Kingbright

SURFACE MOUNT DISPLAY

Part Number: ACSC04-41SURKWA-F01 Hyper Red

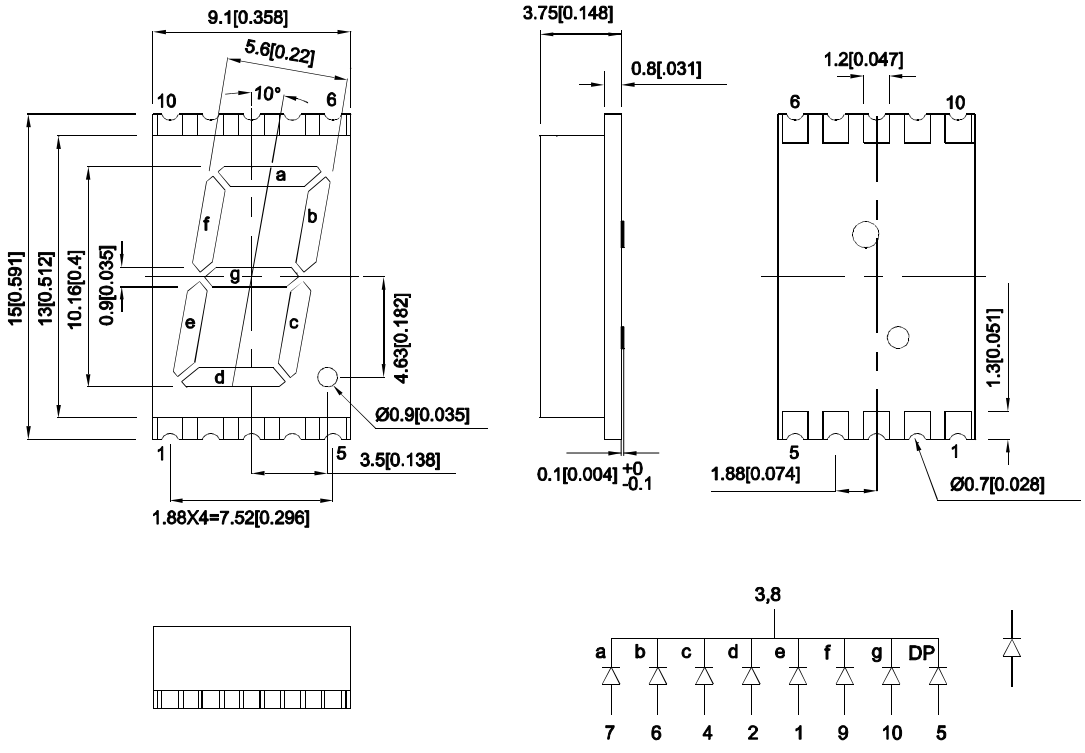
Features

- 0.4 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.

Description

The Hyper Red source color devices are made with Al-GaInP on GaAs substrate 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.

Selection Guide

Part No.	Emitting Color (Material)	Lens Type	Iv (ucd) [1] @ 10mA		Description
			Min.	Typ.	
ACSC04-41SURKWA-F01	Hyper Red (AlGaInP)	White Diffused	21000	54000	Common Cathode, Rt. Hand Decimal.
			*9000	*20000	

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

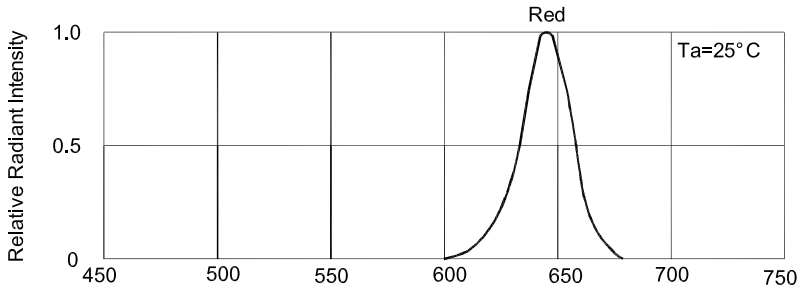
Symbol	Parameter	Emitting Color	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Hyper Red	645		nm	I_F=10mA
λD [1]	Dominant Wavelength	Hyper Red	630		nm	I_F=10mA
Δλ1/2	Spectral Line Half-width	Hyper Red	28		nm	I_F=10mA
C	Capacitance	Hyper Red	35		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	Hyper Red	1.85	2.5	V	I_F=10mA
I_R	Reverse Current	Hyper 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.
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

