Kingbright

Part Number: WP4060VH/2SRD   Super Bright Red
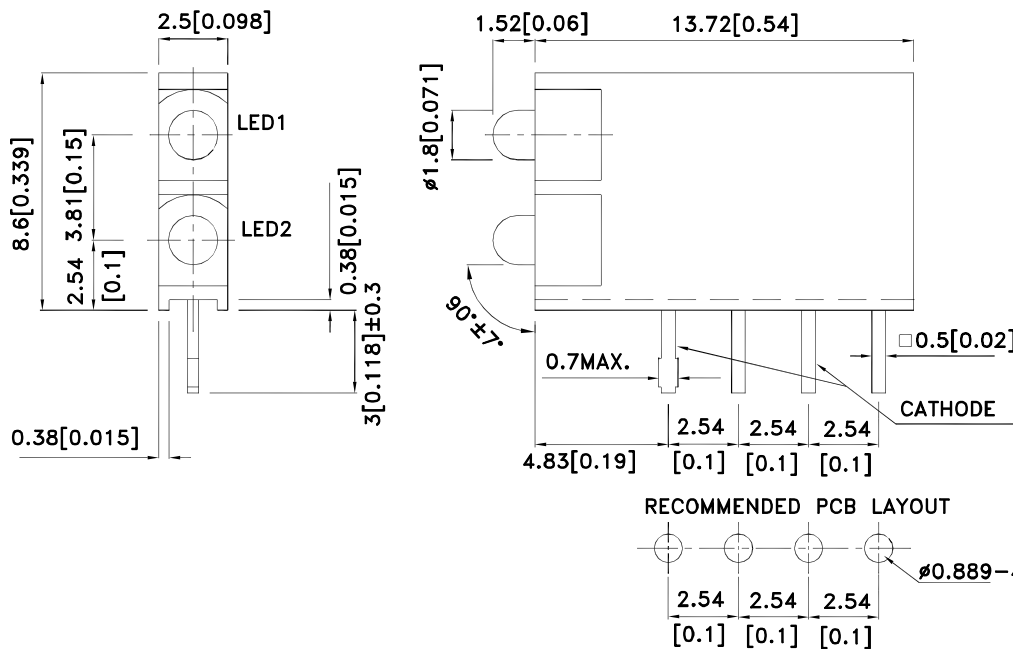
Features

● Pre-trimmed leads for pc mounting.

● Black case enhances contrast ratio.

● Wide viewing angle.

● High reliability life measured in years.

● Housing UL rating:94V-0.

● Housing material: type 66 nylon.

● RoHS compliant.

Description

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.

Package Dimensions

Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±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.

SPEC NO: DSAE9384	REV NO: V.10	DATE: APR/07/2011	PAGE: 1 OF 5
APPROVED: WYNEC	CHECKED: Allen Liu	DRAWN: J.Yu	ERP: 1102013560

Kingbright

Selection Guide

| Part No. | Dice | Lens Type | Iv (mcd) [2] @ 20mA | | Viewing Angle [1] |
			Min.	Typ.	2θ1/2
WP4060VH/2SRD	Super Bright Red (GaAlAs)	Red Diffused	100	250	70°

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%.

Electrical / Optical Characteristics at TA=25°C

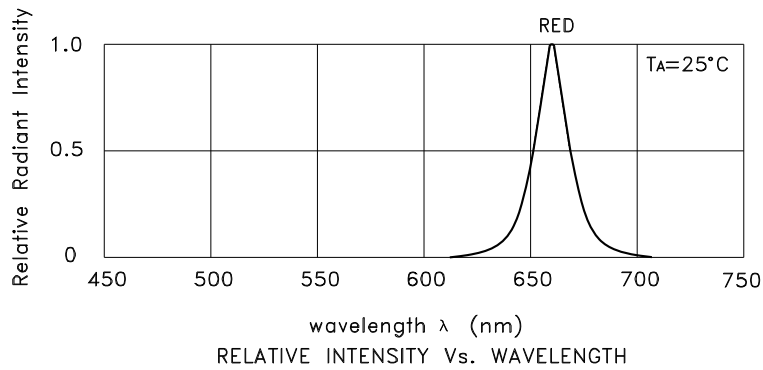| Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Super Bright Red	660		nm	I_F=20mA
λD [1]	Dominant Wavelength	Super Bright Red	640		nm	I_F=20mA
$\Delta\lambda$1/2	Spectral Line Half-width	Super Bright Red	20		nm	I_F=20mA
C	Capacitance	Super Bright Red	45		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	Super Bright Red	1.85	2.5	V	I_F=20mA
I_R	Reverse Current	Super Bright Red		10	uA	V_R = 5V

Notes:
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
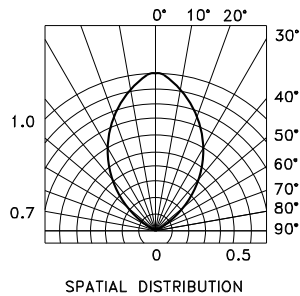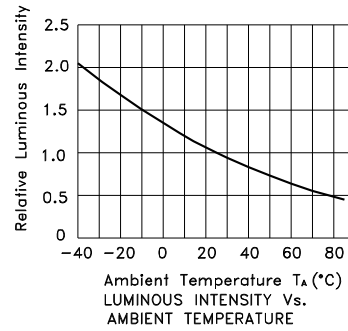
Absolute Maximum Ratings at TA=25°C

