ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: WP1533AA/SRD14V-W152

Super Bright Red

Features

- Outstanding material efficiency.
- Reliable and rugged.
- Low current capability.
- Housing UL rating:94V-0.
- Housing material: type 66 nylon.
- 14V internal resistor.
- RoHS compliant.

Description

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

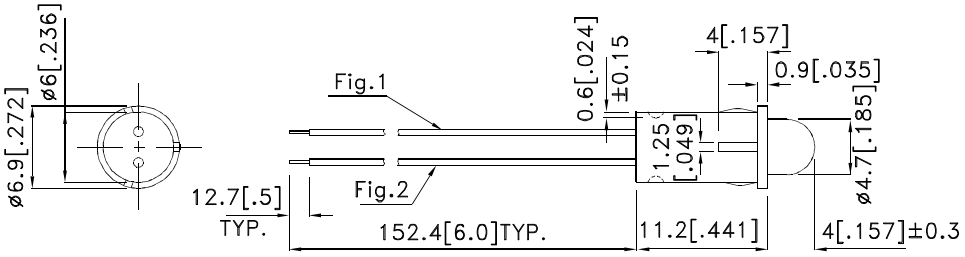
Static electricity and surge damage the LEDS.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

Package Dimensions

Fig.1 :
ANODE LEAD :RED INSULATION LEAD ,24 AWG ,UL#1007,ø1.45mm,
TINNED OVERCOATED WIRE , STRIP 12.7mm.
Fig. 2 :
CATHODE LEAD :BLACK INSULATION LEAD ,24 AWG,UL#1007 ,ø1.45mm,
TINNED OVERCOATED WIRE , STRIP 12.7mm.
Fig.3 :
STAKING TO FIX THE HOLDER AND LED .



Remark:
Recommended panel mount hole diameterφ=6.30-6.35mm;
panel thickness 1.0mm.

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.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] V= 14V		Viewing Angle [1]
			Min.	Typ.	2θ1/2
WP1533AA/SRD14V-W152	Super Bright Red (GaAlAs)	Red Diffused	150	300	60°
			*50	*100	

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

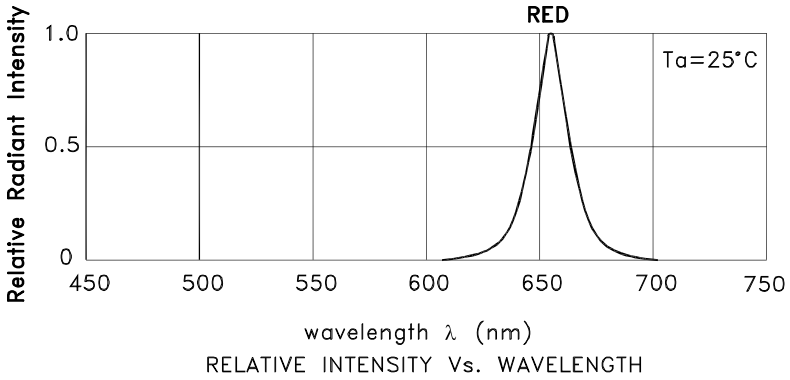
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Super Bright Red	655		nm	V_F=14V
λD [1]	Dominant Wavelength	Super Bright Red	640		nm	V_F=14V
Δλ1/2	Spectral Line Half-width	Super Bright Red	20		nm	V_F=14V
I_F	Forward Current	Super Bright Red	10.5	13.5	mA	V_F=14V
I_R	Reverse Current	Super Bright Red		10	uA	V_R = 5V

Notes:
1.Wavelength: +/-1nm.
2.Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

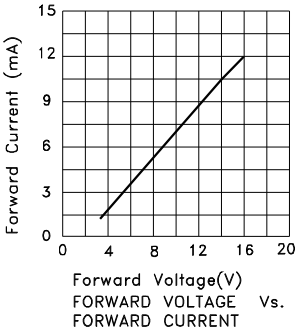
Parameter	Super Bright Red	Units
Power dissipation	160	mW
Forward Voltage	16	V
Reverse Voltage	5	V
Operating Temperature	-40°C To +70°C	
Storage Temperature	-40°C To +85°C	
Lead Solder Temperature [1]	260°C For 3 Seconds	
Lead Solder Temperature [2]	260°C For 5 Seconds	

Notes:
1. 2mm below package base.
2. 5mm below package base.

