



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Part Number: SC10-21SURKWA

Hyper Red

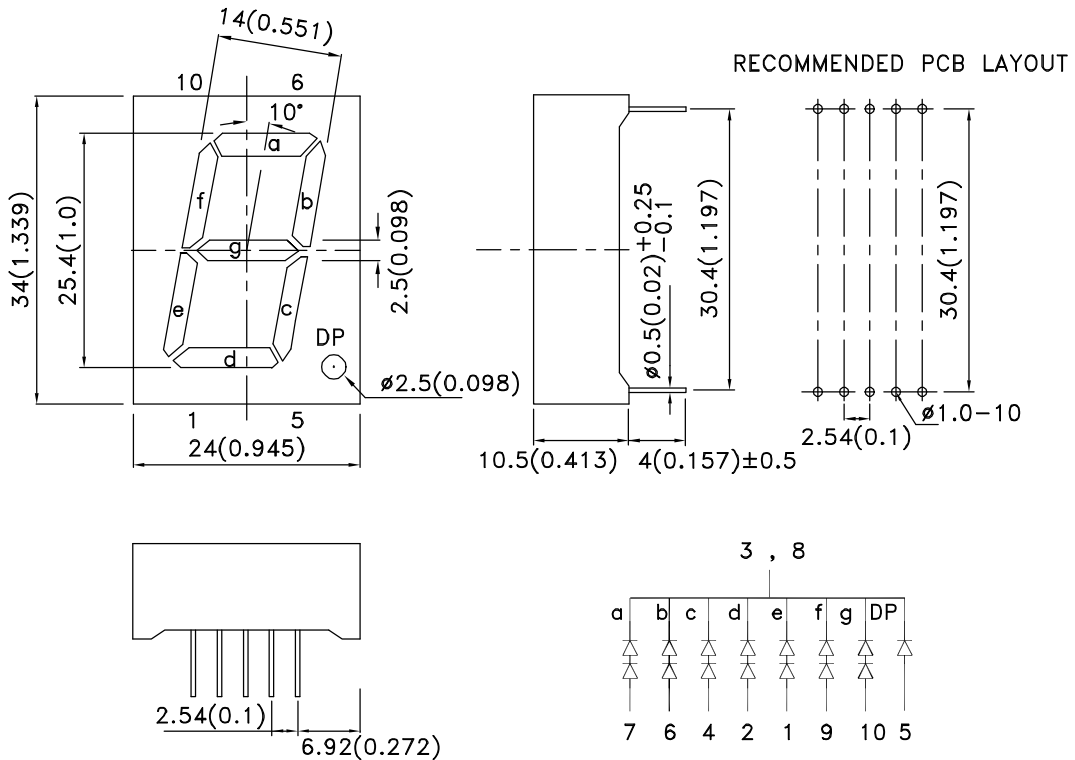
Features

- 1.0 inch digit height.
- Low current operation.
- Excellent character appearance.
- High light output.
- Easy mounting on P.C. boards or sockets.
- Mechanically rugged.
- Standard : gray face, white segment.
- RoHS compliant.

Description

The Hyper Red source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

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.



Selection Guide

Part No.	Dice	Lens Type	Iv (ucd) [1] @ 10mA		Description
			Min.	Typ.	
SC10-21SURKWA	Hyper Red (AlGaInP)	WHITE DIFFUSED	88000 *31000	260000 *70000	Common Cathode,Rt. Hand Decimal.

Note:

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
λ_{peak}	Peak Wavelength	Hyper Red	645		nm	I _F =20mA
λ_D [1]	Dominant Wavelength	Hyper Red	630		nm	I _F =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Hyper Red	28		nm	I _F =20mA
C	Capacitance	Hyper Red	35		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage (DP)	Hyper Red	3.9 (1.95)	5.0 (2.5)	V	I _F =20mA
I _R	Reverse Current (Per chip)	Hyper Red		10 (10)	uA	V _R =5V (V _R =5V)

Notes:

1.Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

3.Wavelength value is traceable to the CIE127-2007 compliant national standards.

