

L169XHx BRIGHT RED	L169XGx GREEN
L169Xlx HIGH EFFICIENCY RED	L169XYx YELLOW
L169XPGx PURE GREEN	L169XAT YELLOW

Features

- LOW POWER CONSUMPTION.
- ULTRA BRIGHTNESS IS AVAILABLE .
- RELIABLE AND RUGGED.
- EXCELLENT UNIFORMITY OF LIGHT OUTPUT.
- SUITABLE FOR LEVEL INDICATOR.
- LONG LIFE - SOLID STATE RELIABILITY.

Description

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

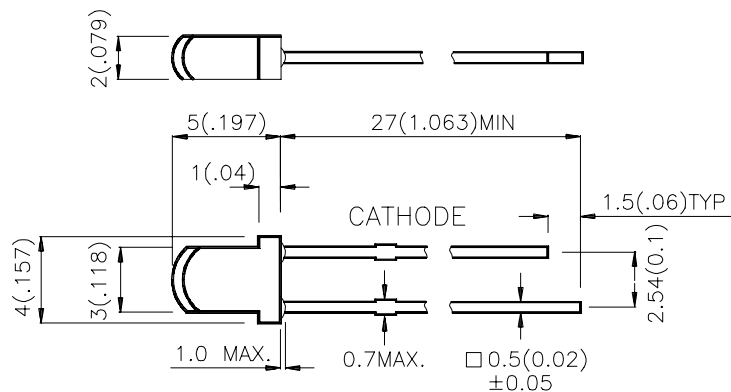
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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 Pure Green source color devices are made with Gallium Phosphide Green 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) @ 10 mA		Viewing Angle
			Min.	Typ.	2θ1/2
L169XHD	BRIGHT RED (GaP)	RED DIFFUSED	1.2	3	100°
L169XHT	BRIGHT RED (GaP)	RED TRANSPARENT	2	5	30°
L169XID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	8	15	100°
L169XIT	HIGH EFFICIENCY RED (GaAsP/GaP)	RED TRANSPARENT	12	30	30°
L169XGD	GREEN (GaP)	GREEN DIFFUSED	5	15	100°
L169XGT	GREEN (GaP)	GREEN TRANSPARENT	5	20	30°
L169XYD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	5	10	100°
L169XYT	YELLOW (GaAsP/GaP)	YELLOW TRANSPARENT	5	15	30°
L169XAT	YELLOW (GaAsP/GaP)	AMBER TRANSPARENT	5	15	30°
L169XPGD	PURE GREEN (GaP)	GREEN DIFFUSED	2	5	100°
L169XPGTL	PURE GREEN (GaP)	GREEN TRANSPARENT	3	8	30°

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_A=25°C

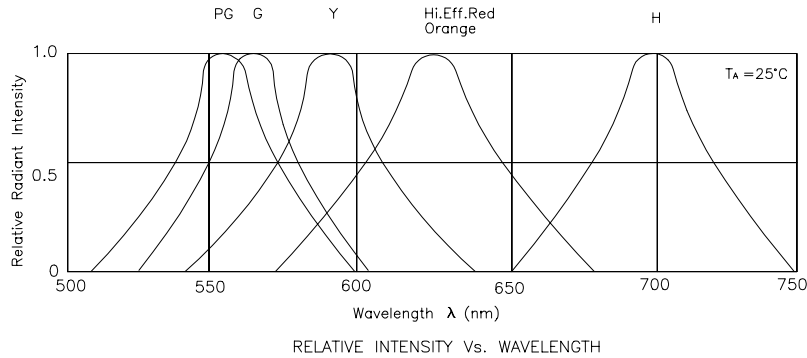
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	Bright Red High Efficiency Red Green Yellow Pure Green	700 627 565 590 555		nm	IF=20mA
λ _D	Dominant Wavelength	Bright Red High Efficiency Red Green Yellow Pure Green	660 625 568 588 555		nm	IF=20mA
Δλ _{1/2}	Spectral Line Halfwidth	Bright Red High Efficiency Red Green Yellow Pure Green	45 45 30 35 30		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Green Yellow Pure Green	40 15 15 20 45		pF	VF=0V;f=1MHz
V _F	Forward Voltage	Bright Red High Efficiency Red Green Yellow Pure Green	2.25 2.0 2.2 2.1 2.25	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 $T_A=25^\circ\text{C}$

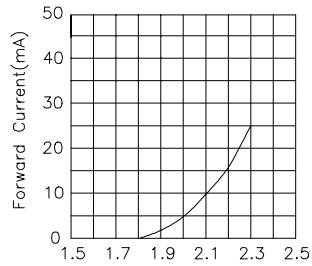
Parameter	Bright Red	High Efficiency Red	Green	Yellow	Pure Green	Units
Power dissipation	120	105	105	105	105	mW
DC Forward Current	25	30	25	30	25	mA
Peak Forward Current [1]	120	160	140	140	135	mA
Reverse Voltage	5	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C					
Lead Solder Temperature [2]	260°C For 5 Seconds					

Notes:

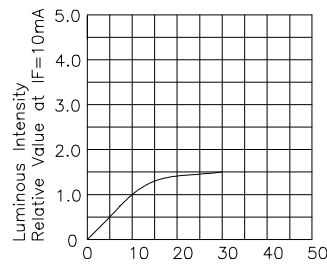
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 2.4mm below package base.



