

L-117EGW HIGH EFFICIENCY RED / GREEN

L-117EYW HIGH EFFICIENCY RED / YELLOW

L-117GYW GREEN / YELLOW

### Features

- UNIFORM LIGHT OUTPUT.
- SUITABLE FOR LEVEL INDICATOR.
- LOW POWER CONSUMPTION.
- MILKY WHITE DIFFUSION LENS.
- SUPER BRIGHT VERSION AVAILABLE.
- I.C. COMPATIBLE.
- LONG LIFE - SOLID STATE RELIABILITY.

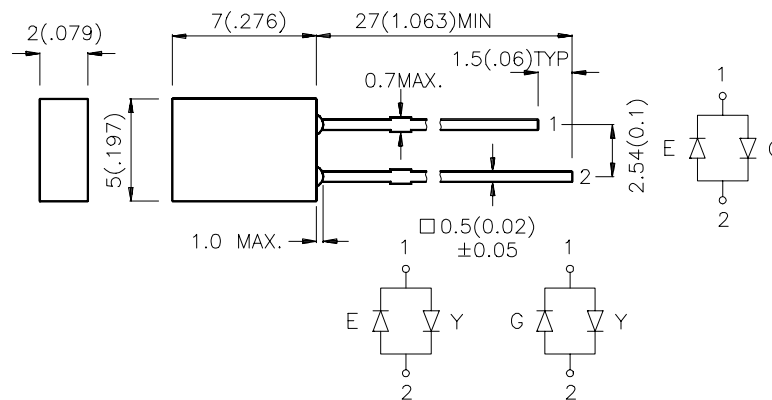
### Description

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

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

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

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

## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle
			Min.	Typ.	2θ1/2
L-117EGW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	5	10	110°
	GREEN (GaP)		5	8	
L-117EYW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	5	10	110°
	YELLOW (GaAsP/GaP)		3	6	
L-117GYW	GREEN (GaP)	WHITE DIFFUSED	5	8	110°
	YELLOW (GaAsP/GaP)		3	6	

Note:

1. θ1/2 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

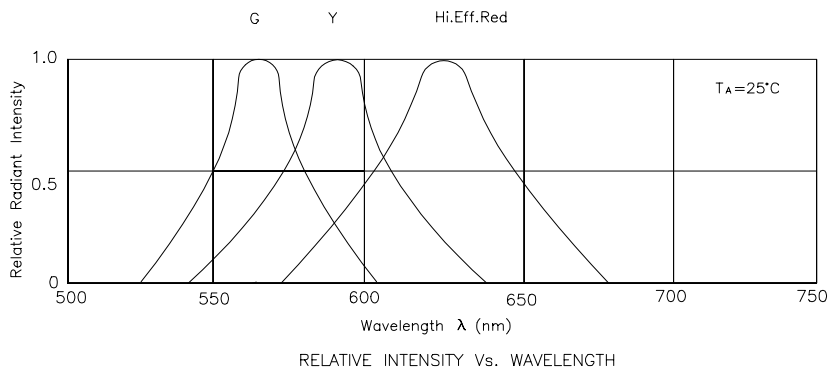
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	High Efficiency Red Green Yellow	627 565 590		nm	IF=20mA
λ <sub>D</sub>	Dominate Wavelength	High Efficiency Red Green Yellow	625 568 588		nm	IF=20mA
Δλ <sub>1/2</sub>	Spectral Line Halfwidth	High Efficiency Red Green Yellow	45 30 35		nm	IF=20mA
C	Capacitance	High Efficiency Red Green Yellow	15 15 20		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	High Efficiency Red Green Yellow	2.0 2.2 2.1	2.5 2.5 2.5	V	IF=20mA
I <sub>R</sub>	Reverse Current	All		10	uA	VR = 5V

