Moisture sensitivity level : level 2a.
- RoHS compliant.

Descriptions

- The Super Bright Yellow device is made with AlGaInP (on GaAs substrate) light emitting diode chip.
- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.
- All devices, equipment and machinery must be electrically grounded.

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.	
KCSA56-107	Super Bright Yellow (AlGaInP)	White Diffused	31000	76000	Common Anode,Rt. Hand Decimal.
			*14000	*29000	

Notes:

1. 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
λ_{peak}	Peak Wavelength	Super Bright Yellow	590		nm	IF=10mA
λ_D [1]	Dominant Wavelength	Super Bright Yellow	590		nm	IF=10mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Super Bright Yellow	20		nm	IF=10mA
C	Capacitance	Super Bright Yellow	20		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Super Bright Yellow	1.95	2.5	V	IF=10mA
IR	Reverse Current	Super Bright Yellow		10	uA	VR=5V

Notes:

1. Wavelength: +/-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.

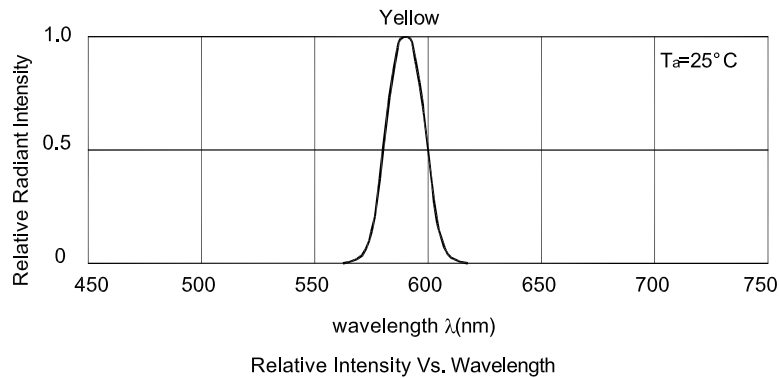
Absolute Maximum Ratings at TA=25°C

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	

Notes:

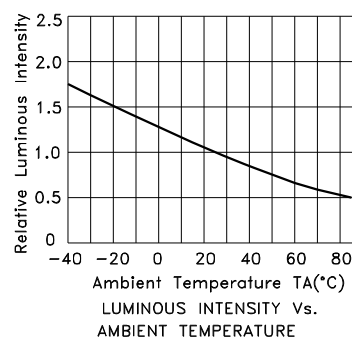
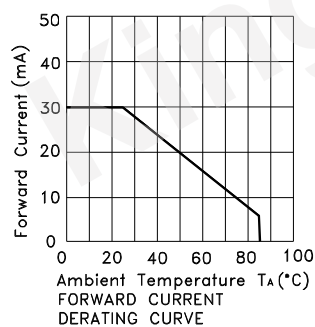
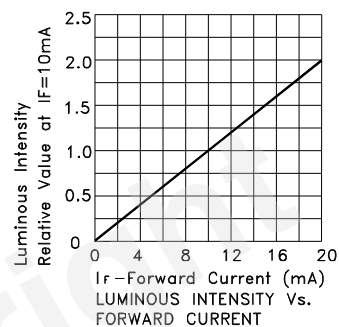
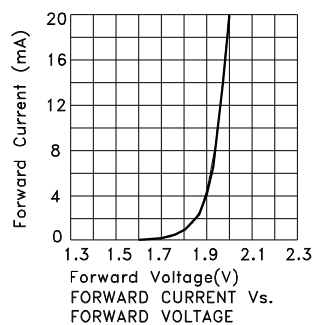
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

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.



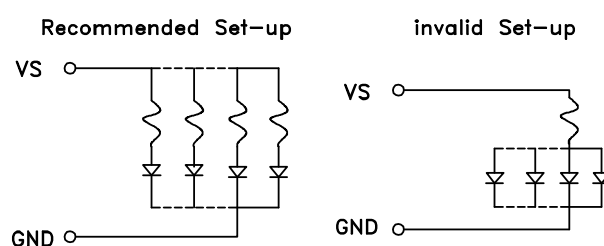
Super Bright Yellow

KCSA56-107



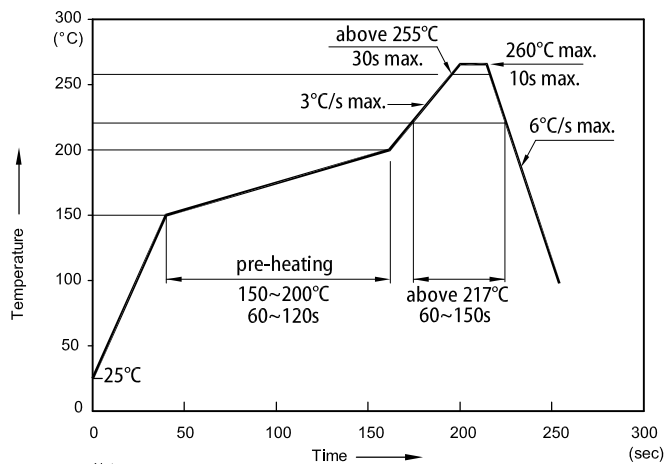
CIRCUIT DESIGN NOTES

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.



KCSA56-107

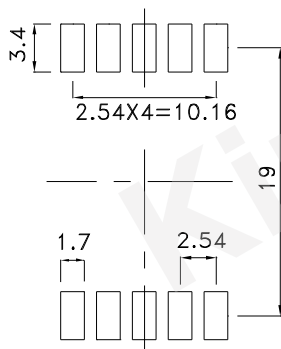
Reflow Soldering Profile for Lead-free SMD Process



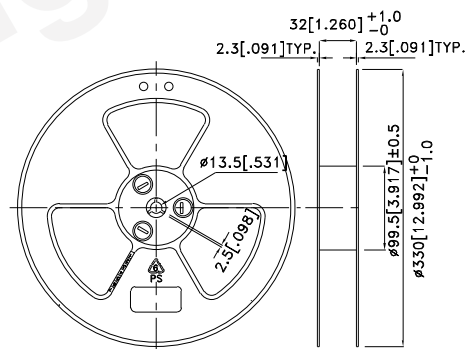
Notes:

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.

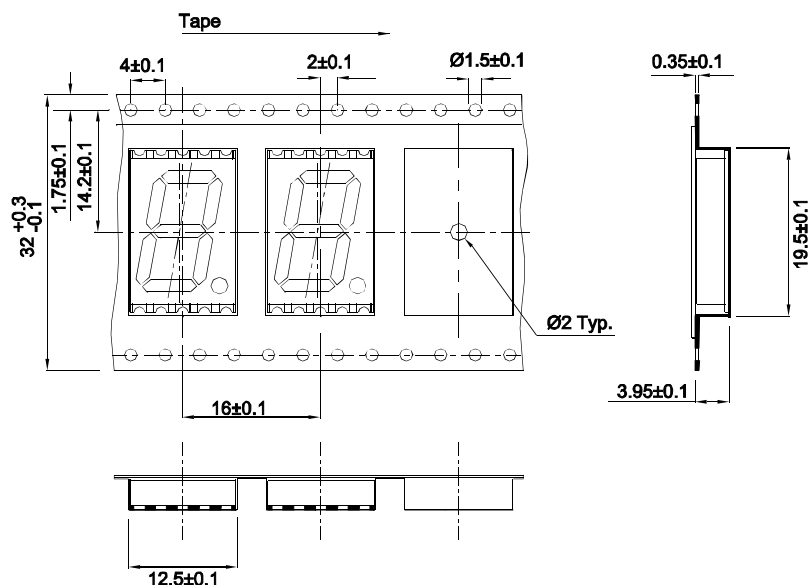
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.15)



Reel Dimension

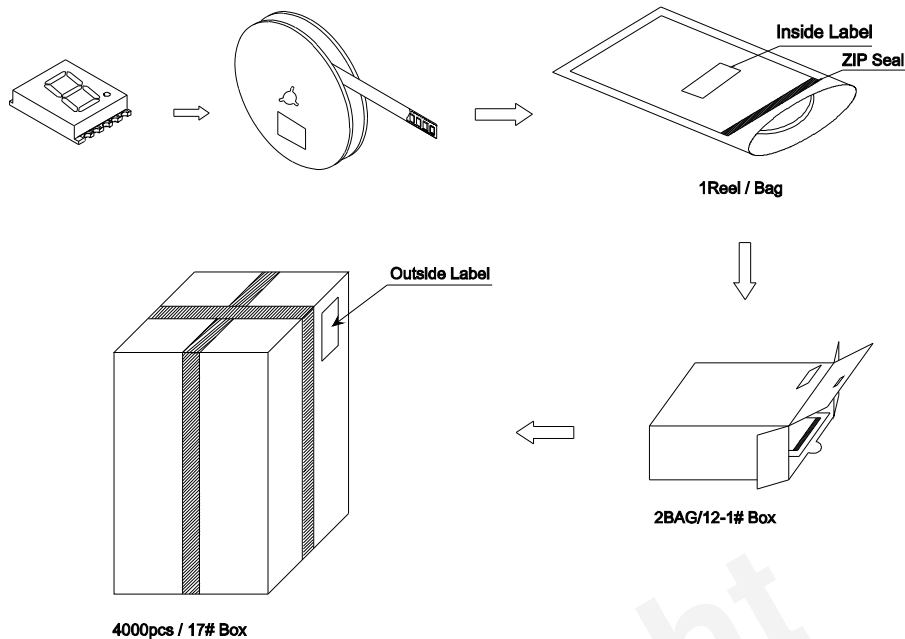


Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

KCSA56-107



Kingbright XXXXXXXXXX-XXXX

P/NO: XXXXXXXX

QTY: XXXXpcs
S/N: XXXX
CODE: XXXX
COUNTRY: CN QC DATE: XXX XX XXXX PASSED
LOT NO: XXXXXXXXXX-XXXX

1 RoHS Compliant

XXXXXX

KCSX56XXX
4000pcs

Bin Code XX

Number OF QA

Date

QAx
xx xx xx
PASSED

RoHS Compliant

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