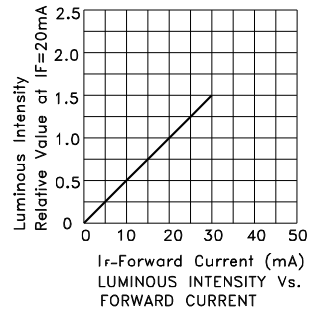| Parameter	Super Bright Red	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	155	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	
Lead Solder Temperature [2]	260°C For 3 Seconds	
Lead Solder Temperature [3]	260°C For 5 Seconds	

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

Kingbright

RELATIVE INTENSITY Vs. WAVELENGTH

Super Bright Red   WP4060VH/2SRD

FORWARD CURRENT Vs.
FORWARD VOLTAGE

LUMINOUS INTENSITY Vs.
FORWARD CURRENT

FORWARD CURRENT
DERATING CURVE

LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

SPATIAL DISTRIBUTION

Kingbright

PACKING & LABEL SPECIFICATIONS   **WP4060VH/2SRD**

190 PCS / IC TUBE

1.52K / 8PCS IC TUBE

OUTSIDE LABEL

LABEL

12.16K / BOX

8PCS IC TUBE / BAG

Kingbright

P/NO: WP4060VHxxx

QTY: 1520 pcs   Q.C.   Q C   XX XX XXXX   PASSED

S/N: XXXX

CODE: XXX

LOT NO:

xxxxxxxxxxxxxxxxxxxxxxxx

RoHS Compliant

SPEC NO: DSAE9384   **REV NO: V.10**   **DATE: APR/07/2011**   **PAGE: 4 OF 5**

APPROVED: WYNEC   **CHECKED: Allen Liu**   **DRAWN: J.Yu**   **ERP: 1102013560**

Kingbright
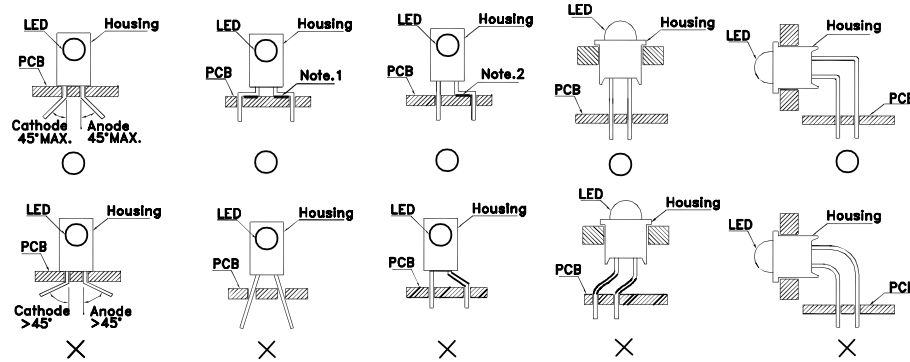
PRECAUTIONS

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.


"◯" Correct mounting method "✕" Incorrect mounting method

2. During soldering, component covers and holders should leave clearance to avoid placing damaging stress on the LED during soldering.
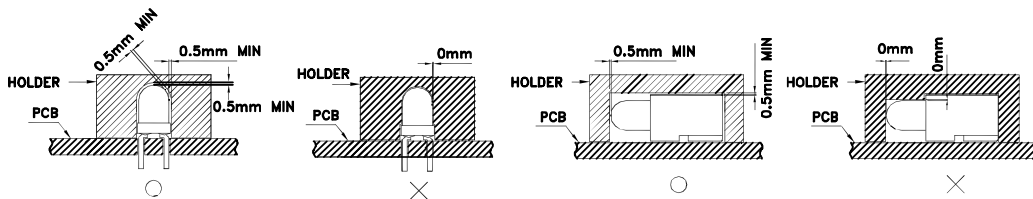
3. The tip of the soldering iron should never touch the lens epoxy.
4. Through–hole LEDs are incompatible with reflow soldering.
5. If the LED will undergo multiple soldering passes or face other processes where the part may be subjected to intense heat, please check with Kingbright for compatibility.
6. Recommended Wave Soldering Profile for Kingbright Thru–Hole Products
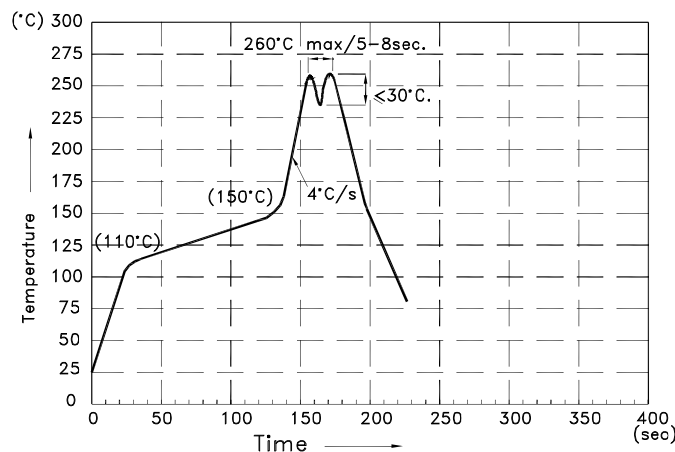
NOTES:
1. Recommend the wave temperature 245°C~260°C.The maximum soldering temperature should be less than 260°C.
2. Do not apply stress on epoxy resins when temperature is over 85°C.
3. The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).
4. During wave soldering, the PCB top–surface temperature should be kept below 105°C.
5. No more than once.