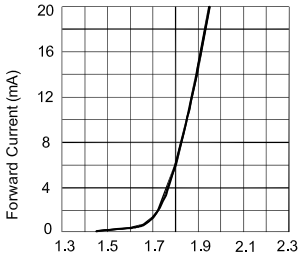
Parameter	Values	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	185	mA
Reverse Voltage	5	V
Operating / Storage Temperature	-40°C To +85°C	

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

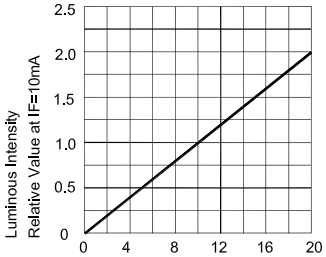


Relative Intensity Vs. Wavelength

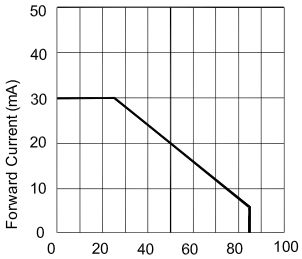
Hyper Red **ACSC04-41SURKWA-F01**



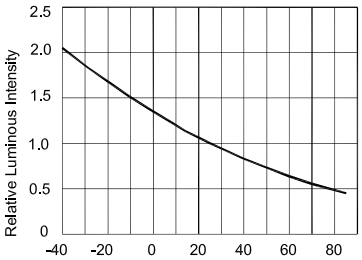
Forward Current Vs.
Forward Voltage



Luminous Intensity Vs.
Forward Current



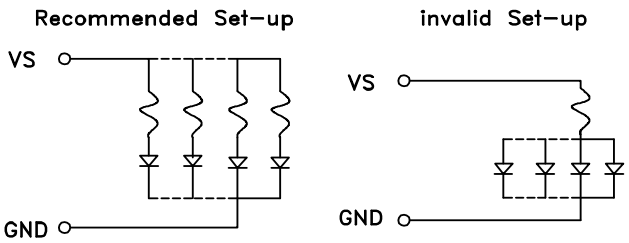
Forward Current
Derating Curve



Luminous Intensity Vs.
Ambient Temperature

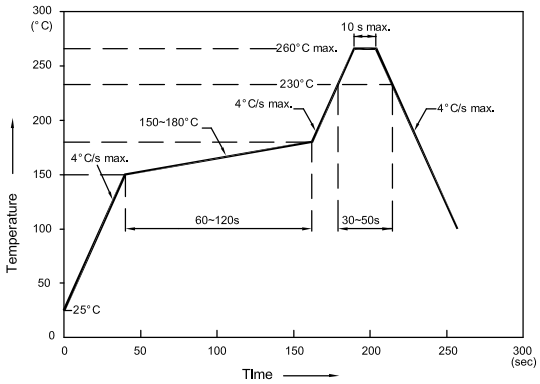
CIRCUIT DESIGN NOTES

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.



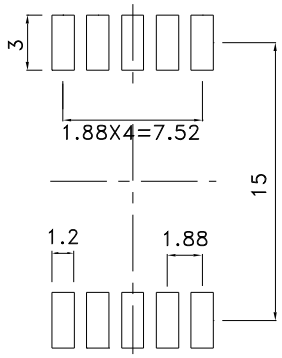
ACSC04-41SURKWA-F01

Reflow Soldering Profile For Lead-free SMT Process.

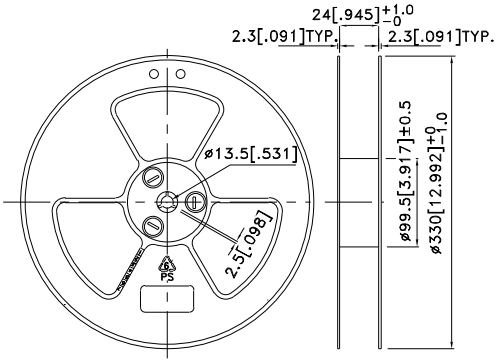


NOTES:
1.We recommend the reflow temperature 245°C(+/-5°C).The maximum soldering temperature should be limited to 260°C.
2.Don't cause stress to the epoxy resin while it is exposed to high temperature.
3.Number of reflow process shall be 2 times or less.

