

PRELIMINARY SPEC



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: WP154A4SUREQBFZGW

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.

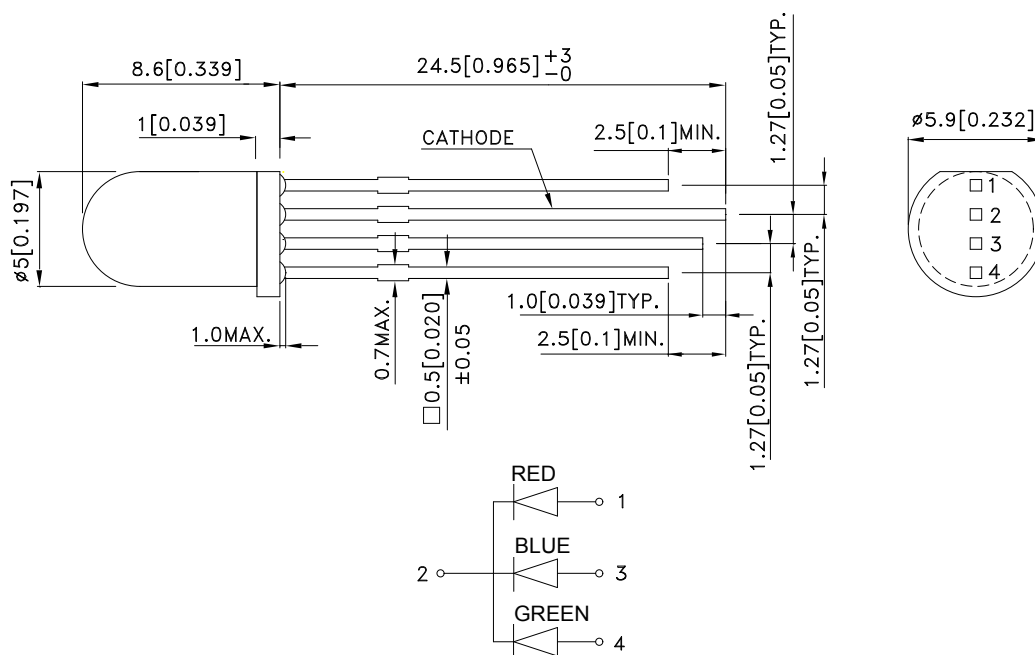
The Green source color devices are made with InGaN on Sapphire Light Emitting Diode.

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	Hyper Red (AlGaInP)	WHITE DIFFUSED	380	750	60°
	Blue (InGaN)		280	420	
	Green (InGaN)		280	750	

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	Hyper Red Blue Green	640 461 515		nm	IF=20mA
λD [1]	Dominant Wavelength	Hyper Red Blue Green	630 465 525		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Hyper Red Blue Green	25 25 30		nm	IF=20mA
C	Capacitance	Hyper Red Blue Green	45 100 45		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Hyper Red Blue Green	1.9 3.3 3.3	2.5 4 4.1	V	IF=20mA
IR	Reverse Current	Hyper Red Blue Green		10 10 10	uA	VR=5V

Notes:

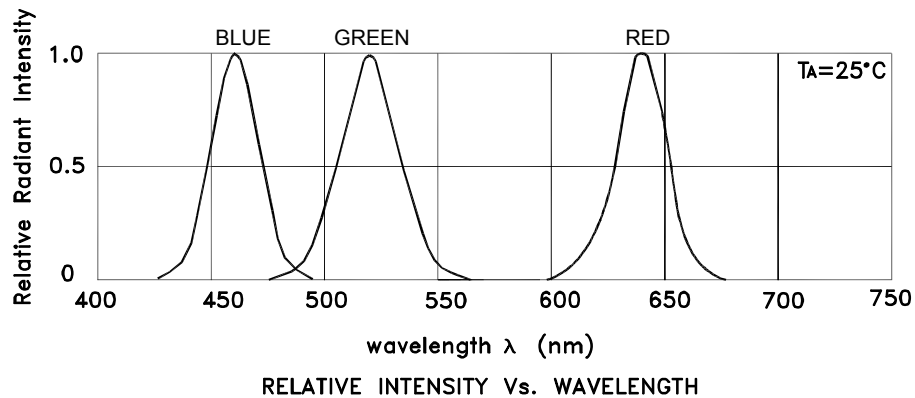
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

