



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

P/N: L-154A4SURKPBVGC

HYPER RED  
BLUE  
GREEN

## Features

- UNIFORM LIGHT OUTPUT.
- LOW POWER CONSUMPTION.
- I.C.COMPATIBLE.
- LONG LIFE-SOLID STATE RELIABILITY.
- RoHS COMPLIANT.

### Description

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

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

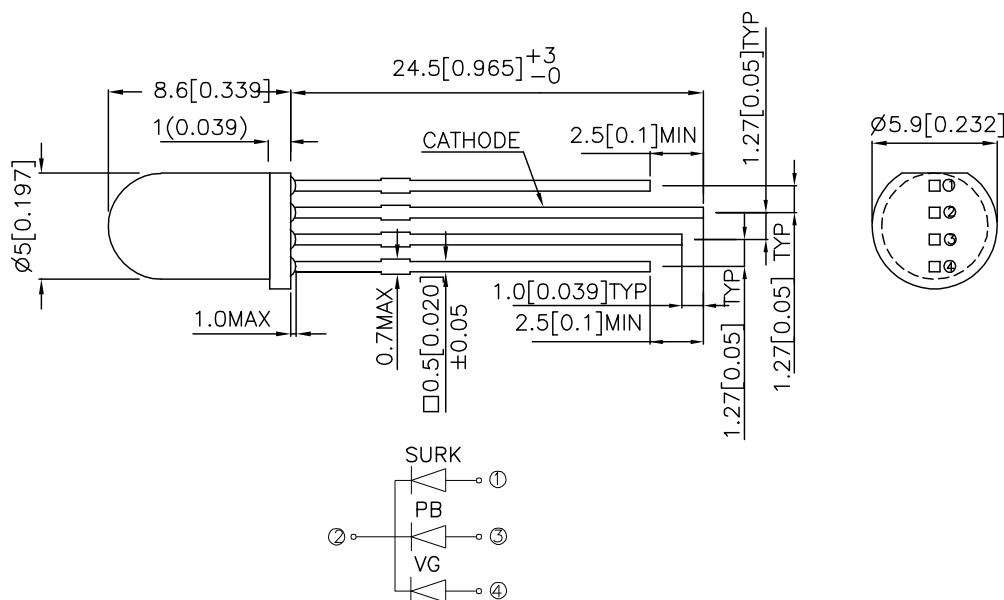
The Green source color devices are made with InGaN on SiC Light Emitting Diode.

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) @ 20mA		Viewing Angle
			Min.	Typ.	2 $\theta$ 1/2
L-154A4SURKPBVGC	HYPER RED (InGaAlP)	WATER CLEAR	380	700	50°
	BLUE (InGaN)		180	500	
	GREEN (InGaN)		480	1200	

Note:

1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Hyper Red Blue Green	650 468 520		nm	I <sub>F</sub> =20mA
$\lambda_D$	Dominant Wavelength	Hyper Red Blue Green	635 470 525		nm	I <sub>F</sub> =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Hyper Red Blue Green	28 25 38		nm	I <sub>F</sub> =20mA
C	Capacitance	Hyper Red Blue Green	35 65 45		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub>	Forward Voltage	Hyper Red Blue Green	1.95 3.65 3.5	2.5 4.2 4.5	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

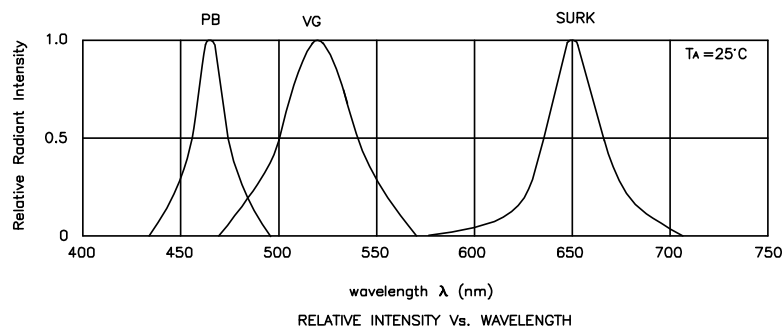
## Absolute Maximum Ratings at T<sub>A</sub>=25°C

Parameter	Hyper Red	Blue	Green	Units
Power dissipation	170	102	105	mW
DC Forward Current	30	30	30	mA
Peak Forward Current [1]	185	160	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			