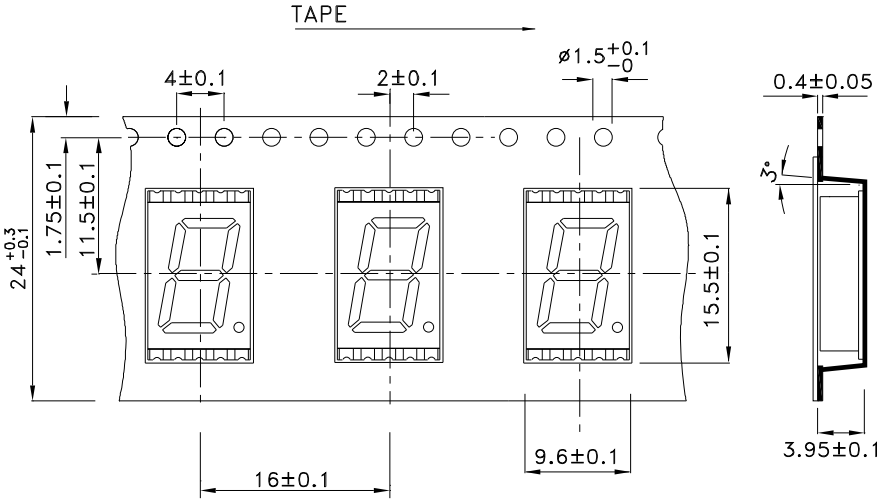
Recommended Soldering Pattern
(Units : mm; Tolerance: ± 0.15)



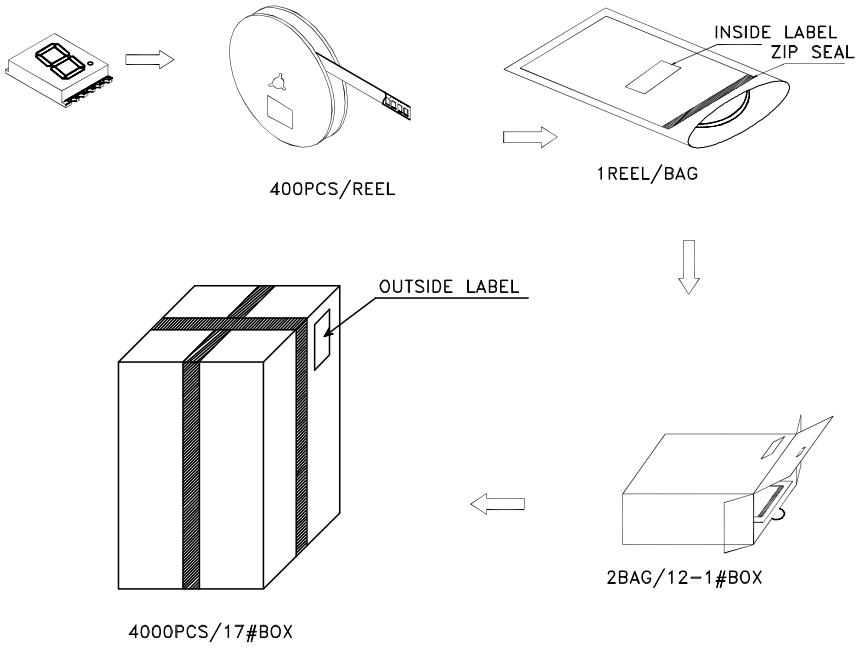
Reel Dimension

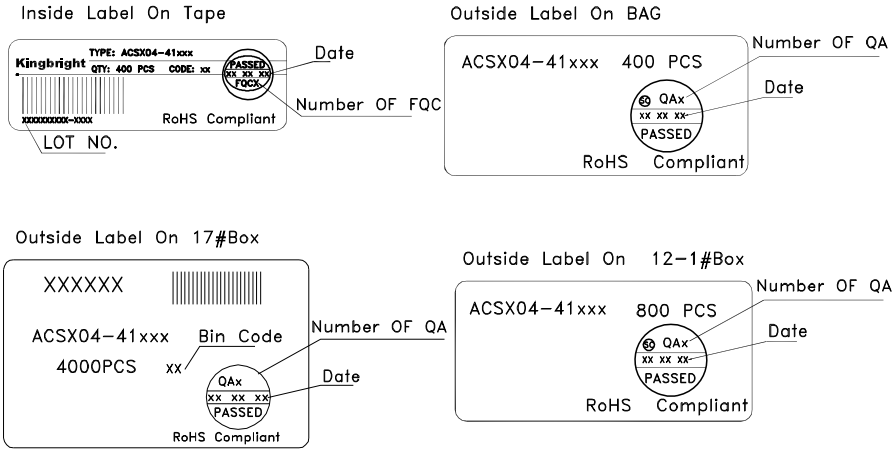


Tape Specifications
(Units : mm)



PACKING & LABEL SPECIFICATIONS **ACSC04-41SURKWA-F01**





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