

Part Number: L-93A8AFQ/2ID-RV

High Efficiency Red

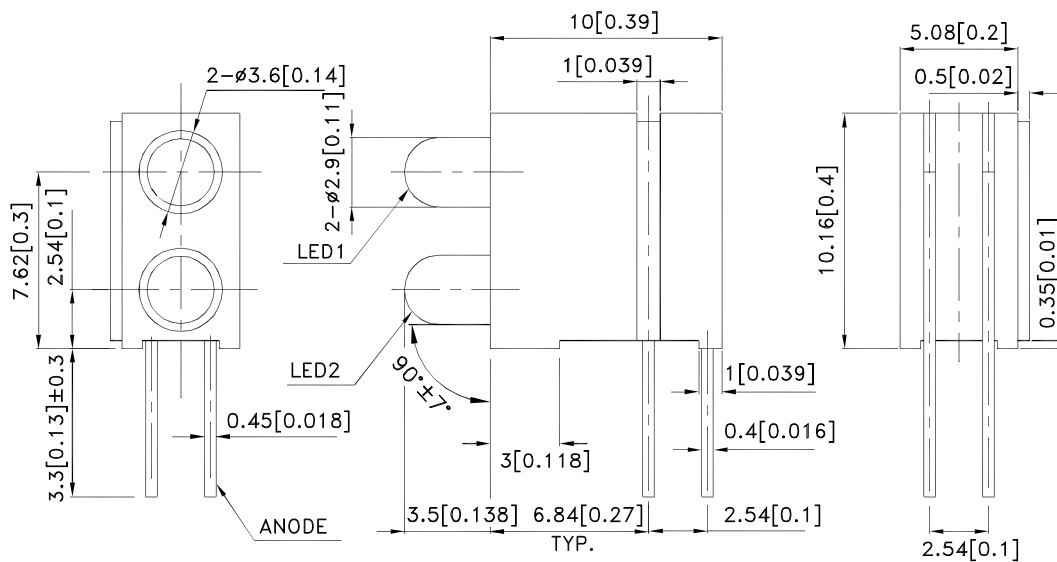
### Features

- Pre-trimmed leads for pc mounting.
- Black case enhances contrast ratio.
- High reliability life measured in years.
- Housing UL rating:94V-0.
- Housing material: type 66 nylon.
- RoHS compliant.

### Description

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm$ 0.25(0.01") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. 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) [2] @ 10mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
L-93A8AFQ/2ID-RV	High Efficiency Red (GaAsP/GaP)	Red Diffused	12	25	60°
			*6	*12	

**Notes:**

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
  2. 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 <sub>peak</sub>	Peak Wavelength	High Efficiency Red	627	*627		nm	I <sub>F</sub> =20mA
λ <sub>D</sub> [1]	Dominant Wavelength	High Efficiency Red	625	*617		nm	I <sub>F</sub> =20mA
Δλ <sub>1/2</sub>	Spectral Line Half-width	High Efficiency Red	45			nm	I <sub>F</sub> =20mA
C	Capacitance	High Efficiency Red	15			pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	High Efficiency Red	2		2.5	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	High Efficiency Red			10	uA	V <sub>R</sub> = 5V

**Notes:**

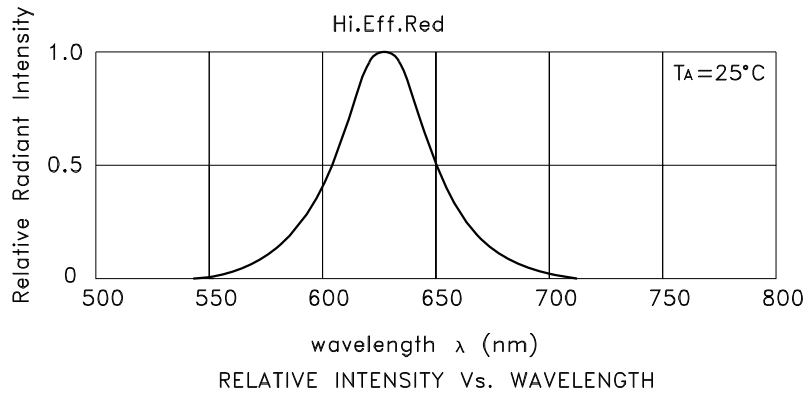
1. Wavelength: +/-1nm.
  2. Forward Voltage: +/-0.1V.
- \*Wavelength value is traceable to the CIE127-2007 compliant national standards.

## Absolute Maximum Ratings at TA=25°C

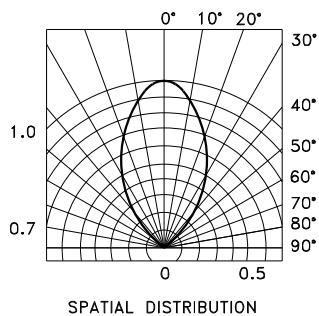
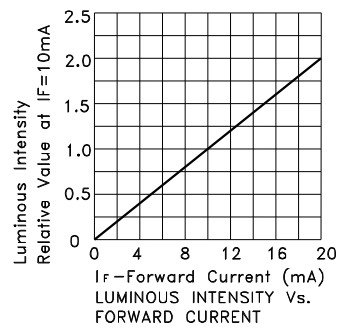
Parameter	High Efficiency Red	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	160	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	
Lead Solder Temperature [2]	260°C For 3 Seconds	
Lead Solder Temperature [3]	260°C For 5 Seconds	

**Notes:**

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.