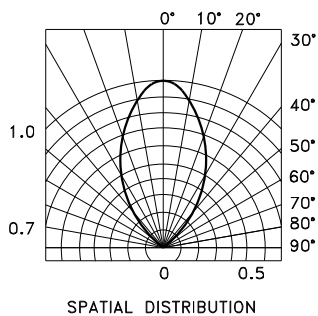
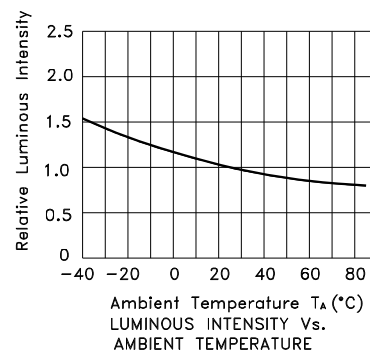
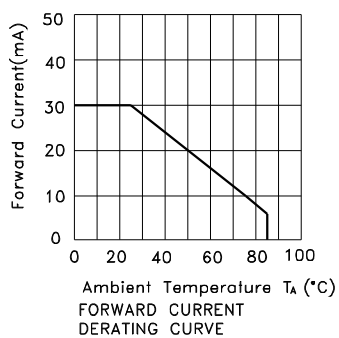
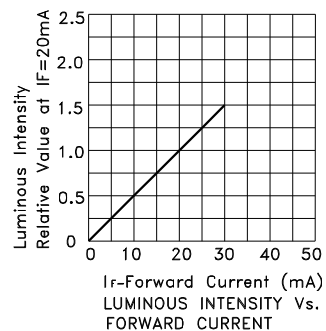
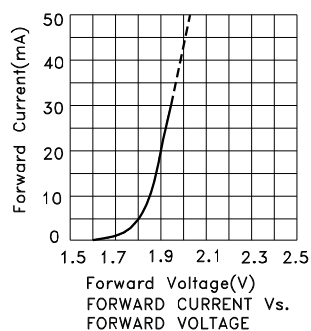
Parameter	Hyper Red	Blue	Green	Units
Power dissipation	75	120	102.5	mW
DC Forward Current	30	30	25	mA
Peak Forward Current [1]	200	150	150	mA
Reverse Voltage	5			V
Operating/Storage Temperature	-40°C To +85°C			
Lead Solder Temperature [2]	260°C For 3 Seconds			
Lead Solder Temperature [3]	260°C For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

Notes:

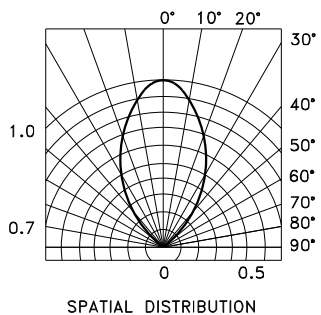
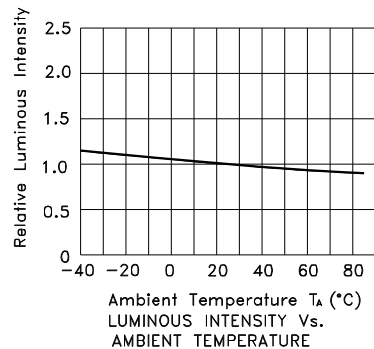
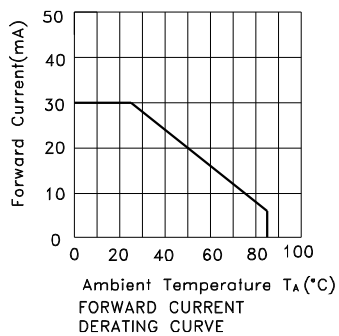
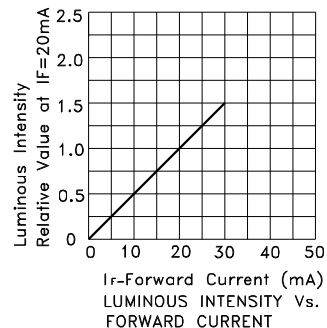
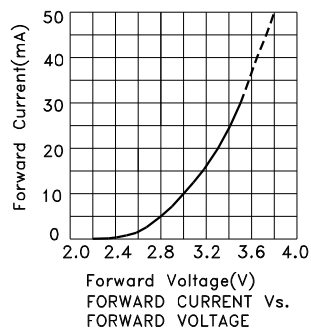
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.



