

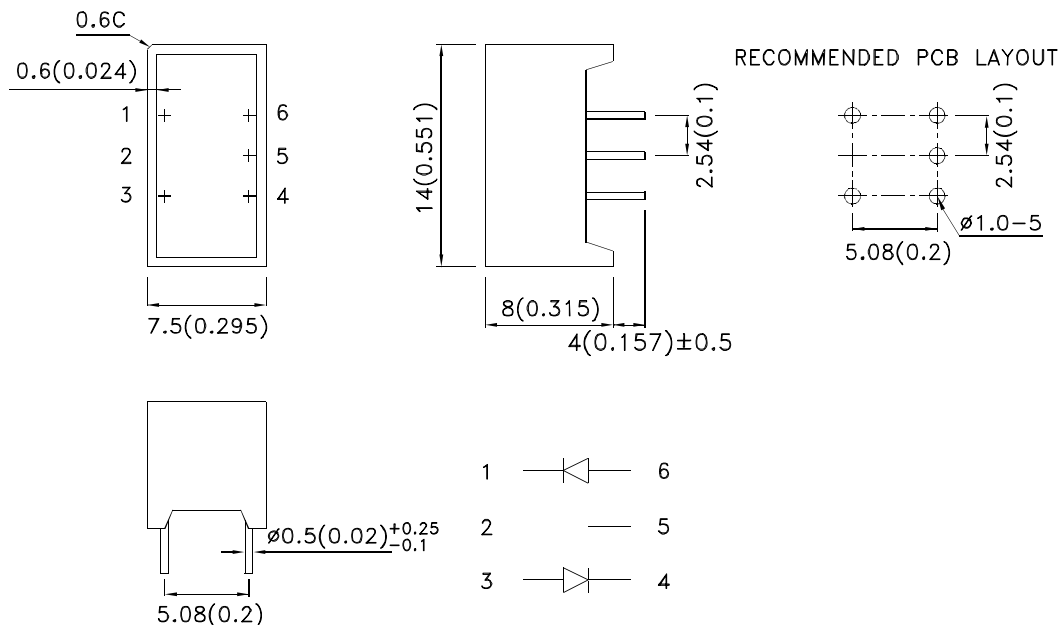
Features

- Uniform light emitting area.
- Easily mounted on P.C. boards or industry standard sockets.
- Flush mountable.
- Excellent on/off contrast.
- Can be used with panels and legend mounts.
- Mechanically rugged
- 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.



Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [1] @ 20mA	
			Min.	Typ.
DE2SYKD	Super Bright Yellow (AlGaInP)	Yellow Diffused	700	1100
			*200	*340

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
λ_{peak}	Peak Wavelength	Super Bright Yellow	590		nm	I _F =20mA
λ_D [1]	Dominant Wavelength	Super Bright Yellow	590		nm	I _F =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Super Bright Yellow	20		nm	I _F =20mA
C	Capacitance	Super Bright Yellow	20		pF	V _F =0V; f=1MHz
V _F [2]	Forward Voltage	Super Bright Yellow	2.0	2.5	V	I _F =20mA
I _R	Reverse Current	Super Bright Yellow		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.

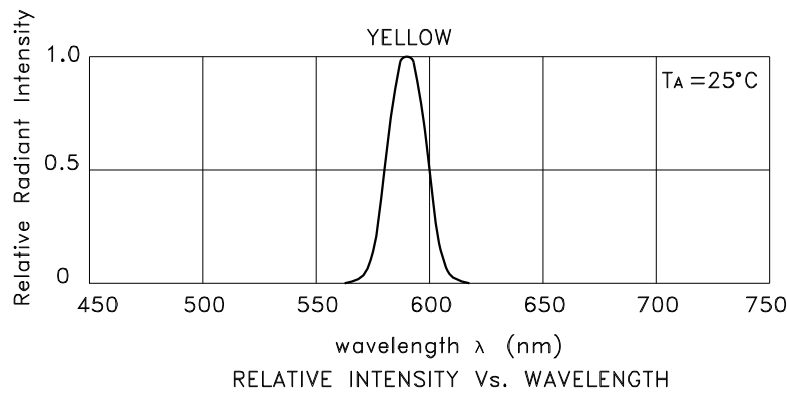
Absolute Maximum Ratings at TA=25°C

Parameter	Super Bright Yellow	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	
Lead Solder Temperature[2]	260°C For 3-5 Seconds	

