

### PRELIMINARY SPEC



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

Part Number: WP154A4SUREQBFZGW/CA

Hyper Red  
Blue  
Green

### Features

- Uniform light output.
- Low power consumption.
- Long life-solid state reliability.
- RoHS compliant.

### Description

The Hyper Red source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

The Blue source color devices are made with InGaN Light Emitting Diode.

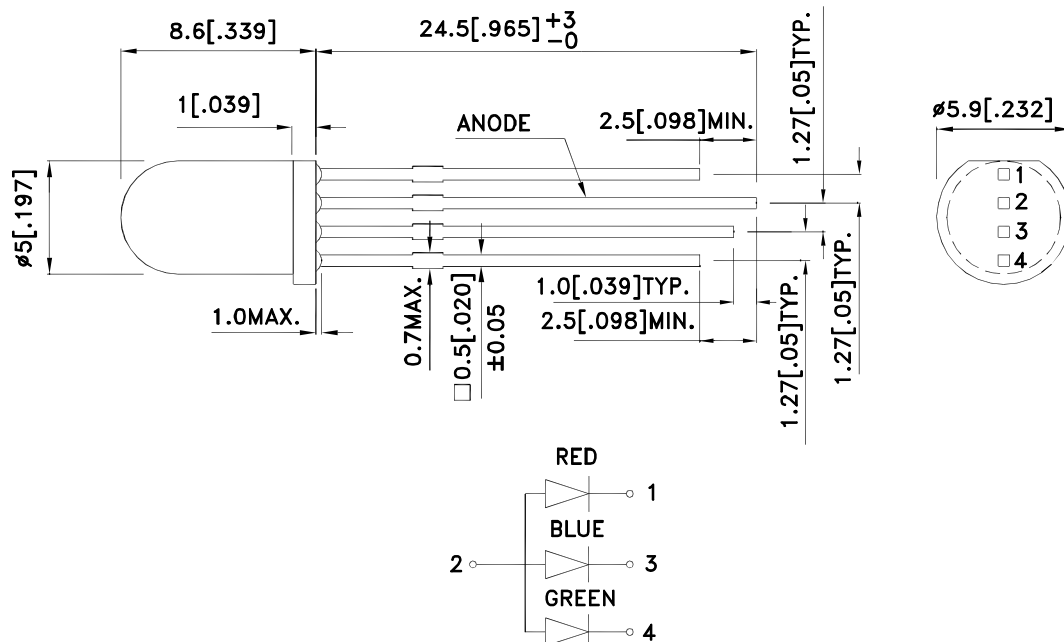
The Green source color devices are made with InGaN on Sapphire Light Emitting Diode.

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



#### 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. Specifications are subject to change without notice.



## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
WP154A4SUREQBFZGW/CA	Hyper Red (AlGaInP)	WHITE DIFFUSED	18	55	60°
	Blue (InGaN)		110	250	
	Green (InGaN)		480	1100	

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
λ <sub>peak</sub>	Peak Wavelength	Hyper Red Blue Green	640 461 515		nm	I <sub>F</sub> =20mA
λ <sub>D</sub> [1]	Dominant Wavelength	Hyper Red Blue Green	630 465 525		nm	I <sub>F</sub> =20mA
Δλ <sub>1/2</sub>	Spectral Line Half-width	Hyper Red Blue Green	25 25 30		nm	I <sub>F</sub> =20mA
C	Capacitance	Hyper Red Blue Green	45 100 45		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage	Hyper Red Blue Green	1.9 3.3 3.3	2.5 4 4.1	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	Hyper Red Blue Green		10 10 10	uA	V <sub>R</sub> =5V

Notes:

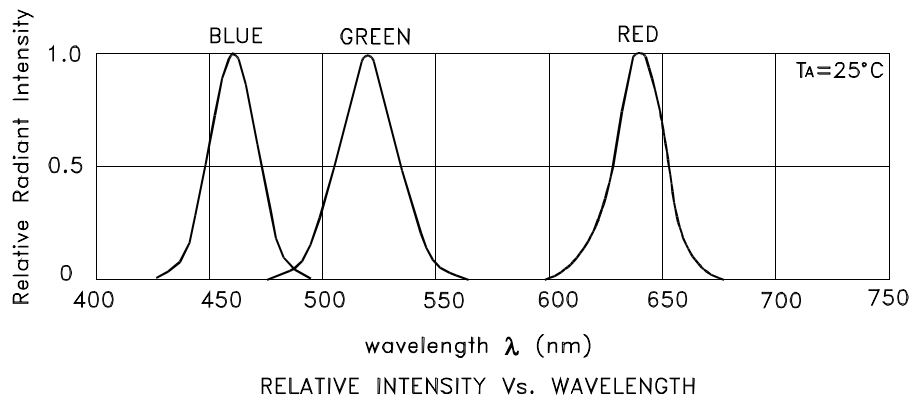
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

