



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 :

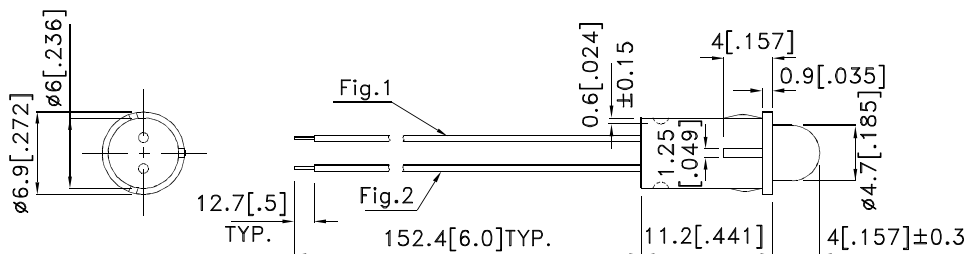
ANODE LEAD :RED INSULATION LEAD ,24 AWG ,UL#1007,Ø1.45mm,
TINNED OVERCOATED WIRE , STRIP 12.7mm.

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 diameter $\phi=6.30-6.35\text{mm}$;
panel thickness 1.0mm.

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01\text{'})$ 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
λ _{peak}	Peak Wavelength	Super Bright Red	655		nm	V _F =14V
λ _D [1]	Dominant Wavelength	Super Bright Red	640		nm	V _F =14V
Δλ _{1/2}	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:

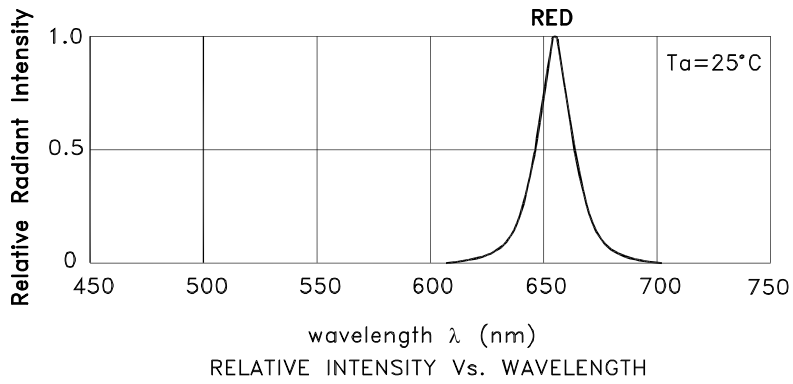
- 1.Wavelength: +/-1nm.
- 2.Wavelength value is traceable to the CIE127-2007 compliant national standards.

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	

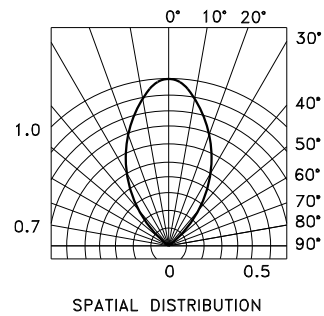
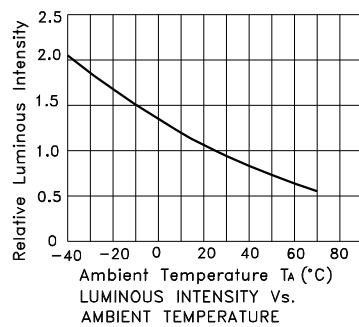
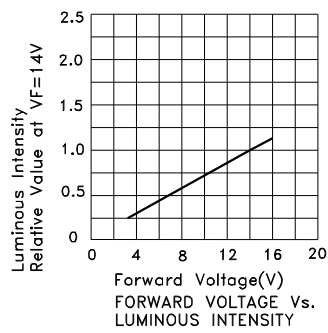
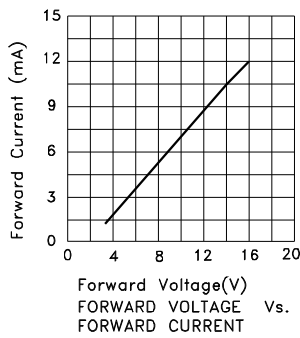
Notes:

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



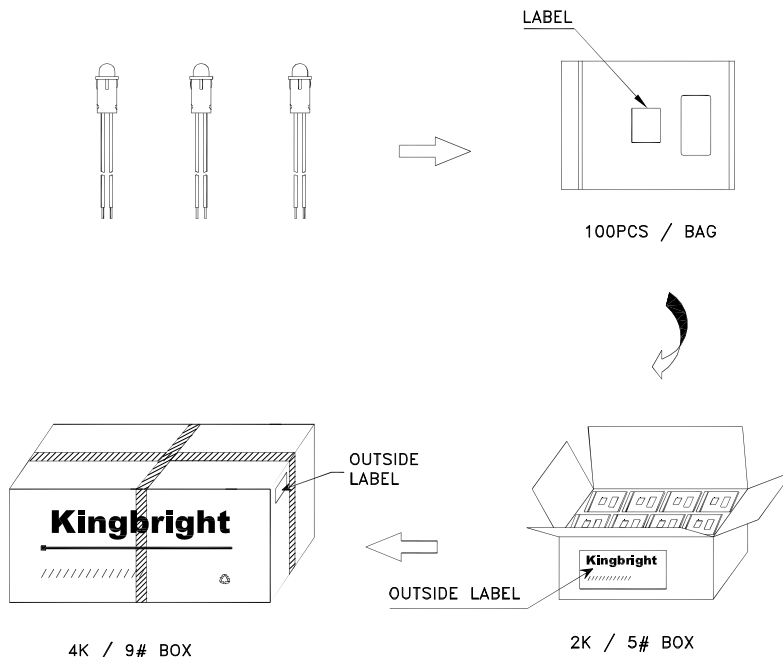
Super Bright Red


WP1533AA/SRD14V-W152



PACKING & LABEL SPECIFICATIONS

WP1533AA/SRD14V-W152



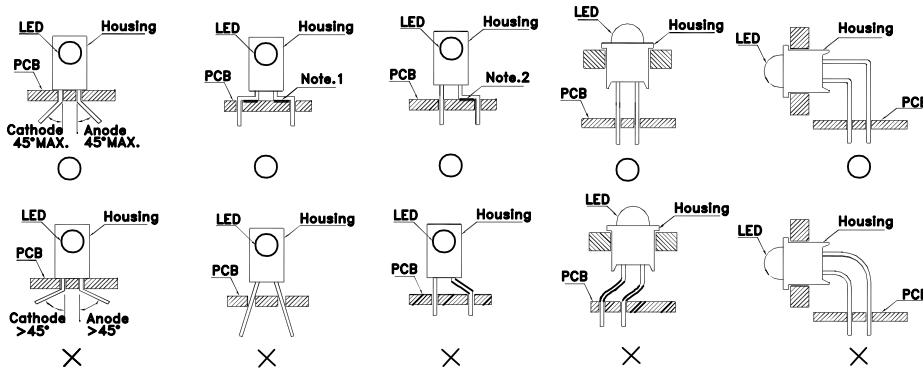
Kingbright	
P/NO: WP1533AAxxx	
QTY: 100 pcs	Q.C. Q C XX XX XX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
	
RoHS Compliant	

Terms and conditions for the usage of this document

- 1.The information included in this document reflects representative usage scenarios and is intended for technical reference only.
- 2.The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications.
- 3.When using the products referenced in this document, please make sure the product is being operated within the environmental and electrical limits specified in the datasheet. If customer usage exceeds the specified limits, Kingbright will not be responsible for any subsequent issues.
- 4.The information in this document applies to typical usage in consumer electronics applications. If customer's application has special reliability requirements or have life-threatening liabilities, such as automotive or medical usage, please consult with Kingbright representative for further assistance.
- 5.The contents and information of this document may not be reproduced or re-transmitted without permission by Kingbright.
- 6.All design applications should refer to Kingbright application notes available at <http://www.KingbrightUSA.com/ApplicationNotes>

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.

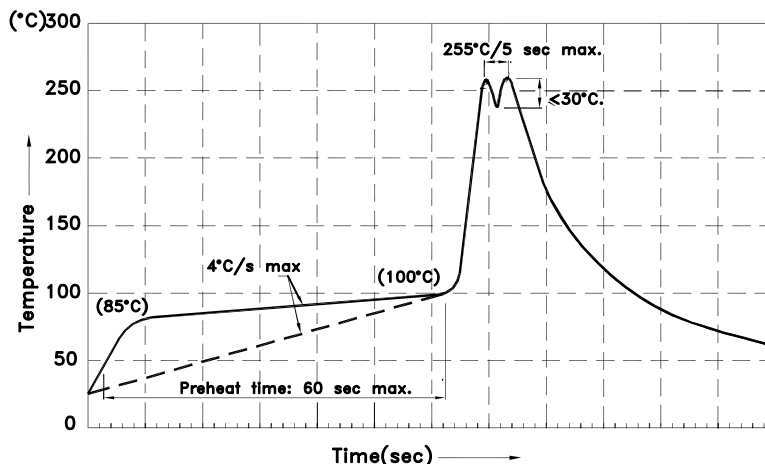


”○” Correct mounting method ”×” Incorrect mounting method

- 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 Profiles:



Notes:

- 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
- Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).
- Do not apply stress to the epoxy resin while the temperature is above 85°C.
- Fixtures should not incur stress on the component when mounting and during soldering process.
- SAC 305 solder alloy is recommended.
- No more than one wave soldering pass.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Kingbright:](#)

[WP1533AA/SRD14V-W152](#)