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

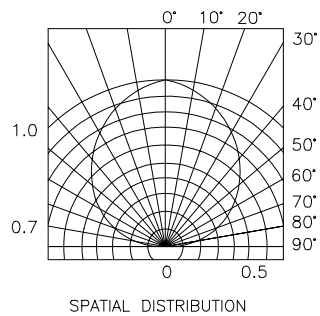
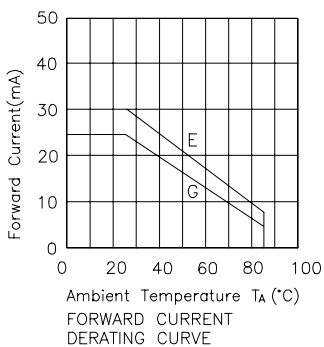
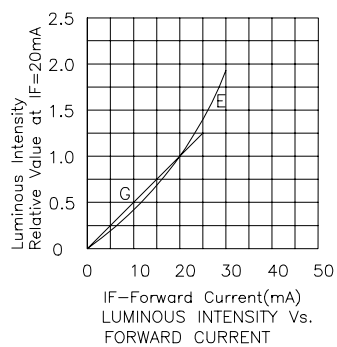
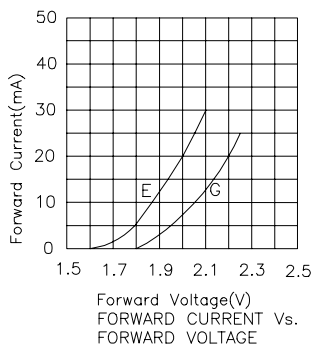
Parameter	High Efficiency Red	Green	Yellow	Units
Power dissipation	105	105	105	mW
DC Forward Current	30	25	30	mA
Peak Forward Current [1]	160	140	140	mA
Reverse Voltage	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C			
Lead Solder Temperature [2]	260°C For 5 Seconds			

Notes:

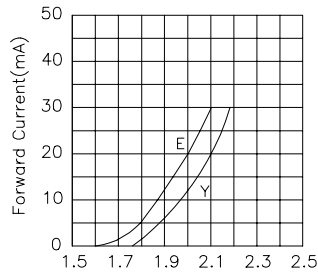
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.



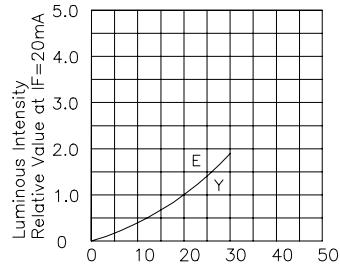
## High Efficiency Red / Green L-117EGW



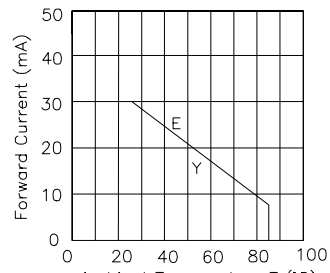
## High Efficiency Red / Yellow L-117EYW



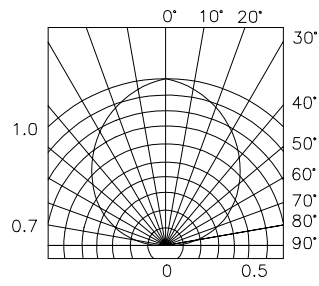
Forward Voltage(V)  
FORWARD CURRENT Vs  
FORWARD VOLTAGE



$I_f$ -Forward Current (mA)  
LUMINOUS INTENSITY Vs.  
FORWARD CURRENT

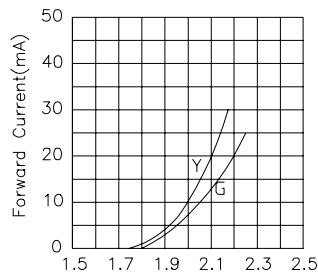


Ambient Temperature  $T_a$ (°C)  
FORWARD CURRENT  
DERATING CURVE

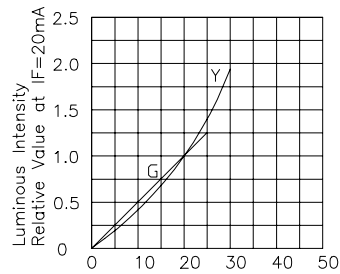


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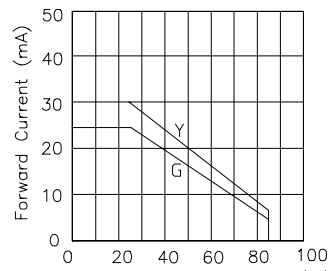
## Green / Yellow L-117GYW



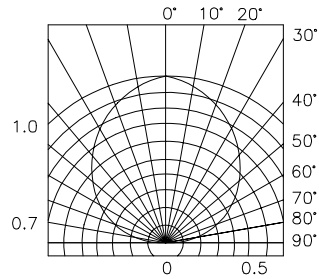
Forward Voltage(V)  
FORWARD CURRENT Vs  
FORWARD VOLTAGE



$I_f$ -Forward Current (mA)  
LUMINOUS INTENSITY Vs.  
FORWARD CURRENT



Ambient Temperature  $T_a$ (°C)  
FORWARD CURRENT  
DERATING CURVE



SPATIAL DISTRIBUTION