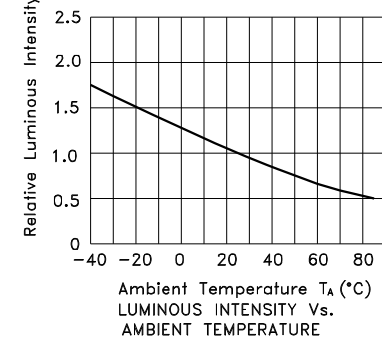
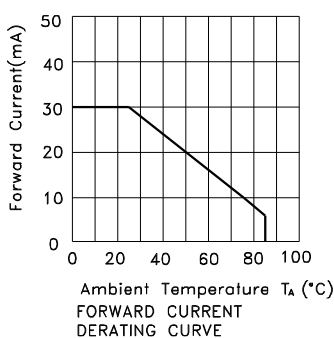
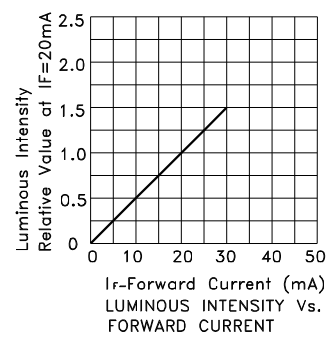
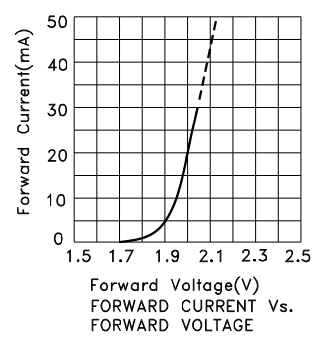
Notes:

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

2. 2mm below package base.