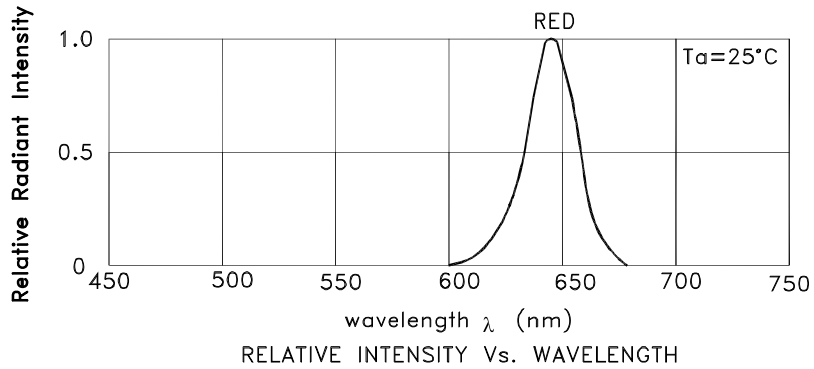
Absolute Maximum Ratings at TA=25°C

Parameter	Hyper Red	Units
Power dissipation (DP)	150 (75)	mW
DC Forward Current	30	mA
Peak Forward Current [1]	185	mA
Reverse Voltage (Per chip)	5 (5)	V
Operating / Storage Temperature	-40°C To +85°C	
Lead Solder Temperature[2]	260°C For 3-5 Seconds	

Notes:

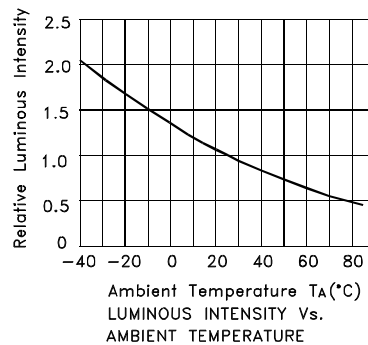
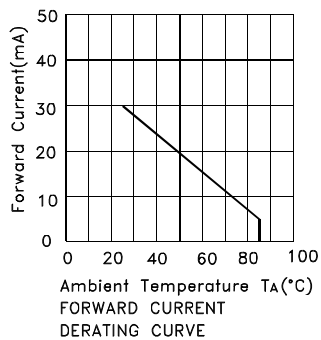
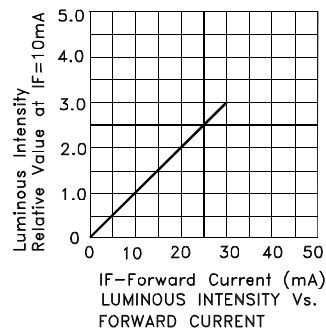
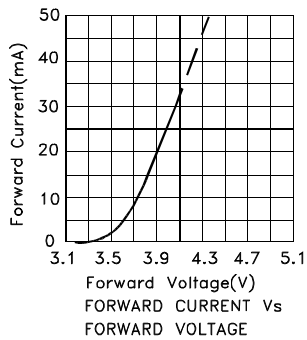
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

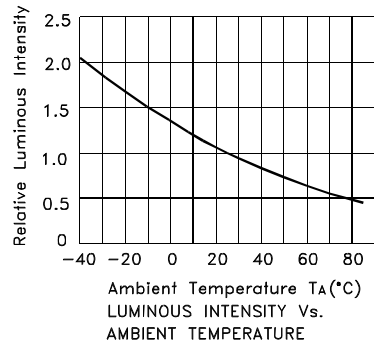
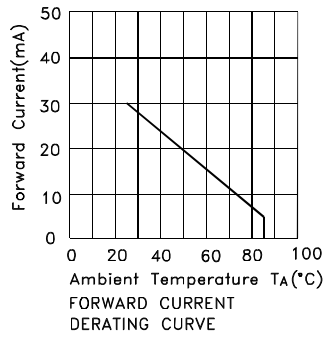
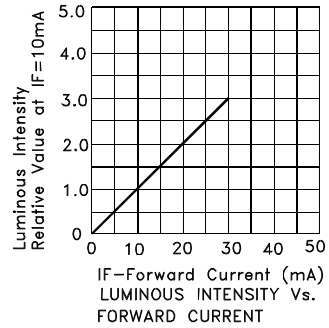
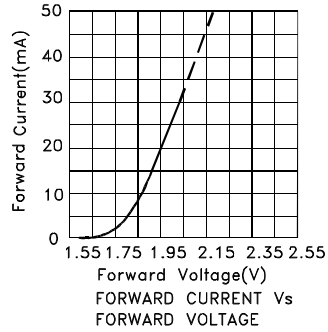
2. 2mm below package base.



