

### Features

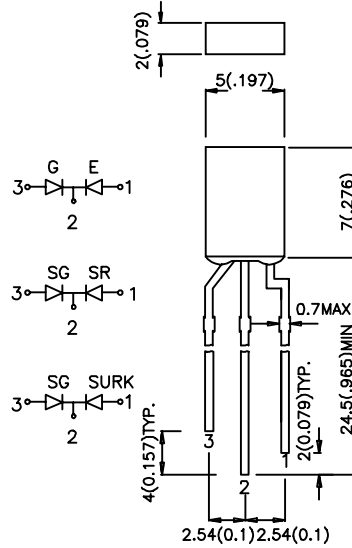
- UNIFORM LIGHT OUTPUT.
- LOW POWER CONSUMPTION.
- MILKY WHITE DIFFUSION LENS.
- 3 LEADS WITH ONE COMMON LEAD.
- THIRD COLOR (MIXED COLOR) AVAILABLE.
- SUPER BRIGHT VERSION AVAILABLE.
- I.C. COMPATIBLE.
- LONG LIFE - SOLID STATE RELIABILITY.

L119EGW HIGH EFFICIENCY RED / GREEN

L119SRSGWT/CC SUPER BRIGHT RED / SUPER BRIGHT GREEN

L119SURKSGWT HYPER RED / SUPER BRUGHT GREEN

### Package Dimensions



### Description

The High Efficiency Red and Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Green and Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

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

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

#### 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 lead emerge package.
4. Specifications are subjected to change without notice.

### Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle
			Min.	Typ.	
L119EGW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	8	20	110°
	GREEN (GaP)		5	12	
L119SRSGWT/CC	SUPER BRIGHT RED (GaAlAs)	WHITE DIFFUSED	30	60	110°
	SUPER BRIGHT GREEN (GaP)		8	12	
L119SURKSGWT	HYPER RED (InGaAlP)	WHITE DIFFUSED	30	55	110°
	SUPER BRIGHT GREEN (GaP)		8	12	

#### 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

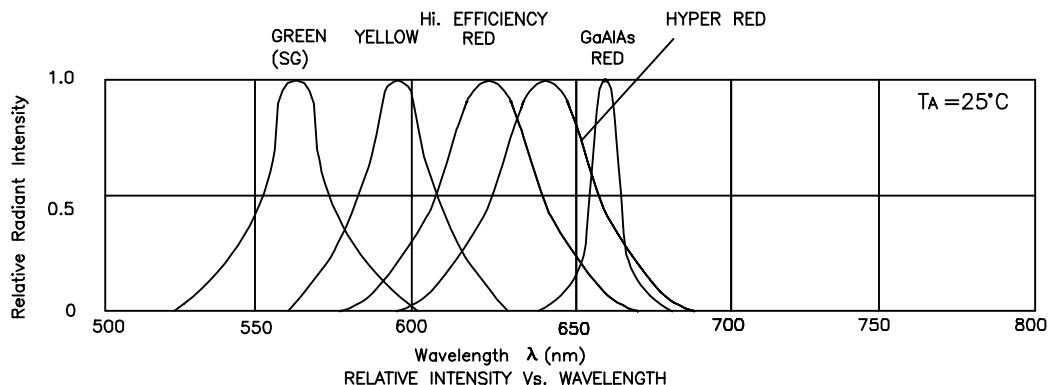
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	High Efficiency Red Green Super Bright Green Super Bright Red Hyper Red	625 565 565 660 640		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	High Efficiency Red Green Super Bright Green Super Bright Red Hyper Red	45 30 30 20 25		nm	IF=20mA
C	Capacitance	High Efficiency Red Green Super Bright Green Super Bright Red Hyper Red	12 45 45 95 35		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	High Efficiency Red Green Super Bright Green Super Bright Red Hyper Red	2.0 2.2 2.2 1.85 2.0	2.5 2.5 2.5 2.5 2.2	V	IF=20mA
I <sub>R</sub>	Reverse Current	All		10	uA	VR = 5V

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

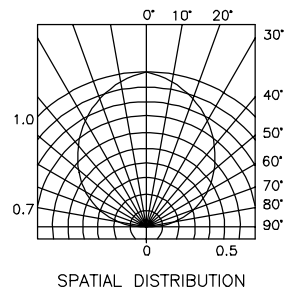
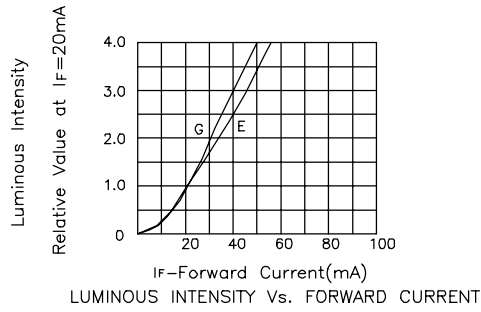
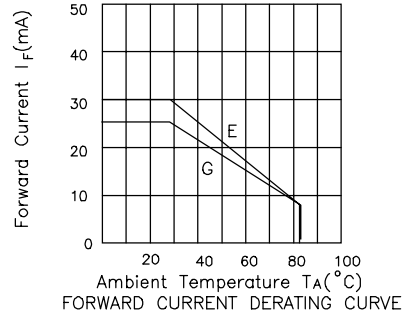
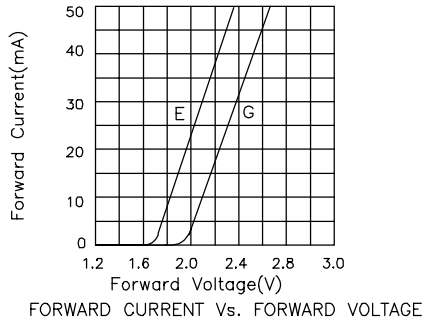
Parameter	High Efficiency Red	Green	Super Bright Green	Super Bright Red	Hyper Red	Units
Power dissipation	105	105	105	100	170	mW
DC Forward Current	30	25	25	30	50	mA
Peak Forward Current [1]	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C					
Lead Soldering Temperature [2]	260°C For 5 Seconds					

### Notes:

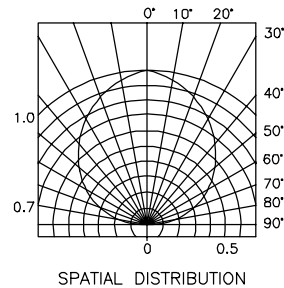
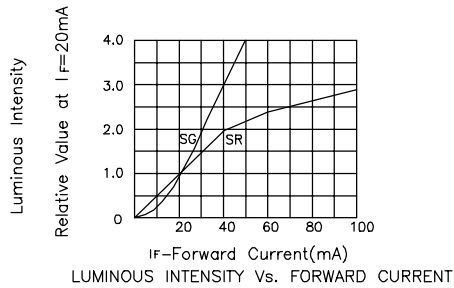
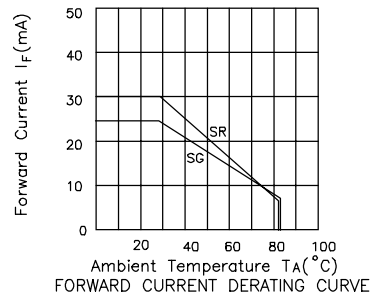
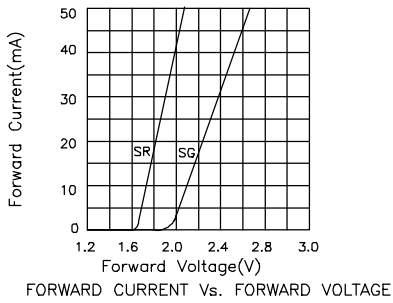
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.



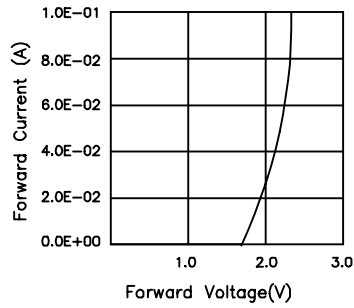
## High Efficiency Red / Green L119EGW



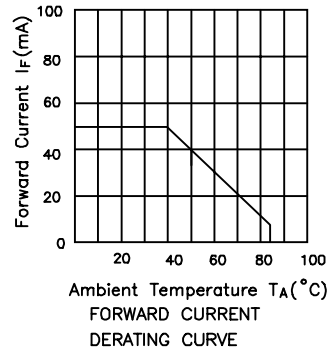
## Super Bright Red / Super Bright Green L119SRSGWT/CC



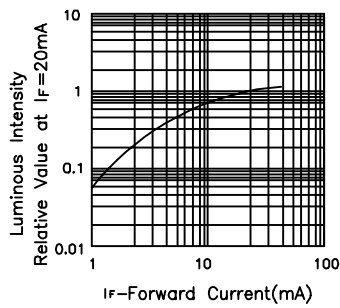
## L119SURKSGWT Hyper Red



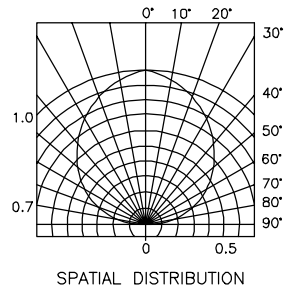
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

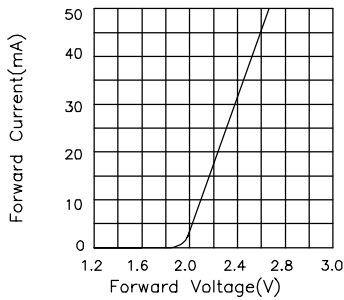


LUMINOUS INTENSITY Vs. FORWARD CURRENT

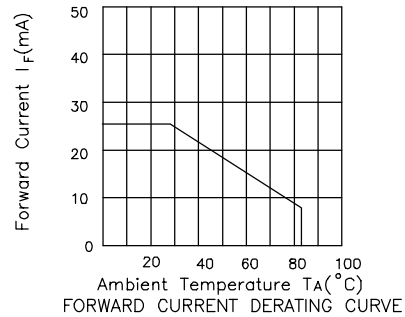


SPATIAL DISTRIBUTION

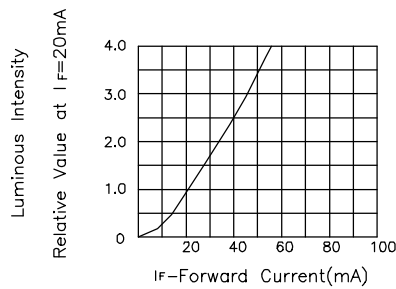
## Super Bright Green



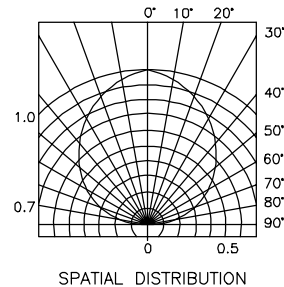
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION