

Part Number: DC4G3Y3EWA

Green
Yellow
High Efficiency Red

Features

- Suitable for level indicators.
- Low current operation.
- Excellent on/off contrast.
- End stackable.
- Mechanically rugged.
- Standard : gray face, white segment.
- RoHS compliant.

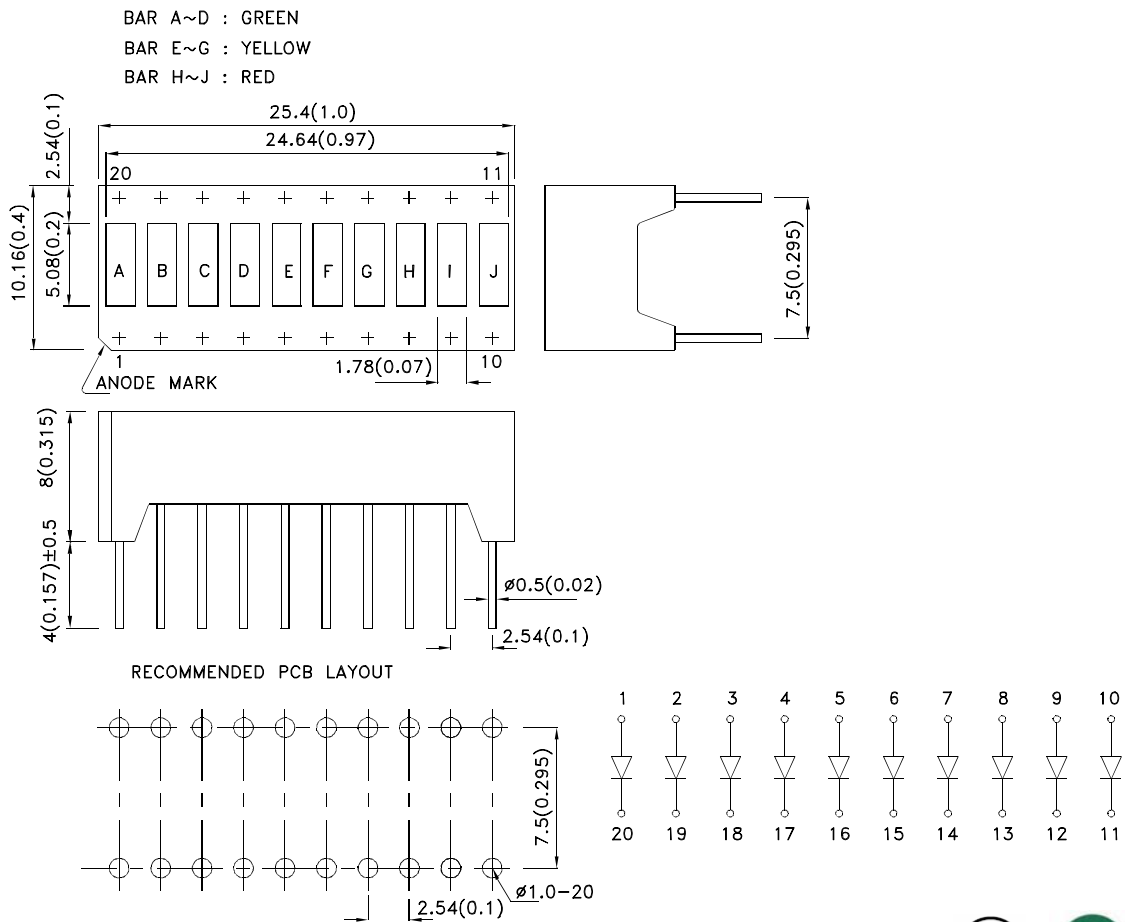
Description

The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange 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.	
DC4G3Y3EWA	Green (GaP)	White Diffused	5600	12000	10 Segments Bar graph-Display 4 x Green 3 x Yellow 3 x High Efficiency Red
	Yellow (GaAsP/GaP)		2200	9000	
	High Efficiency Red (GaAsP/GaP)		3600	9000	

Note:

