

L57 SERIES

Features

- LOW POWER CONSUMPTION.
- HIGH EFFICIENCY RED, GREEN , YELLOW AND SUPER BRIGHT RED ARE AVAILABLE.
- I.C. COMPATIBLE.
- LONG LIFE - SOLID STATE RELIABILITY.

Description

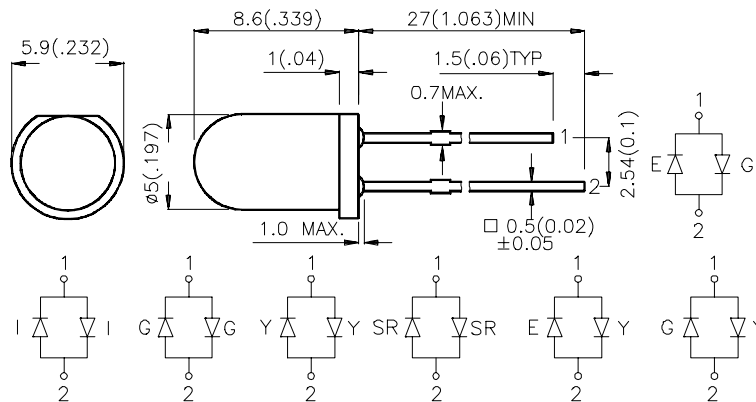
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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.

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 $\pm 0.25 (0.01)$ 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.	
L57IID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	8	20	60°
	HIGH EFFICIENCY RED (GaAsP/GaP)		8	20	
L57GGD	GREEN (GaP)	GREEN DIFFUSED	5	10	60°
	GREEN (GaP)		5	10	
L57YYD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	5	10	60°
	YELLOW (GaAsP/GaP)		5	10	
L57SRSRD	SUPER BRIGHT RED (GaAlAs)	RED DIFFUSED	80	150	60°
	SUPER BRIGHT RED (GaAlAs)		80	150	
L57EGW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	10	30	60°
	GREEN (GaP)		12	20	
L57EYW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	10	30	60°
	YELLOW (GaAsP/GaP)		5	10	
L57GYW	GREEN (GaP)	WHITE DIFFUSED	12	20	60°
	YELLOW (GaAsP/GaP)		5	10	

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 $T_A=25^\circ\text{C}$

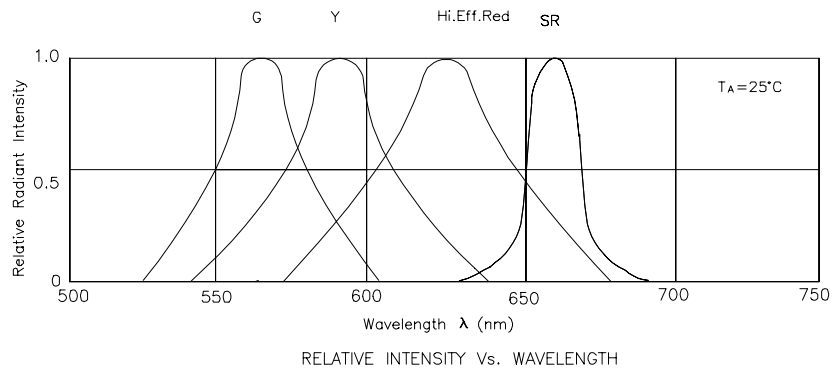
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	High Efficiency Red Green Yellow Super Bright Red	627 565 590 660		nm	IF=20mA
λ_D	Dominate Wavelength	High Efficiency Red Green Yellow Super Bright Red	625 568 588 640		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	High Efficiency Red Green Yellow Super Bright Red	45 30 35 20		nm	IF=20mA
C	Capacitance	High Efficiency Red Green Yellow Super Bright Red	15 15 20 45		pF	VF=0V;f=1MHz
V_F	Forward Voltage	High Efficiency Red Green Yellow Super Bright Red	2.0 2.2 2.1 1.85	2.5 2.5 2.5 2.5	V	IF=20mA
I_R	Reverse Current	All		10	μA	VR = 5V

Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

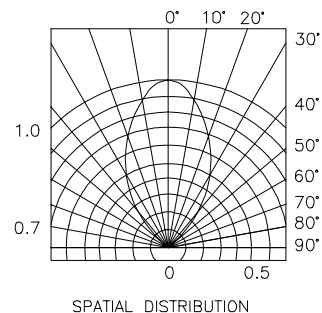
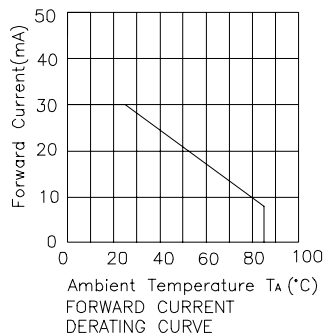
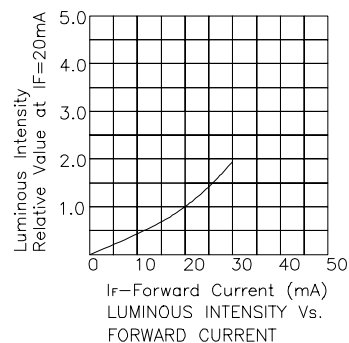
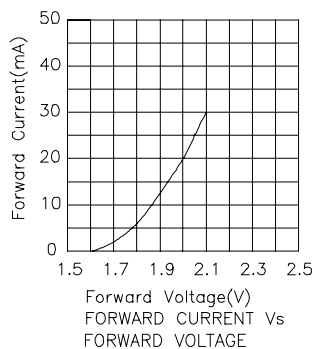
Parameter	High Efficiency Red	Green	Yellow	Super Bright Red	Units
Power dissipation	105	105	105	100	mW
DC Forward Current	30	25	30	30	mA
Peak Forward Current [1]	160	140	140	155	mA
Reverse Voltage	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C				
Lead Solder Temperature [2]	260°C For 5 Seconds				