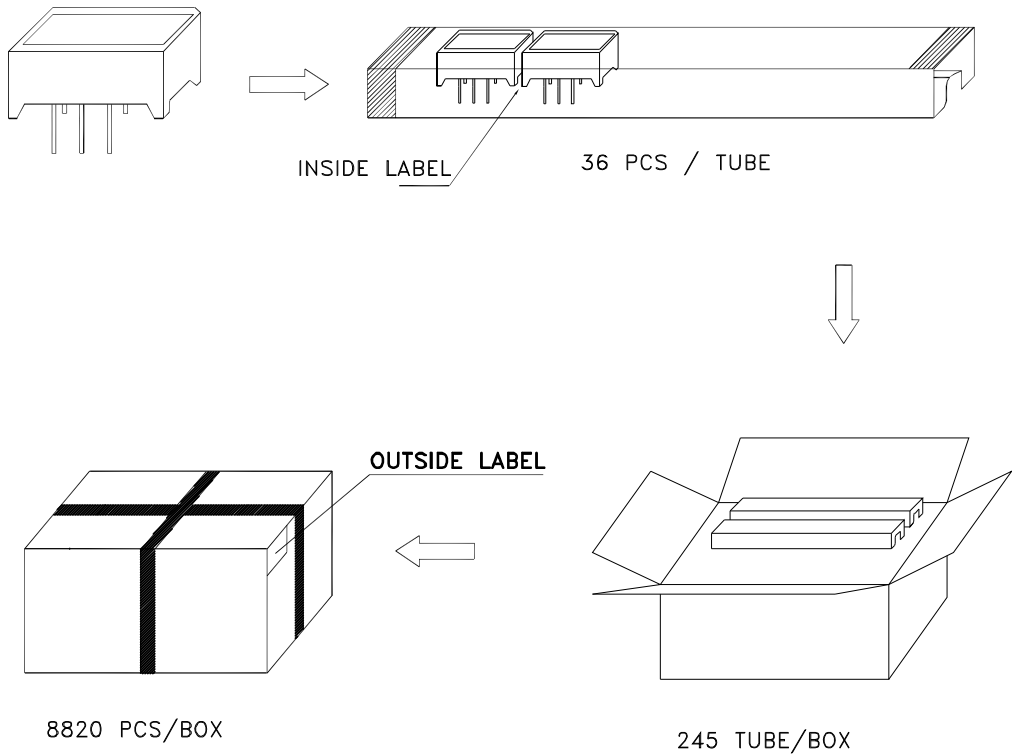


Super Bright Yellow DE2SYKD



PACKING & LABEL SPECIFICATIONS

DE2SYKD



Inside Label On IC-tube

Kingbright	TYPE: DE2xxx	QTY: 36 PCS	CODE: xx	PASSED xx xx xx FQCX	Date
XXXXXXXXXX-XXXX				Number OF FQC	
RoHS Compliant					
LOT NO.					

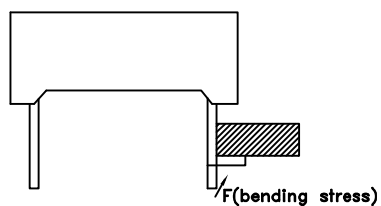
Outside Label On Box

XXXXXX					
DE2xxx	Bin Code	Number OF QA			
8820 PCS	XX	QAx xx xx xx PASSED	Date		
RoHS Compliant					

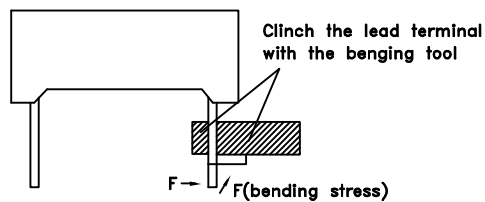
THROUGH HOLE DISPLAY MOUNTING METHOD

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.



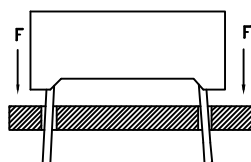
Not Recommended



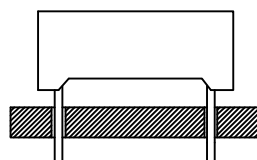
Recommended

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.

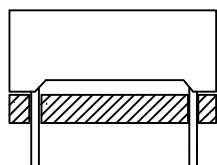


Not Recommended

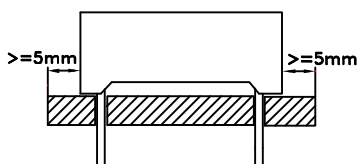


Recommended

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



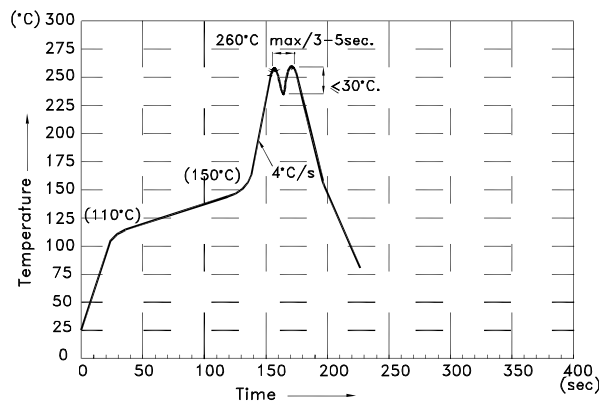
Not Recommended



Recommended

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:

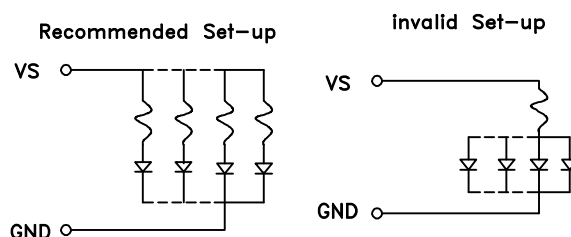
1. Through-hole displays are incompatible with reflow soldering.
2. If components will undergo multiple soldering processes, or other processes where the components may be subjected to intense heat, please check with Kingbright for compatibility.

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>