1. Luminous intensity/ luminous Flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	Green Yellow High Efficiency Red	565 590 627		nm	I _F =20mA
λ_D [1]	Dominant Wavelength	Green Yellow High Efficiency Red	568 588 625		nm	I _F =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Green Yellow High Efficiency Red	30 35 45		nm	I _F =20mA
C	Capacitance	Green Yellow High Efficiency Red	15 20 15		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	Green Yellow High Efficiency Red	2.2 2.1 2.0	2.5 2.5 2.5	V	I _F =20mA
I _R	Reverse Current	Green Yellow High Efficiency Red		10 10 10	uA	V _R =5V

Notes:

1. Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

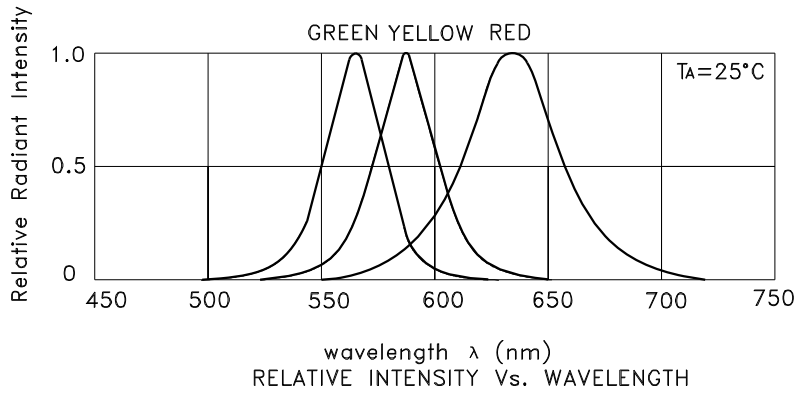
Absolute Maximum Ratings at TA=25°C

Parameter	Green	Yellow	High Efficiency Red	Units
Power dissipation	62.5	75	75	mW
DC Forward Current	25	30	30	mA
Peak Forward Current [1]	140	140	160	mA
Reverse Voltage	5			V
Operating/Storage Temperature	-40°C To +85°C			
Lead Solder Temperature [2]	260°C For 3-5 Seconds			

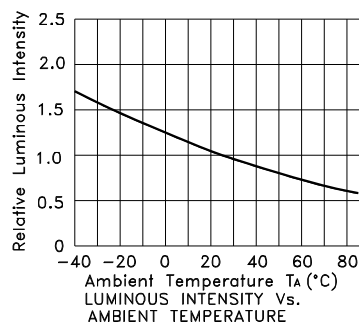
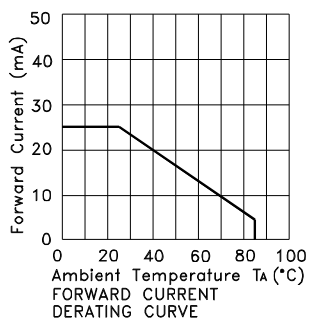
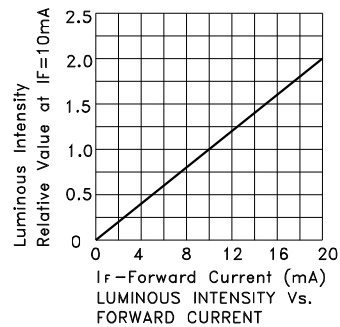
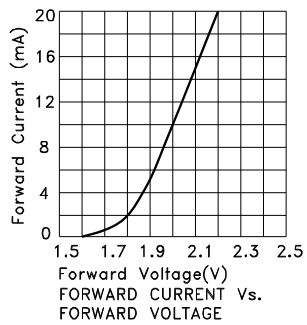
Notes:

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

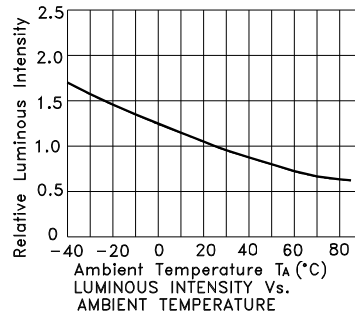
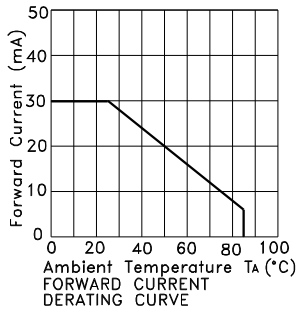
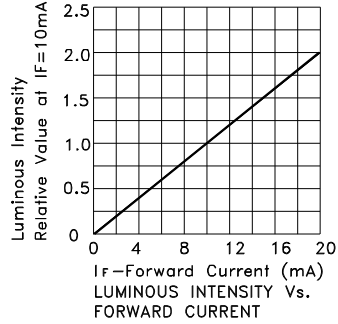
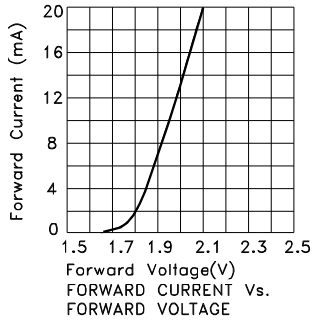
2. 2mm below package base.