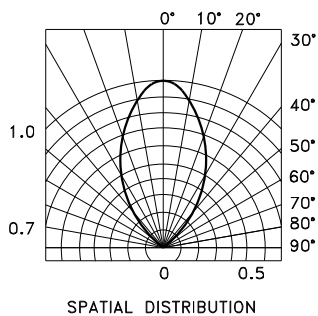
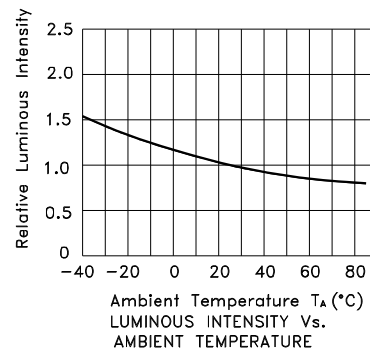
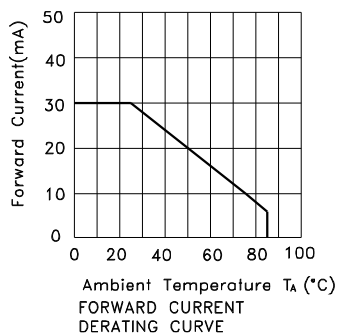
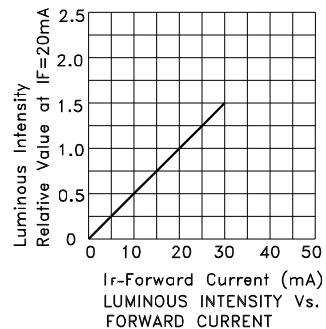
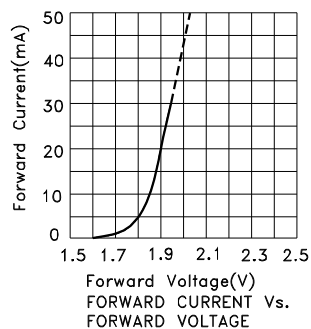
Parameter	Hyper Red	Blue	Green	Units
Power dissipation	75	120	102.5	mW
DC Forward Current	30	30	25	mA
Peak Forward Current [1]	200	150	150	mA
Reverse Voltage	5			V
Operating/Storage Temperature	-40°C To +85°C			
Lead Solder Temperature [2]	260°C For 3 Seconds			
Lead Solder Temperature [3]	260°C For 5 Seconds			

Notes:

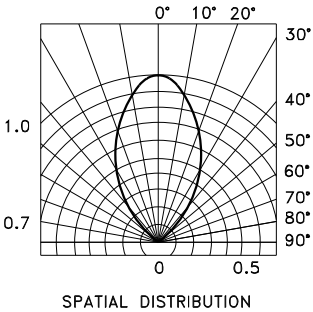
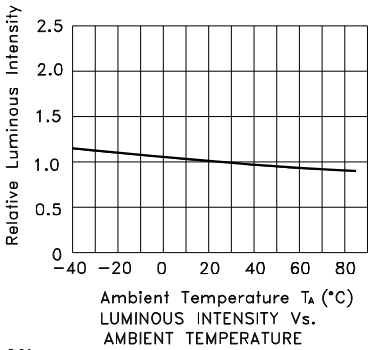
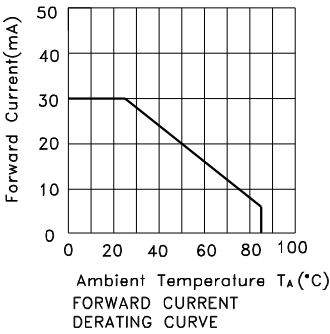
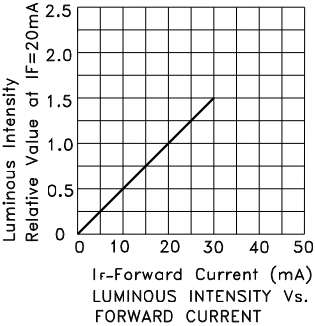
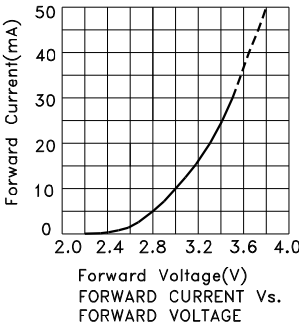
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.