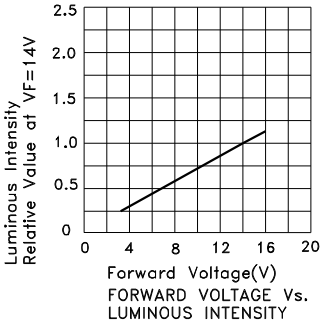


RELATIVE INTENSITY Vs. WAVELENGTH

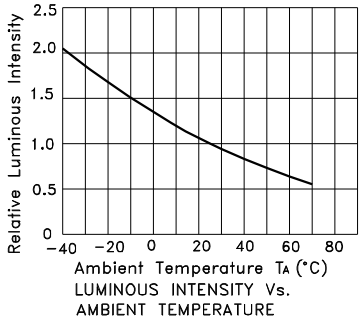
Super Bright Red **WP1533AA/SRD14V-W152**



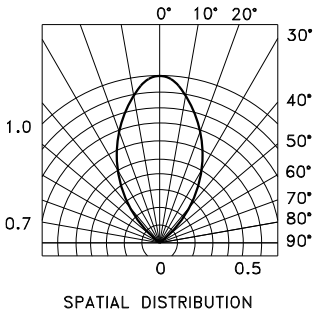
FORWARD VOLTAGE Vs. FORWARD CURRENT



FORWARD VOLTAGE Vs. LUMINOUS INTENSITY

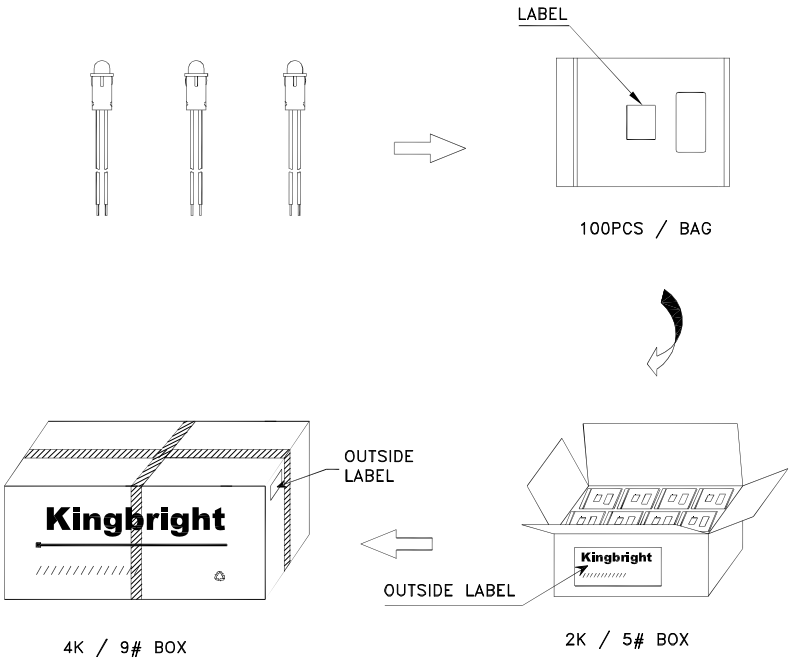


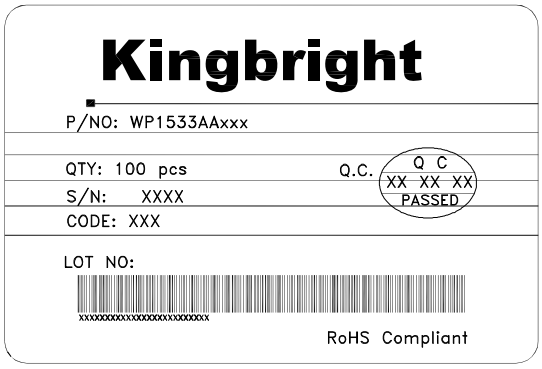
LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