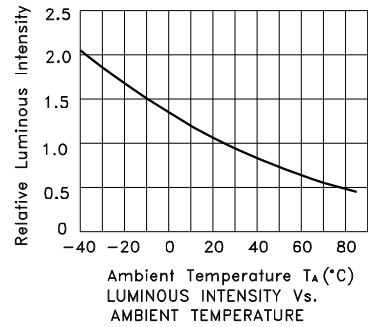
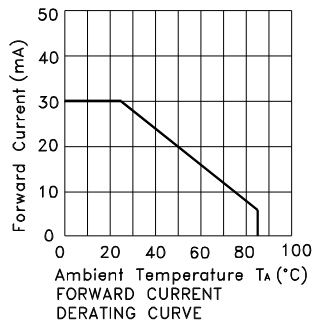
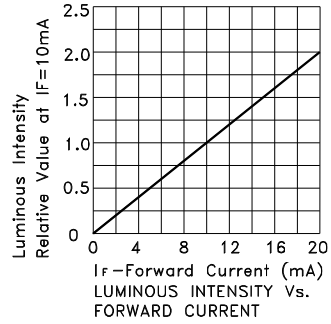
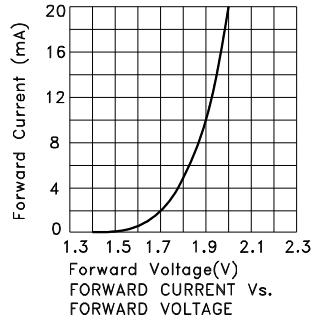
DC4G3Y3EWA Green