Hyper Red

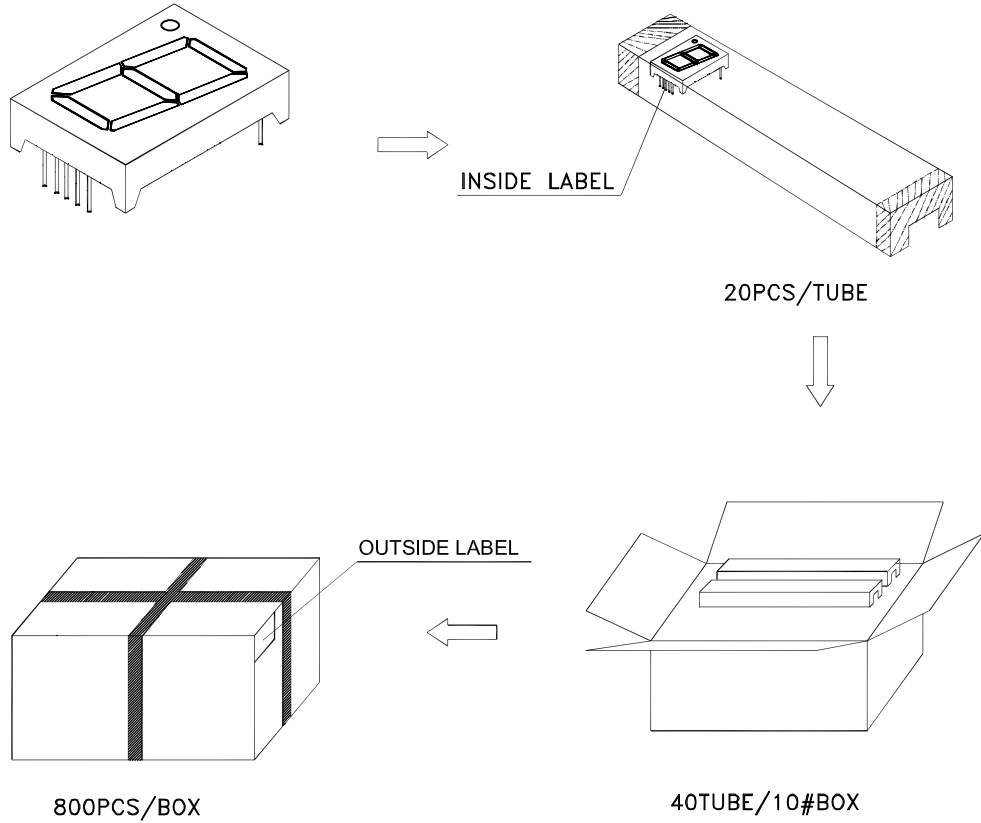
SC10-21SURKWA



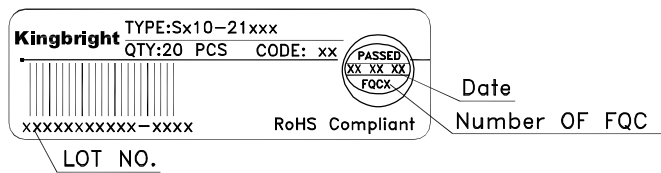


PACKING & LABEL SPECIFICATIONS

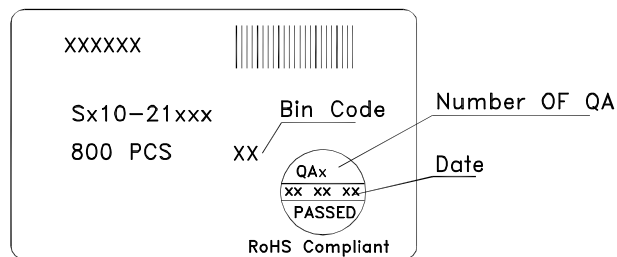
SC10-21SURKWA



Inside Label On IC-tube



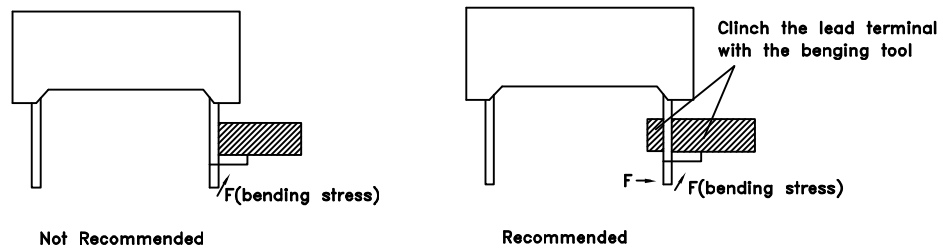
Outside Label On Box



THROUGH HOLE DISPLAY MOUNTING METHOD

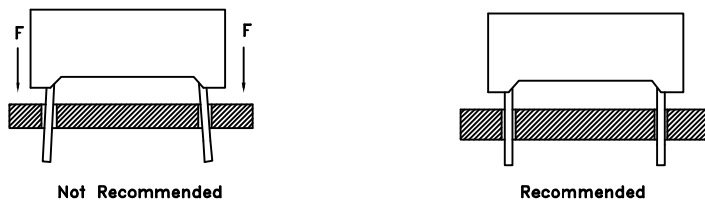
Lead Forming

Do not bend the component leads by hand without proper tools.
The leads should be bent by clinching the upper part of the lead firmly such that the bending force is not exerted on the plastic body.

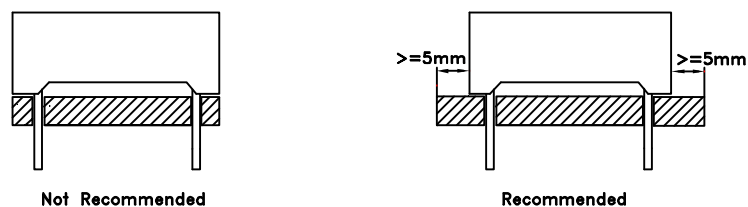


Installation

- 1.The installation process should not apply stress to the lead terminals.
- 2.When inserting for assembly, ensure the terminal pitch matches the substrate board's hole pitch to prevent spreading or pinching the lead terminals.

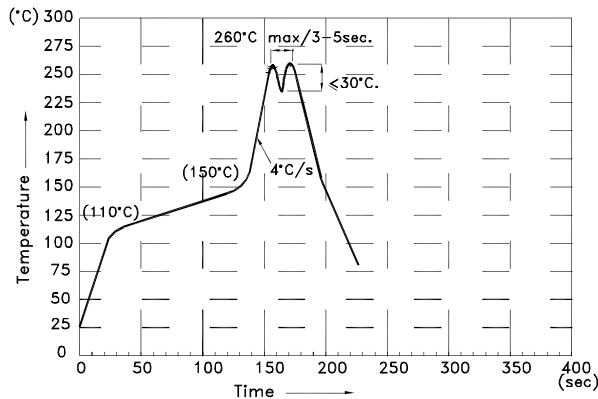


- 3.The component shall be placed at least 5mm from edge of PCB to avoid damage caused excessive heat during wave soldering.



DISPLAY SOLDERING CONDITIONS

Wave Soldering Profile For Lead-free Through-hole LED.



NOTES:

1. Recommend the wave temperature 245°C~260°C. The maximum soldering temperature should be less than 260°C.
2. Do not apply stress on epoxy resins when temperature is over 85°C.
3. The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).
4. During wave soldering, the PCB top-surface temperature should be kept below 105°C
5. No more than once.

Soldering General Notes:

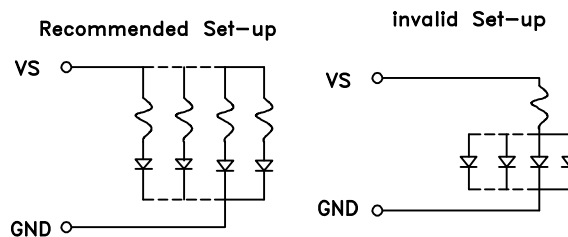
1. Through-hole displays are incompatible with reflow soldering.
2. If components will undergo multiple soldering processes, or other processes where the components may be subjected to intense heat, please check with Kingbright for compatibility.

CLEANING

1. Mild "no-clean" fluxes are recommended for use in soldering.
2. If cleaning is required, Kingbright recommends to wash components with water only. Do not use harsh organic solvents for cleaning, because they may damage the plastic parts. And the devices should not be washed for more than one minute.

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.



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