Notes:

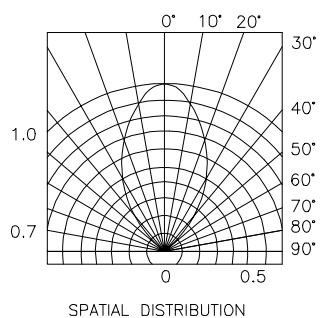
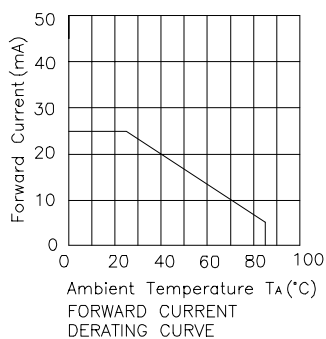
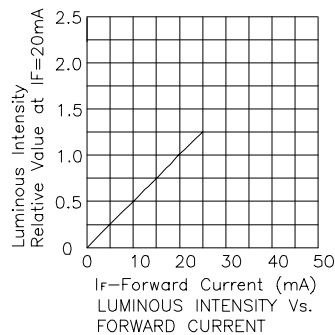
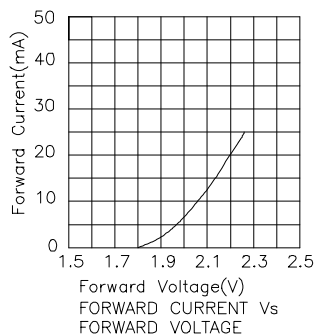
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.



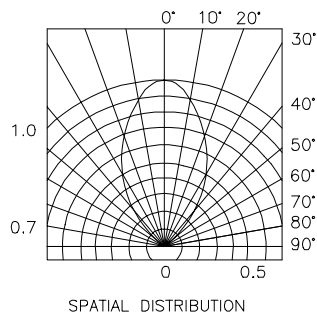
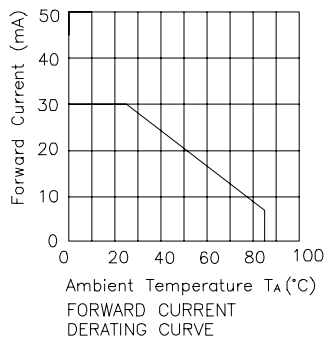
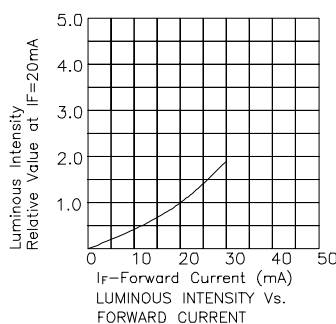
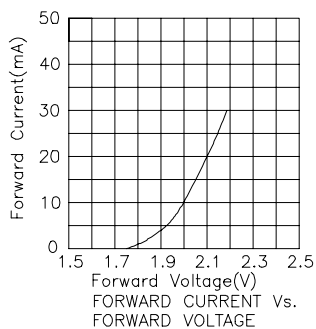
High Efficiency Red L57IID



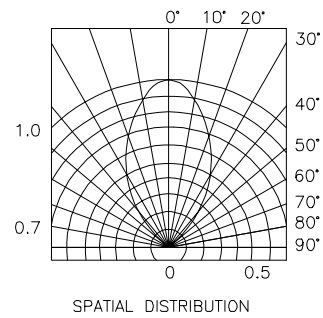
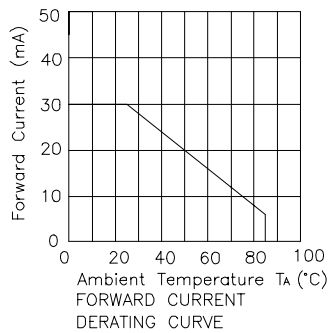
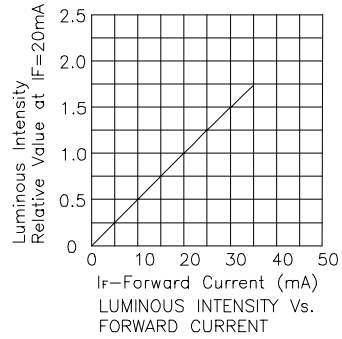
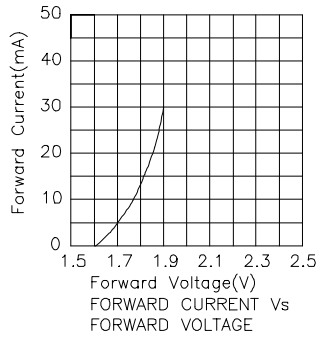
Green L57GGD



