Kingbright

SURFACE MOUNT DISPLAY

Part Number: ACPSA04-41SRWA Super Bright Red

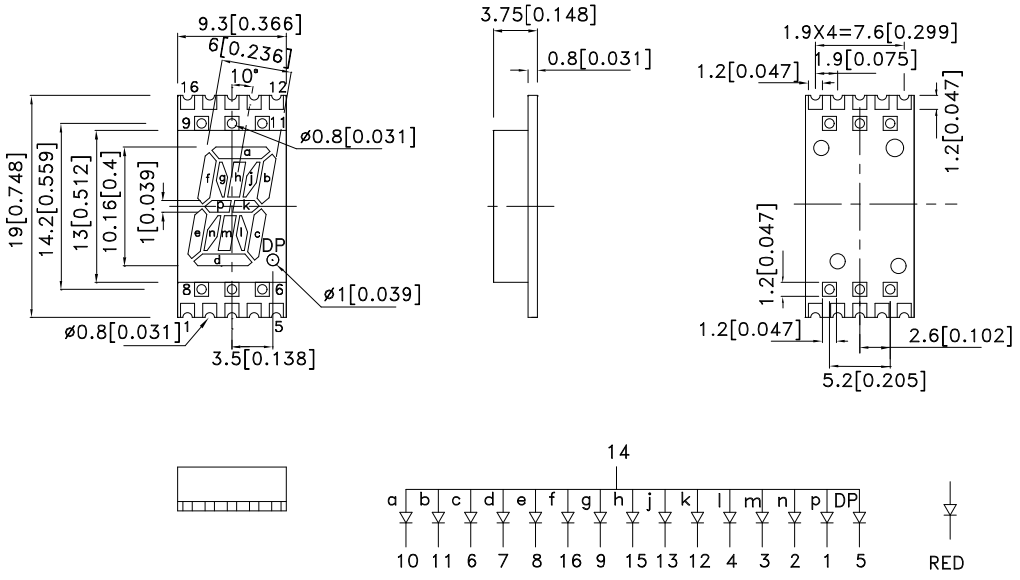
Features

- 0.4 inch character height.
- Low current operation.
- High contrast and light output.
- Categorized for luminous intensity.
- Mechanically rugged.
- Gray face,white segment.
- Package : 400pcs / reel.
- Moisture sensitivity level : level 2a.
- RoHS compliant.

Description

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.

Package Dimensions& Internal Circuit Diagram



Notes:
1. All dimensions are in millimeters (inches), Tolerance is ±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.

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Selection Guide

Part No.	Dice	Lens Type	Iv (ucd) [1] @ 10mA		Description
			Min.	Typ.	
ACPSA04-41SRWA	Super Bright Red (GaAlAs)	White Diffused	3600	10000	Common Anode, Rt. Hand Decimal.
			*1400	*2800	

Notes:
1. Luminous intensity/ luminous Flux: +/-15%.
*Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

Electrical / Optical Characteristics at TA=25°C

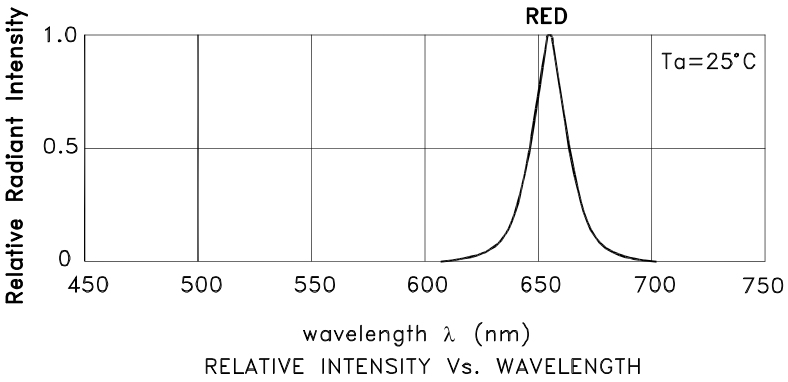
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Super Bright Red	655		nm	I_F=20mA
λD [1]	Dominant Wavelength	Super Bright Red	640		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	Super Bright Red	20		nm	I_F=20mA
C	Capacitance	Super Bright Red	45		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	Super Bright Red	1.85	2.5	V	I_F=20mA
I_R	Reverse Current	Super Bright Red		10	uA	V_R=5V

Notes:
1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

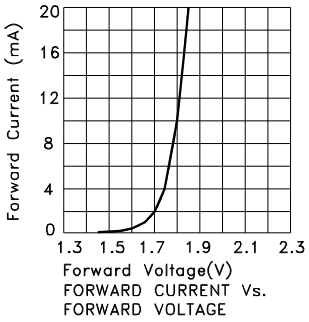
Parameter	Super Bright Red	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	155	mA
Reverse Voltage	5	V
Operating / Storage Temperature	-40°C To +85°C	

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

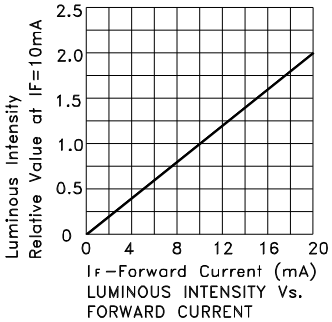


RELATIVE INTENSITY Vs. WAVELENGTH

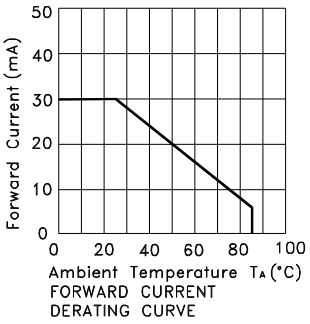
Super Bright Red **ACPSA04-41SRWA**



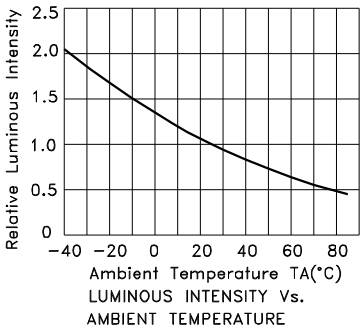
FORWARD CURRENT Vs.
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

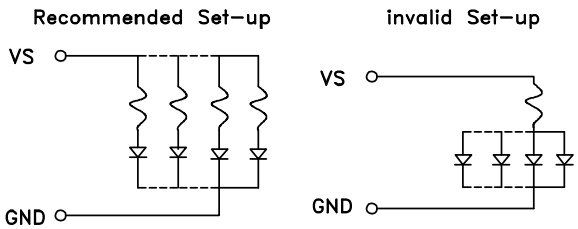


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

CIRCUIT DESIGN NOTES

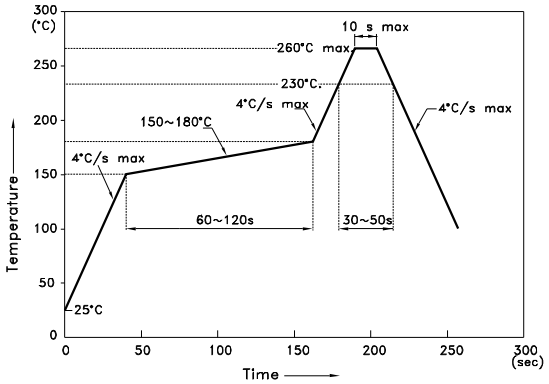
1.Protective current–limiting resistors may be necessary to operate the Displays.

2.LEDs mounted in parallel should each be placed in series with its own current–limiting resistor.



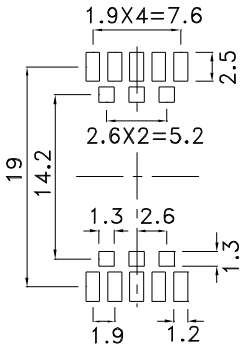
ACPSA04-41SRWA

Reflow Soldering Profile For Lead-free SMT Process.

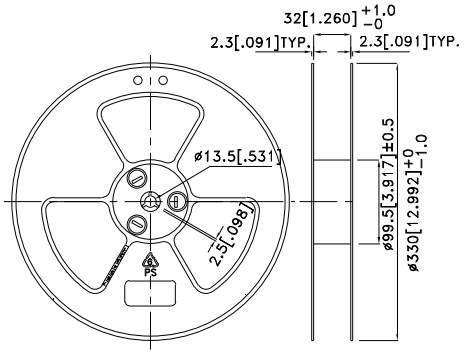


NOTES:
1. We recommend the reflow temperature 245°C(+/-5°C).The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

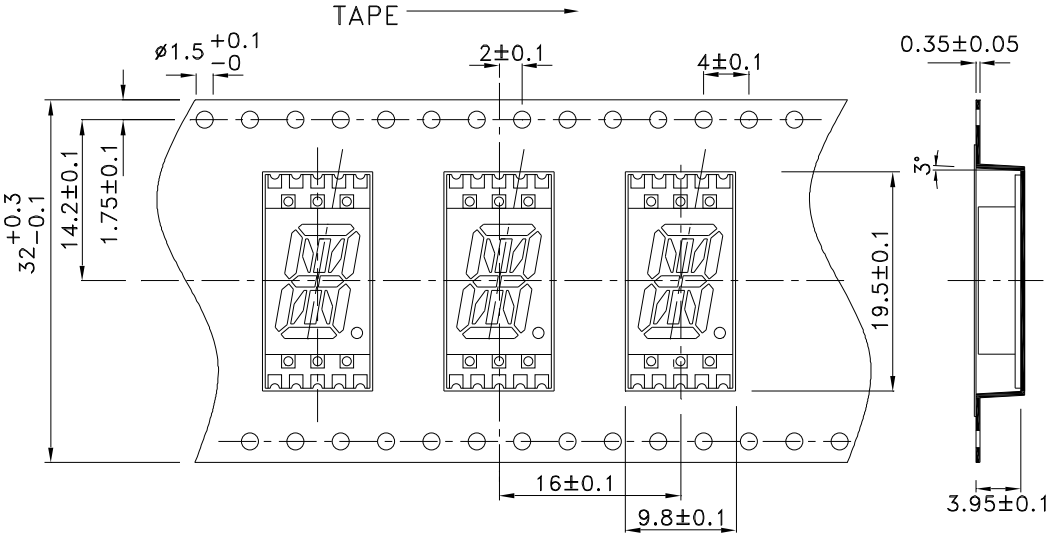
Recommended Soldering Pattern
(Units : mm; Tolerance: ± 0.15)