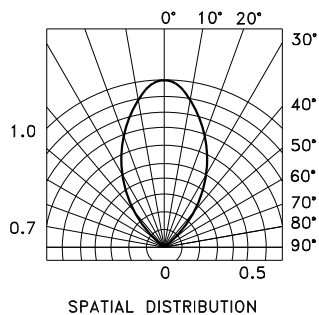
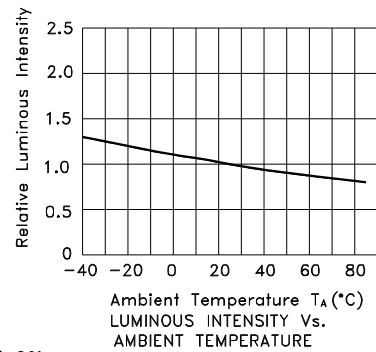
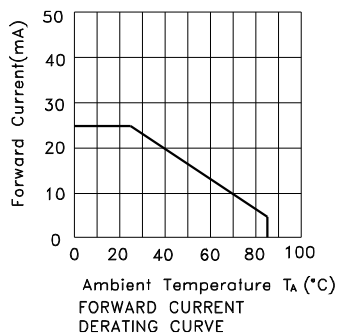
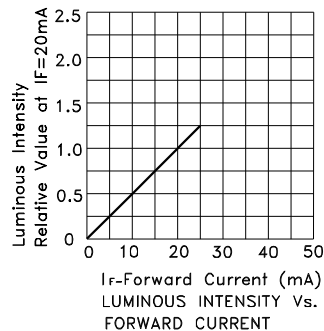
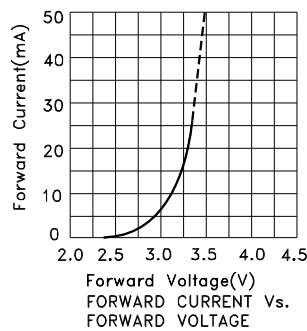
WP154A4SUREQBFZGW Hyper Red



Blue

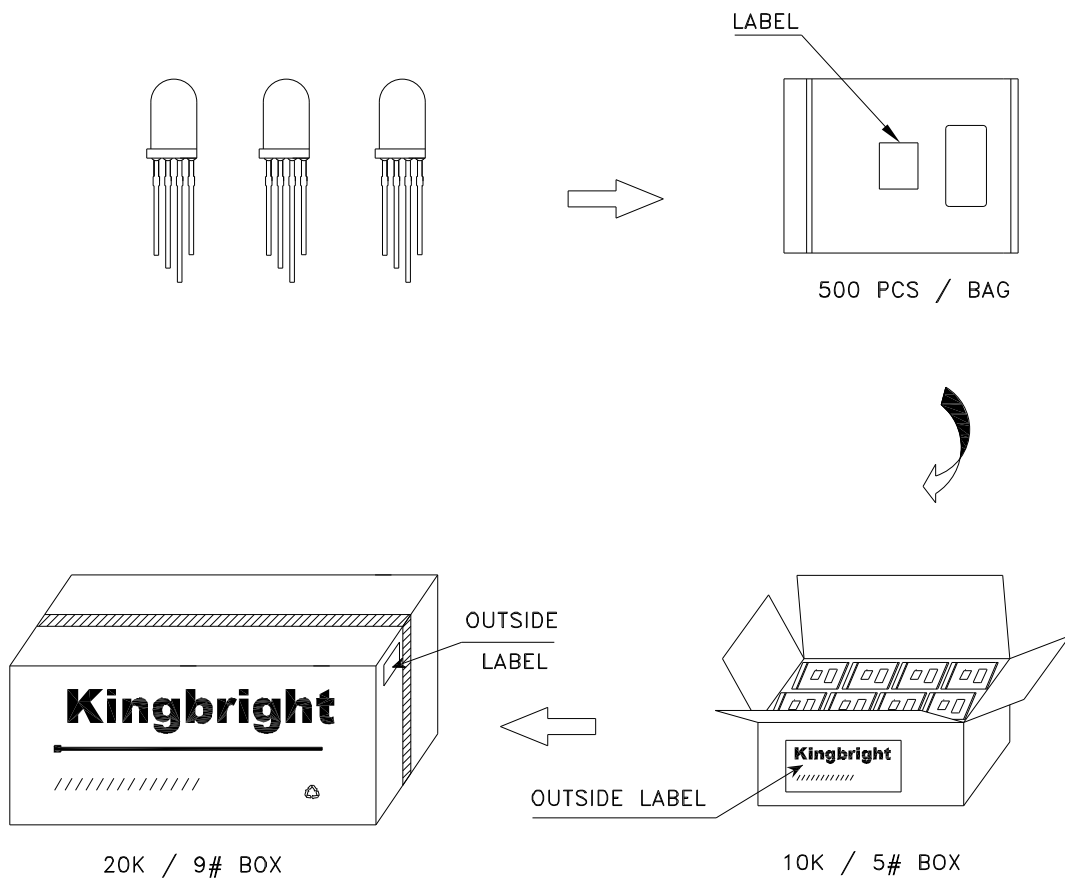



Green



PACKING & LABEL SPECIFICATIONS

WP154A4SUREQBFZGW



Kingbright	
P/NO: WP154A4xxx	
QTY: 500 pcs	Q.C. <div>Q C xx xx xxxx PASSED</div>
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	