Yellow

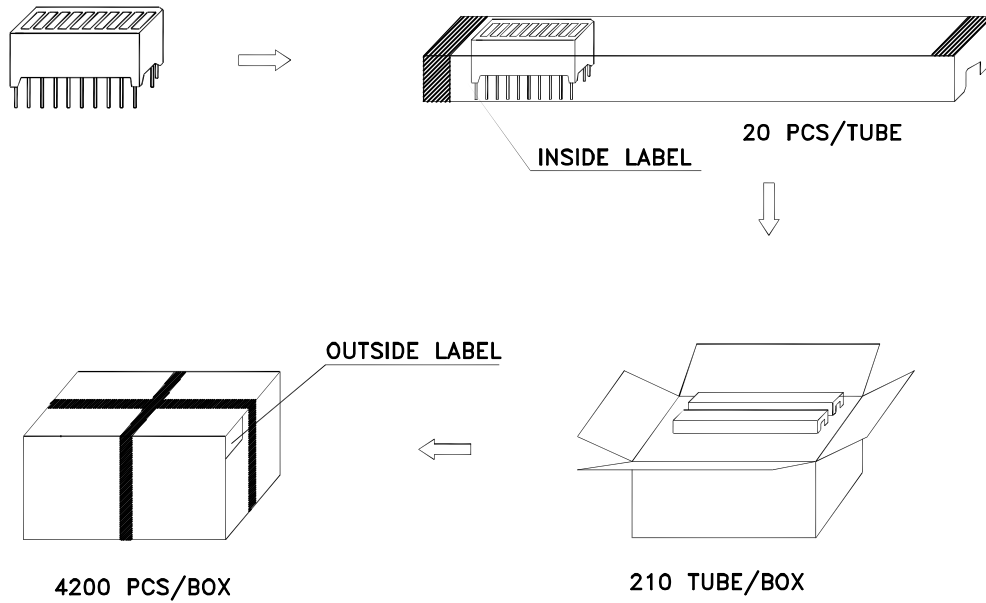


High Efficiency Red

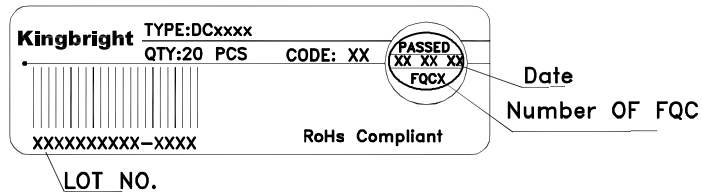


PACKING & LABEL SPECIFICATIONS

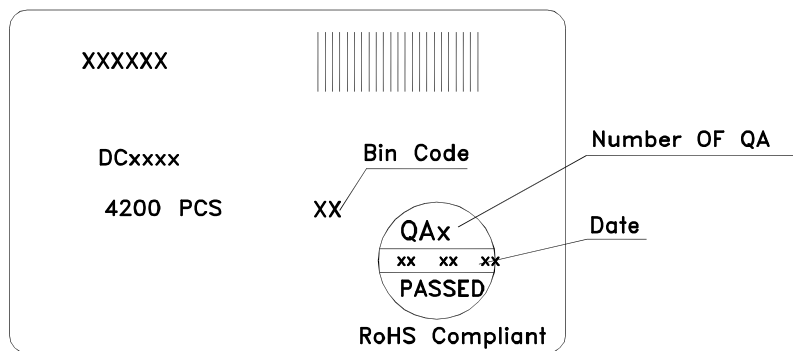
DC4G3Y3EWA



Inside Label On IC-tube



Outside Label On Box



PRECAUTIONS

1. The lead pitch of the LED must match the pitch of the mounting holes on the PCB during component placement. Lead-forming may be required to insure the lead pitch matches the hole pitch. Refer to the figure below for proper lead forming procedures. (Fig. 1)

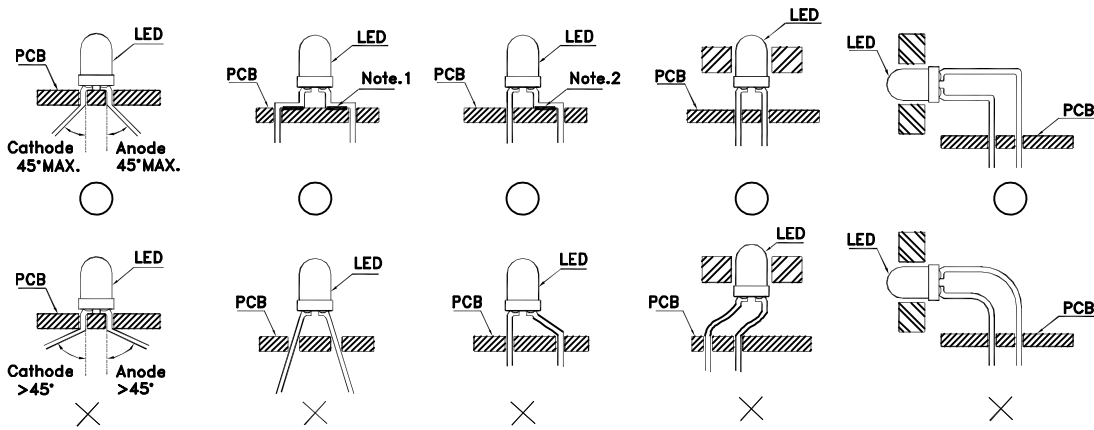


Fig.1

”○” Correct mounting method ”×” Incorrect mounting method

2. When soldering wire to the LED, use individual heat-shrink tubing to insulate the exposed leads to prevent accidental contact short-circuit. (Fig.2)