Reel Dimension



Tape Specifications
(Units : mm)



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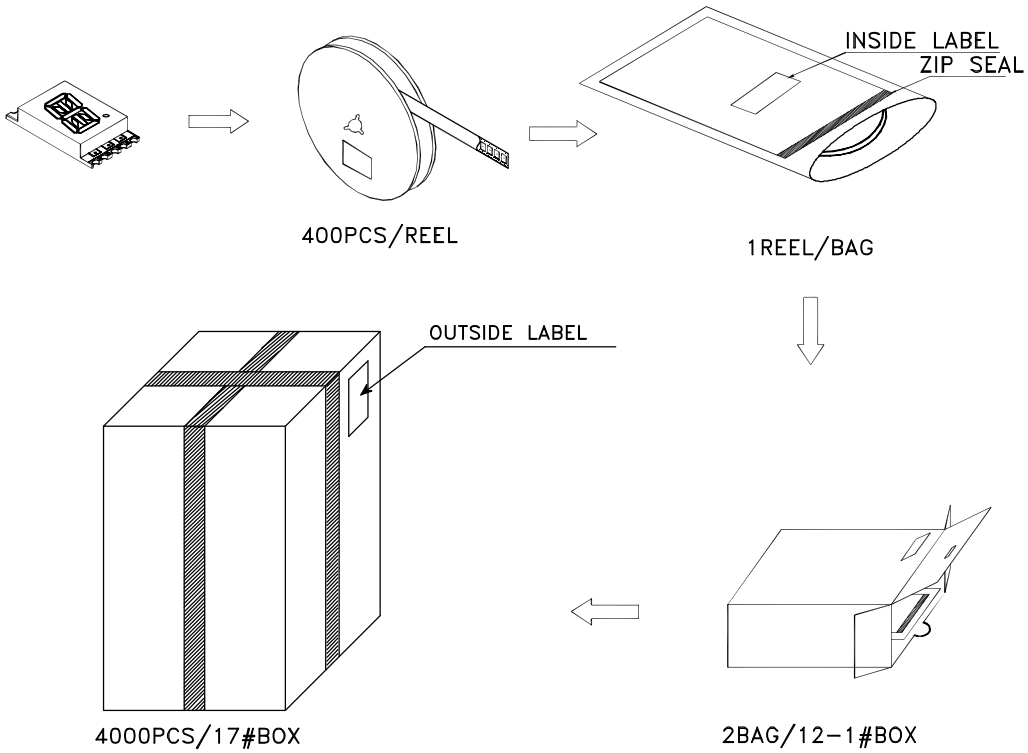
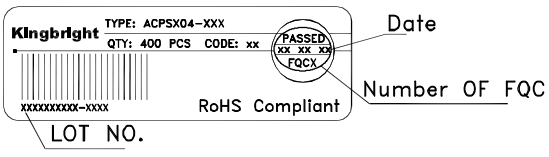
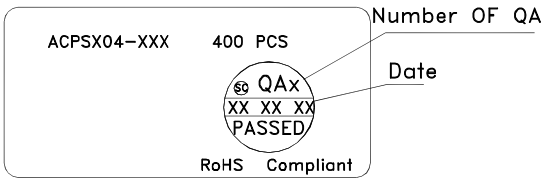
PACKING & LABEL SPECIFICATIONS **ACPSA04-41SRWA**



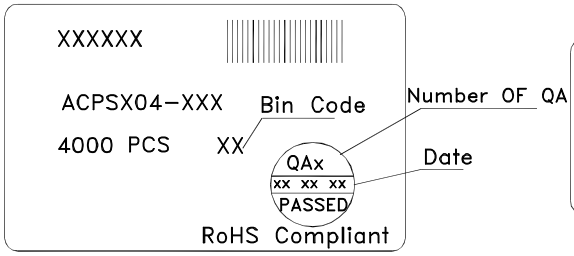
Inside Label On Tape



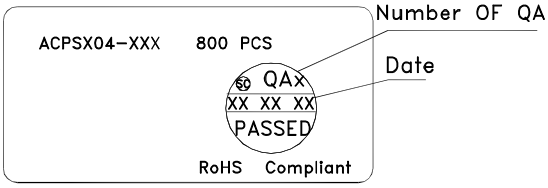
Outside Label On Bag



Outside Label On 17#Box



Outside Label On 12-1#Box



All design applications should refer to Kingbright application notes available at
http://www.KingbrightUSA.com/ApplicationNotes