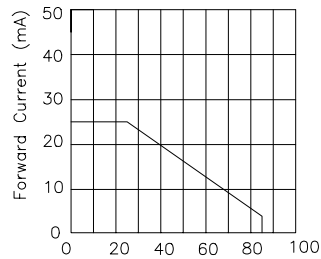
Bright Red L169XHD, L169XHT



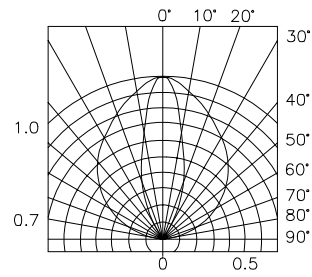
FORWARD CURRENT vs. FORWARD VOLTAGE



LUMINOUS INTENSITY vs. FORWARD CURRENT

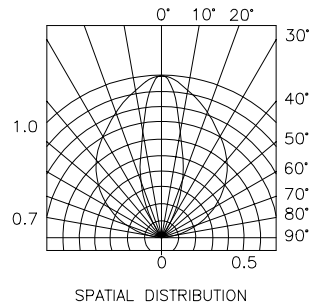
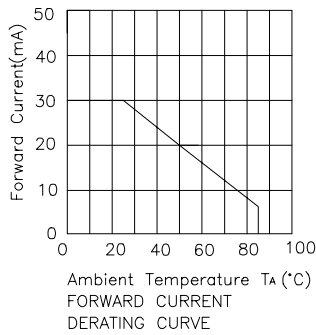
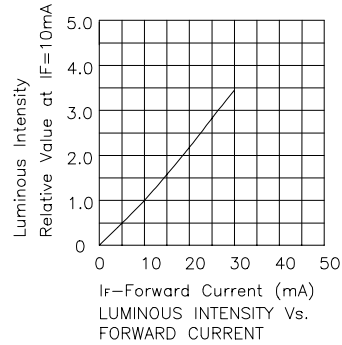
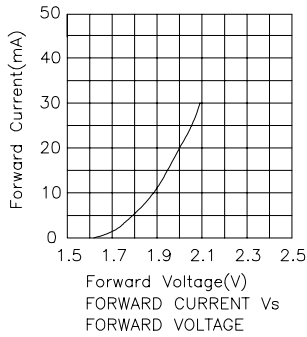


FORWARD CURRENT DERATING CURVE

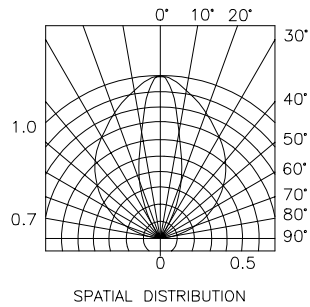
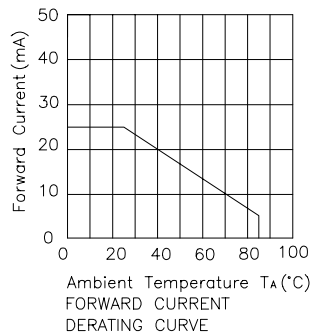
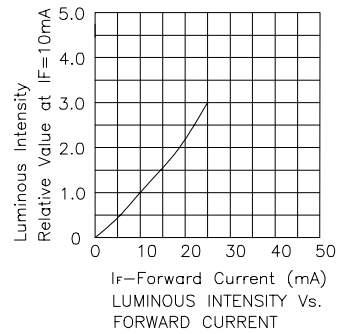
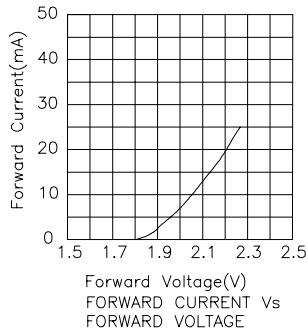


SPATIAL DISTRIBUTION

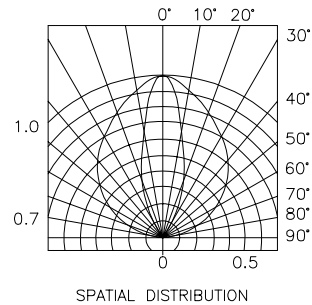
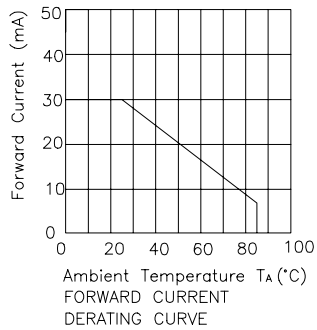
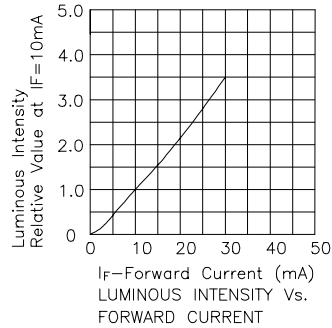
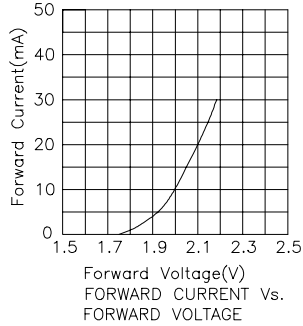
High Efficiency Red L169XID,L169XIT



Green L169XGD,L169XGT



Yellow L169XYD,L169XYT,L169XAT



Pure Green L169XPGD,L169XPGTL