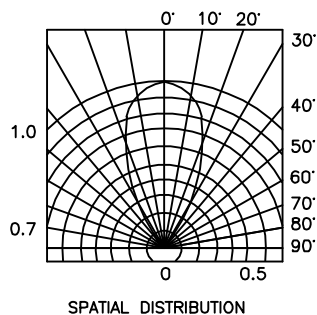
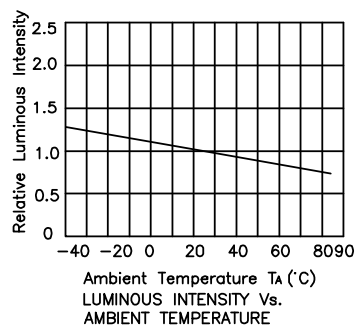
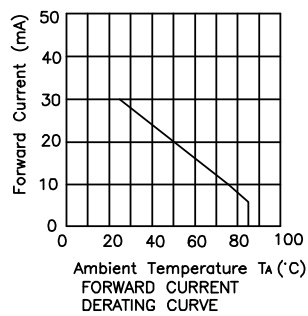
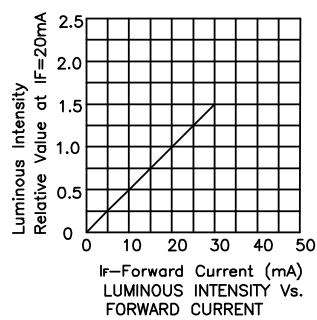
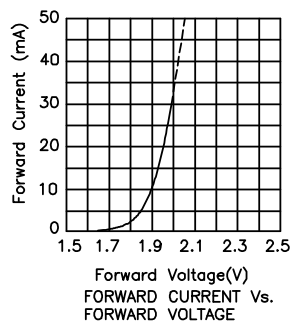
Notes:

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



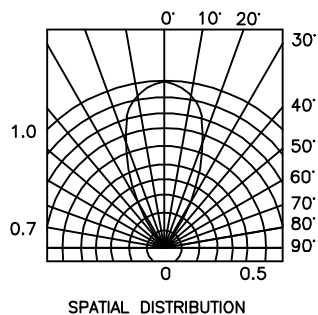
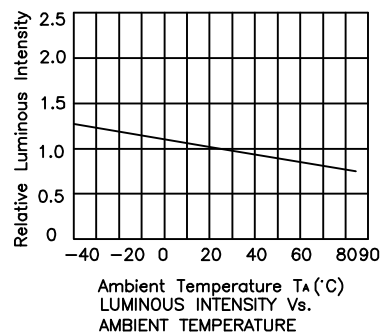
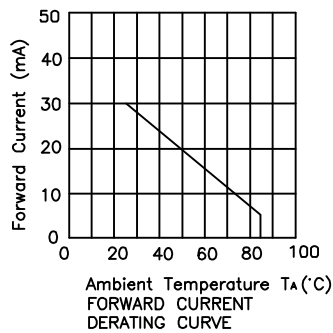
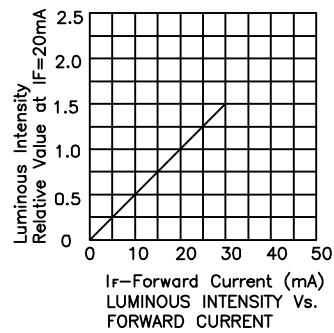
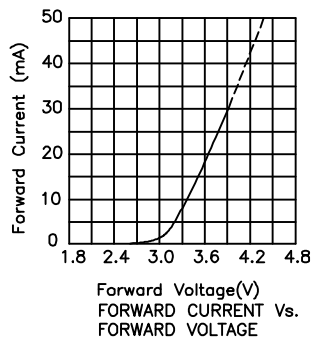


L-154A4SURKPBVG  
Hyper Red



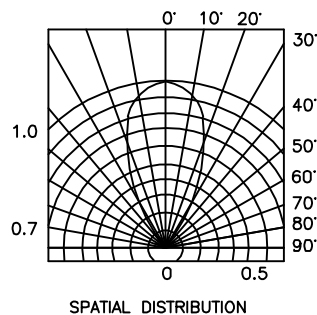
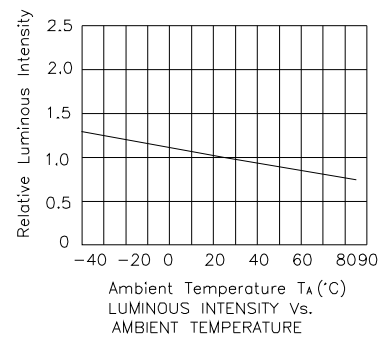
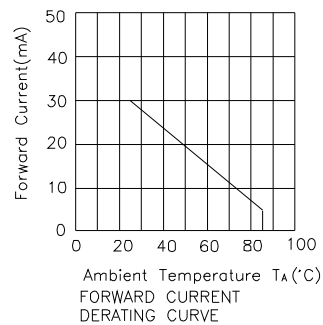
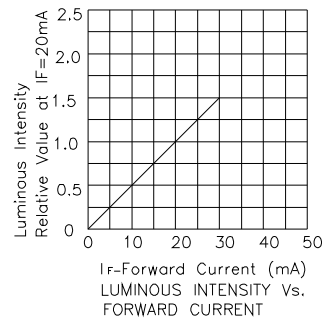
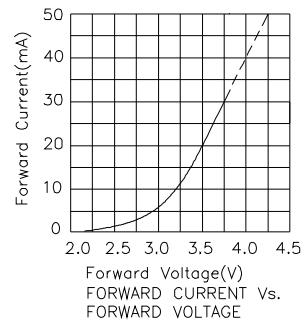


## Blue





## Green



### Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity/ luminous flux or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength:  $\pm 1\text{nm}$
2. Luminous Intensity/ Luminous Flux:  $\pm 15\%$
3. Forward Voltage:  $\pm 0.1\text{V}$

Note: Accuracy may depend on the sorting parameters.