PACKING & LABEL SPECIFICATIONS **WP1533AA/SRD14V-W152**





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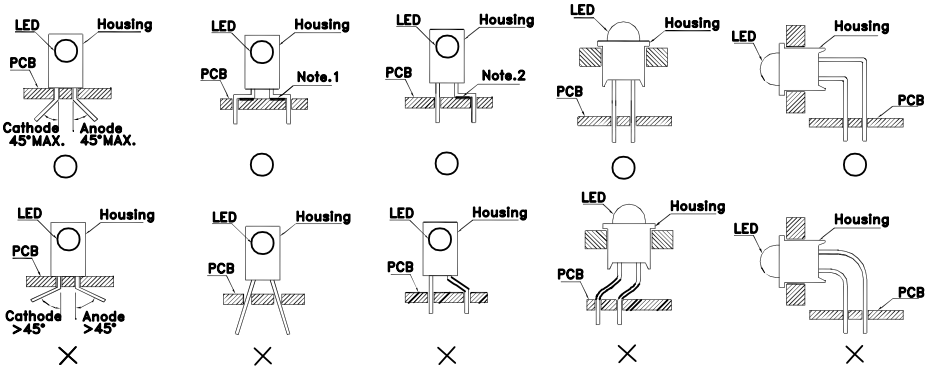
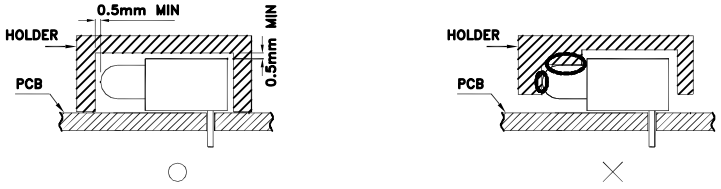
PRECAUTIONS

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.

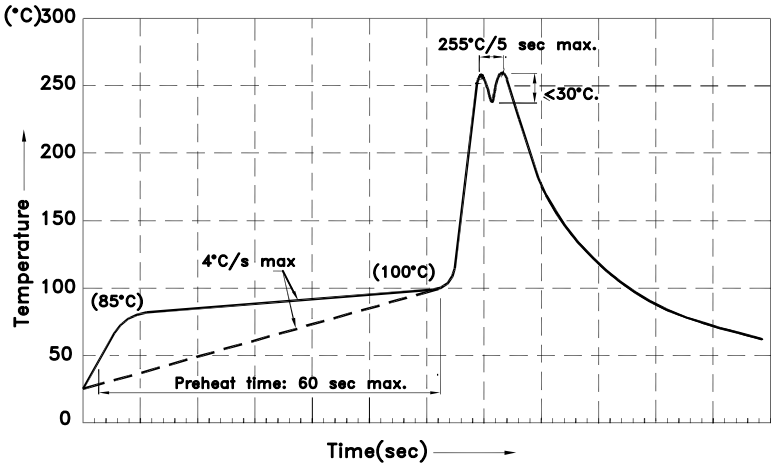


"○" Correct mounting method "×" Incorrect mounting method

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 Profiles:



Notes:

1. Recommend pre–heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
2. Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).
3. Do not apply stress to the epoxy resin while the temperature is above 85°C.
4. Fixtures should not incur stress on the component when mounting and during soldering process.
5. SAC 305 solder alloy is recommended.
6. No more than one wave soldering pass.