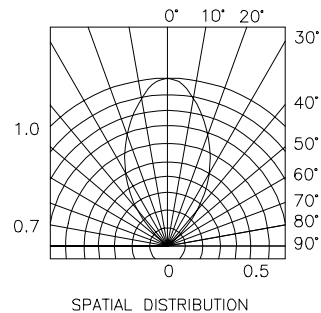
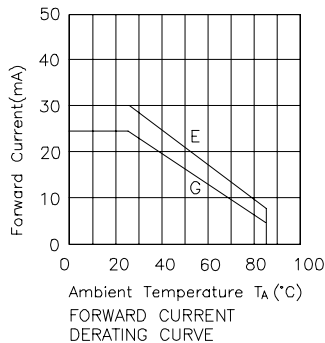
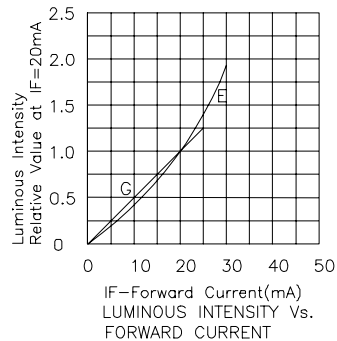
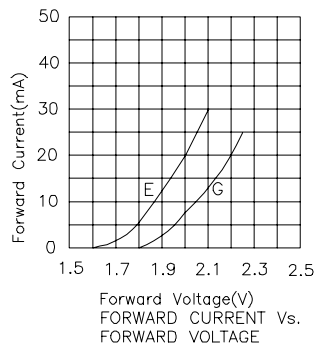
Yellow L57YYD



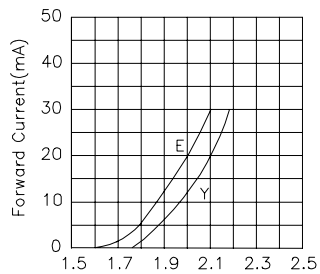
Super Bright Red L57SRSRD



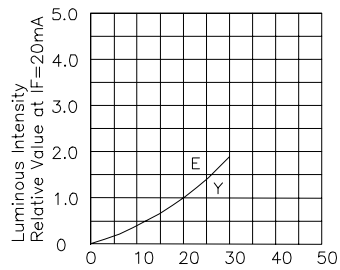
High Efficiency Red / Green L57EGW



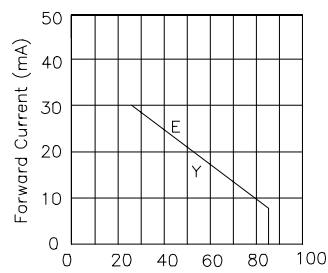
High Efficiency Red / Yellow L57EYW



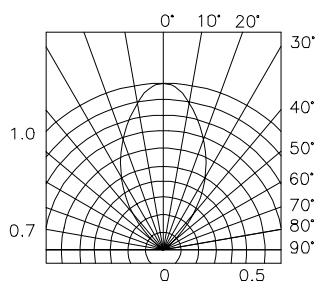
Forward Voltage(V)
FORWARD CURRENT Vs
FORWARD VOLTAGE



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

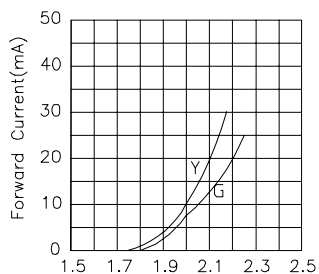


Ambient Temperature T_a (°C)
FORWARD CURRENT
DERATING CURVE

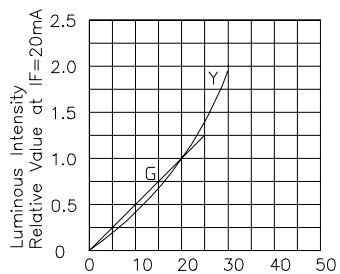


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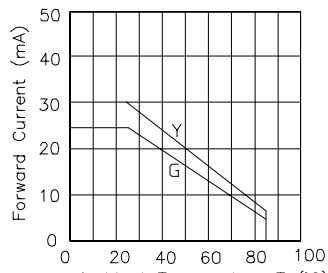
Green / Yellow L57GYW



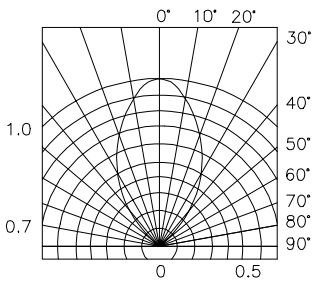
Forward Voltage(V)
FORWARD CURRENT Vs
FORWARD VOLTAGE



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



Ambient Temperature T_a (°C)
FORWARD CURRENT
DERATING CURVE



SPATIAL DISTRIBUTION