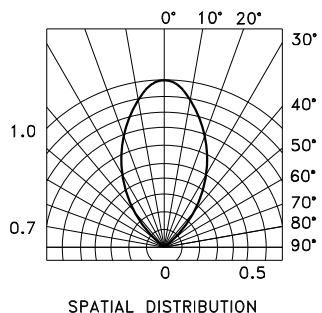
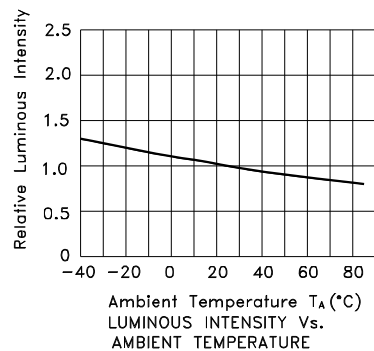
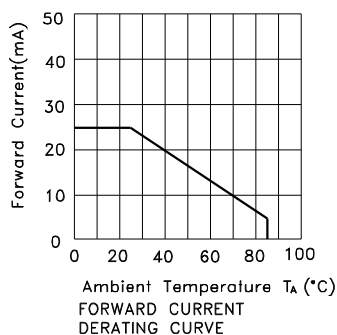
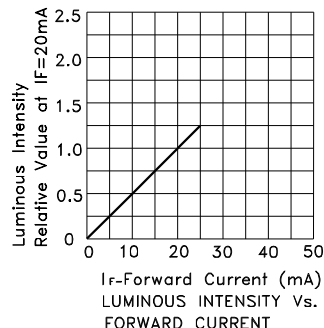
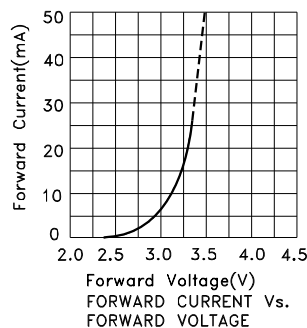
## WP154A4SUREQBFZGW/CA Hyper Red



## Blue

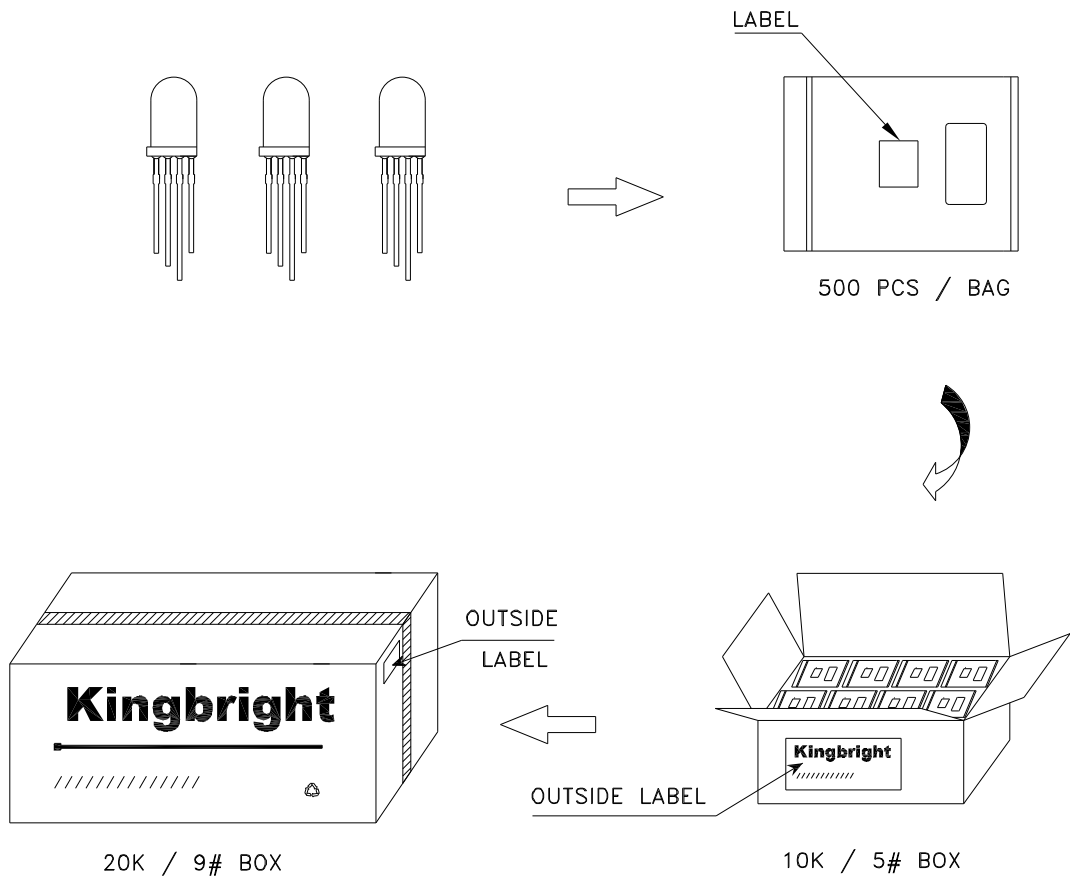



## Green



## PACKING & LABEL SPECIFICATIONS

WP154A4SUREQBFZGW/CA



<b>Kingbright</b>	
P/NO: WP154A4xxx	
QTY: 500 pcs	Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C xx xx xxxx PASSED</span>
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	

# Mouser Electronics

Authorized Distributor

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