3. Use stand-offs (Fig.3) or spacers (Fig.4) to securely position the LED above the PCB.

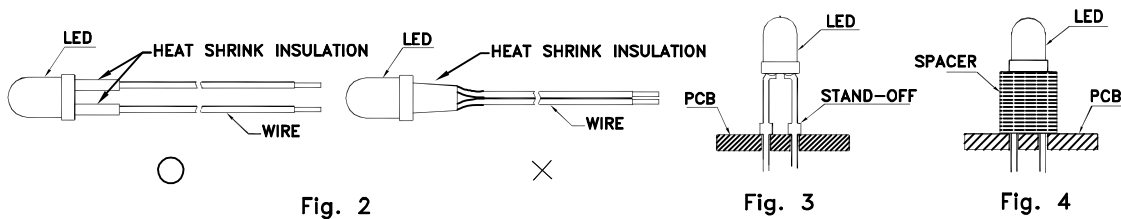


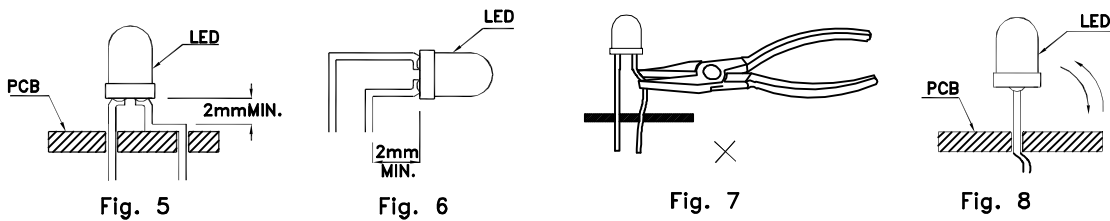
Fig. 2

Fig. 3

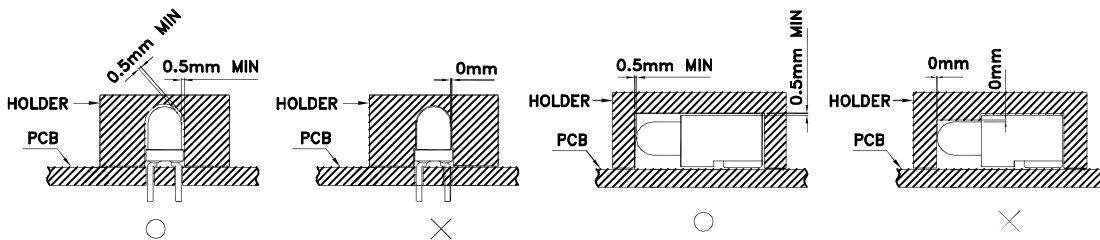
Fig. 4

4. Maintain a minimum of 2mm clearance between the base of the LED lens and the first lead bend. (Fig. 5 and 6)
5. During lead forming, use tools or jigs to hold the leads securely so that the bending force will not be transmitted to the LED lens and its internal structures. Do not perform lead forming once the component has been mounted onto the PCB. (Fig. 7)

6. Do not bend the leads more than twice. (Fig. 8)



7. During soldering, component covers and holders should leave clearance to avoid placing damaging stress on the LED during soldering.

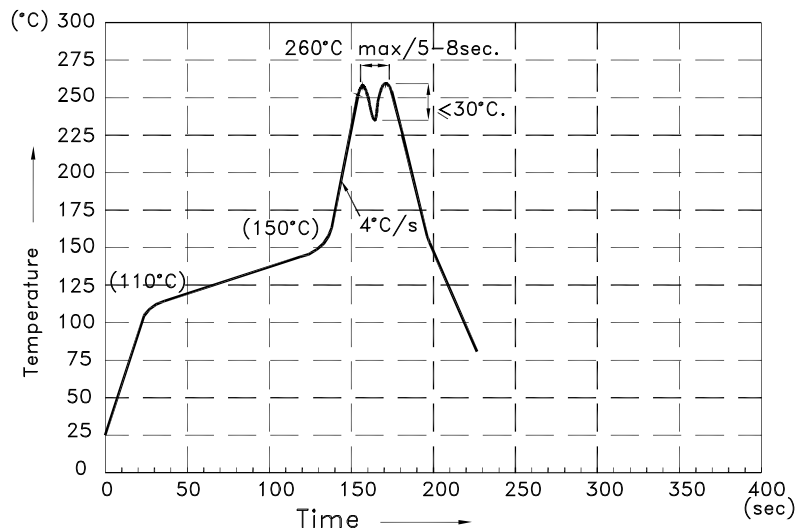


8. The tip of the soldering iron should never touch the lens epoxy.

9. Through-hole LEDs are incompatible with reflow soldering.

10. If the LED will undergo multiple soldering passes or face other processes where the part may be subjected to intense heat, please check with Kingbright for compatibility.

11. Recommended Wave Soldering Profile for Kingbright Thru-Hole Products



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.

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