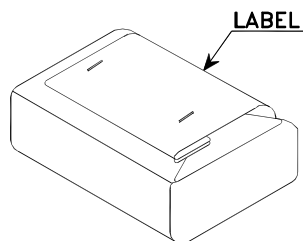
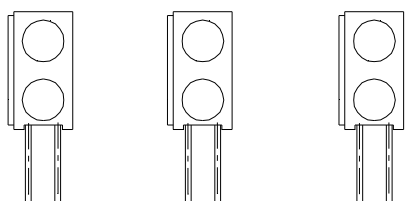
## High Efficiency Red L-93A8AFQ/2ID-RV



# Kingbright

## PACKING & LABEL SPECIFICATIONS

L-93A8AFQ/2ID-RV

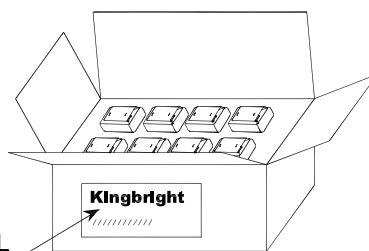


500PCS / BAG



20K / 9# BOX

OUTSIDE LABEL



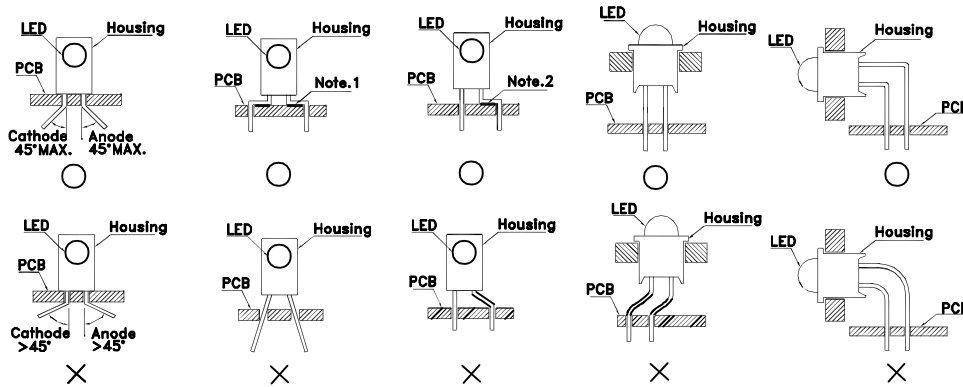
OUTSIDE LABEL

10K / 5# BOX

<h1>Kingbright</h1>		
P/NO: L-93A8AFQxxx		
QTY: 500 pcs	Q.C.	
S/N: XXXX		
CODE: XXX		
LOT NO:		
RoHS Compliant		

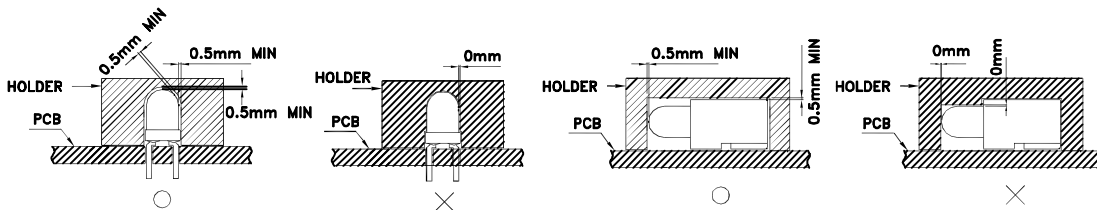
## PRECAUTIONS

- 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.

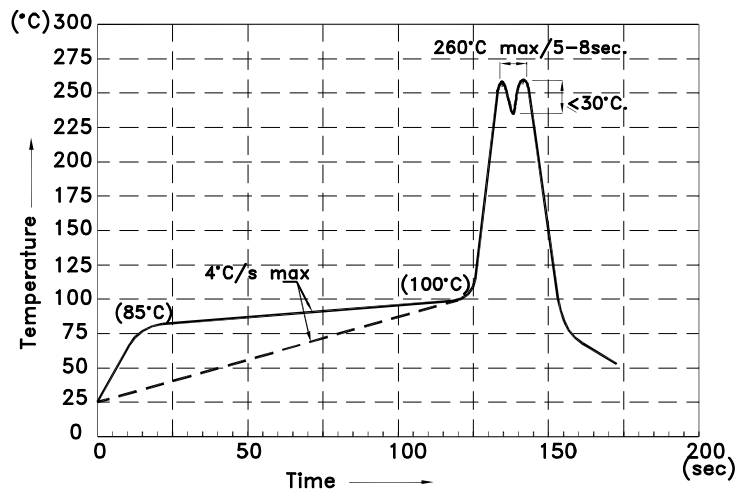


”○” Correct mounting method ”×” Incorrect mounting method

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



- The tip of the soldering iron should never touch the lens epoxy.
- Through-hole LEDs are incompatible with reflow soldering.
- 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.
- Recommended Wave Soldering Profile for Kingbright Thru-Hole Products



### Notes:

- Recommend the solder wave peak temperature kept between 245~260°C. The maximum soldering temperature should not exceed 260°C.
- Do not apply stress to the epoxy body while the temperature is above 85°C.
- During the wave soldering process, the preheat temperature must not exceed 100°C.
- Fixtures should not place stress on the component when mounted.
- No more than one soldering pass.