

Kingbright®

2x5mm BI-COLOR RECTANGULAR LED LAMPS

L-117EG / L-119EG HIGH EFFICIENCY RED / GREEN

L-117EY HIGH EFFICIENCY RED / YELLOW

L-117GY GREEN / YELLOW

L-119SRSG SUPER BRIGHT RED / SUPER BRIGHT GREEN

Features

- UNIFORM LIGHT OUTPUT.
- SUITABLE FOR LEVEL INDICATOR.
- LOW POWER CONSUMPTION.
- MILKY WHITE DIFFUSION LENS.
- 3 LEADS AND 2 LEADS VERSIONS AVAILABLE.
- THIRD COLOR (MIXED COLOR) AVAILABLE FOR 3 LEADS VERSION.
- SUPER BRIGHT VERSION AVAILABLE.
- I.C. COMPATIBLE.
- LONG LIFE - SOLID STATE RELIABILITY.

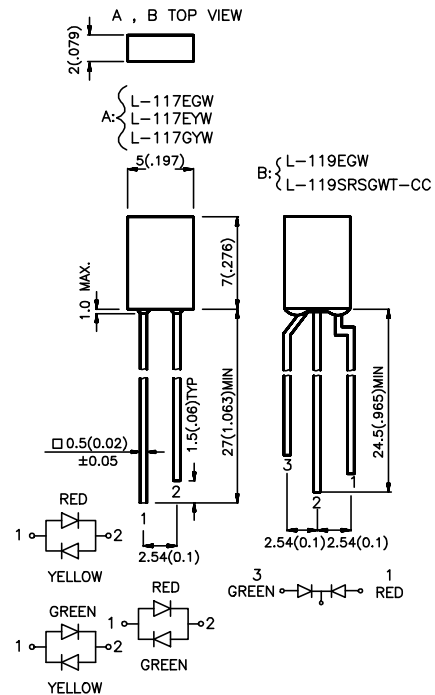
Description

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

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

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

Package Dimensions



- Notes:
1. All dimensions are in millimeters (inches).
 2. Tolerance is ± 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 2θ1/2
			Min.	Max.	
L-117EGW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	5	20	110°
	GREEN (GaP)		5	12.5	
L-117EYW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	5	20	110°
	YELLOW (GaAsP/GaP)		5	12.5	
L-117GYW	GREEN (GaP)	WHITE DIFFUSED	5	12.5	110°
	YELLOW (GaAsP/GaP)		5	12.5	
L-119EGW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	8	40	110°
	GREEN (GaP)		5	20	
L-119SRSGWT-CC	SUPER BRIGHT RED (GaAlAs)	WHITE DIFFUSED	30	70	110°
	SUPER BRIGHT GREEN (GaP)		8	20	

Note:
1. θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

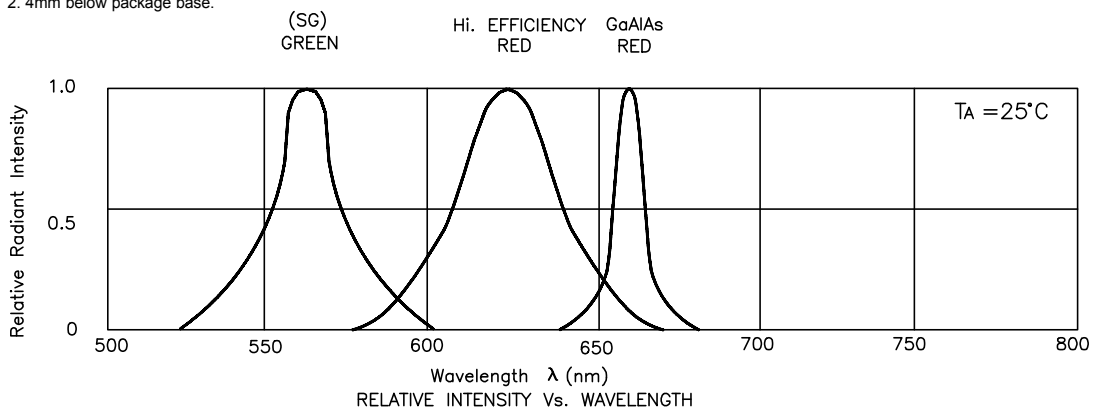
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	High Efficiency Red Green Yellow Super Bright Red Super Bright Green	625 565 590 660 565		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	High Efficiency Red Green Yellow Super Bright Red Super Bright Green	45 30 35 20 30		nm	IF=20mA
C	Capacitance	High Efficiency Red Green Yellow Super Bright Red Super Bright Green	12 45 10 95 45		pF	VF=0V;f=1MHz
V _F	Forward Voltage	High Efficiency Red Green Yellow Super Bright Red Super Bright Green	2.0 2.2 2.1 1.85 2.2	2.5 2.5 2.5 2.5 2.5	V	IF=20mA
I _R	Reverse Current	All	10		uA	VR = 5V

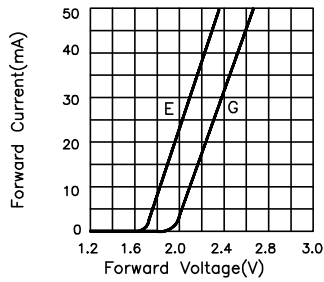
Absolute Maximum Ratings at T_A=25°C

Parameter	High Efficiency Red	Green	Yellow	Super Bright Red	Super Bright Green	Units
Power dissipation	105	105	105	100	105	mW
DC Forward Current	30	25	30	30	25	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					

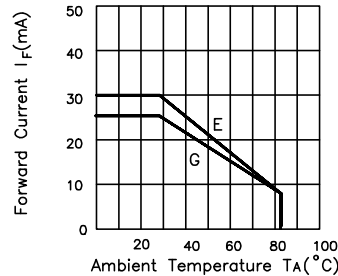
- Notes:
 1. 1/10 Duty Cycle, 0.1ms Pulse Width.
 2. 4mm below package base.



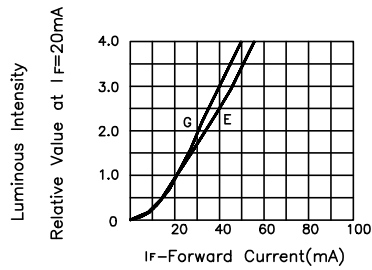
High Efficiency Red / Green L-117EGW,L-119EGW



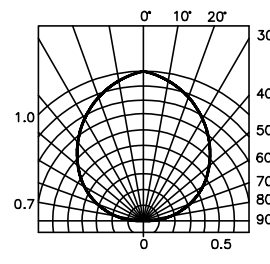
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

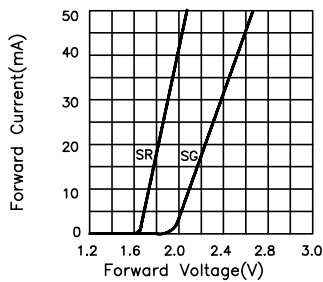


LUMINOUS INTENSITY Vs. FORWARD CURRENT

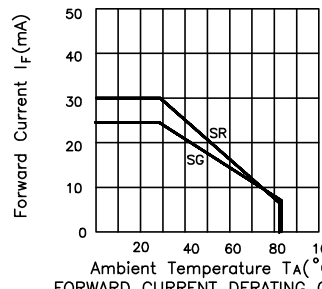


SPATIAL DISTRIBUTION

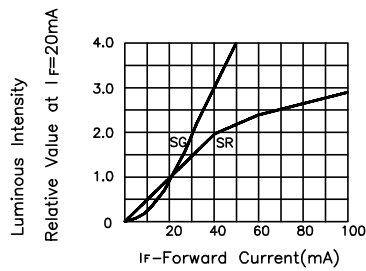
Super Bright Red / Super Bright Green L-119SRSGWT-CC



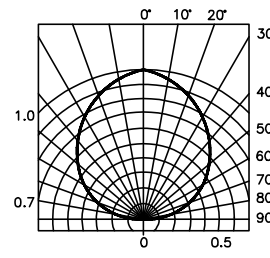
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

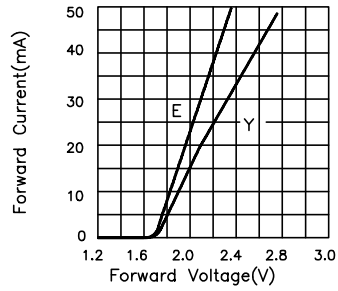


LUMINOUS INTENSITY Vs. FORWARD CURRENT

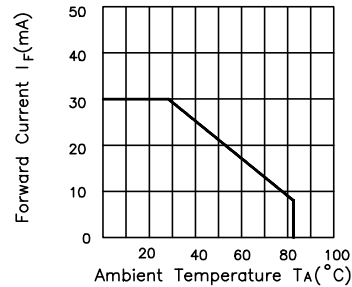


SPATIAL DISTRIBUTION

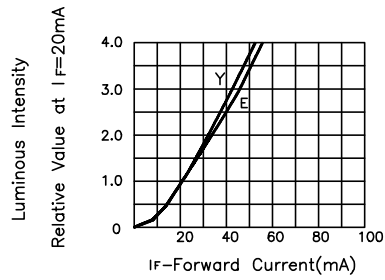
High Efficiency Red / Yellow L-117EYW



FORWARD CURRENT Vs. FORWARD VOLTAGE

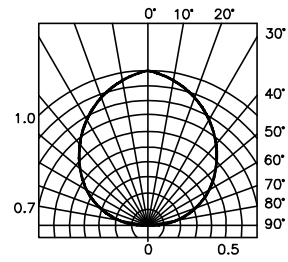


FORWARD CURRENT DERATING CURVE



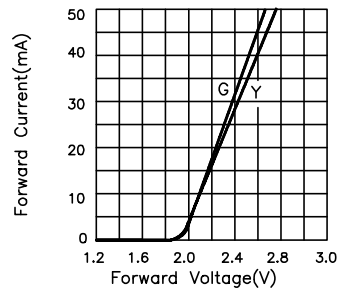
Luminous Intensity
Relative Value at $I_F=20\text{mA}$

I_F -Forward Current(mA)

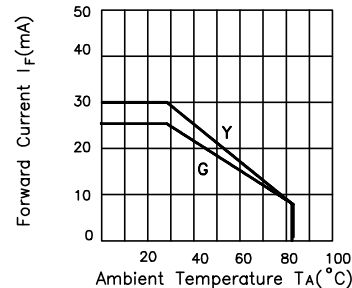


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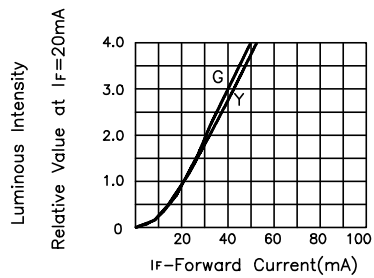
Green / Yellow L-117GYW



FORWARD CURRENT Vs. FORWARD VOLTAGE



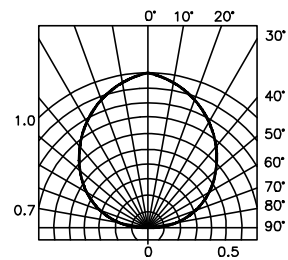
FORWARD CURRENT DERATING CURVE



Luminous Intensity
Relative Value at $I_F=20\text{mA}$

I_F -Forward Current(mA)

LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION