



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

P/N: LF5WAEMBGMB

HIGH EFFICIENCY RED
BLUE
GREEN

Features

- TWO BLUE, ONE GREEN AND ONE RED CHIPS IN ONE PACKAGE.
- CAN PRODUCE ANY COLOR IN VISIBLE SPECTRUM, INCLUDING WHITE LIGHT.
- RoHS COMPLIANT.

Description

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

The Blue source color devices are made with GaN on SiC Light Emitting Diode.

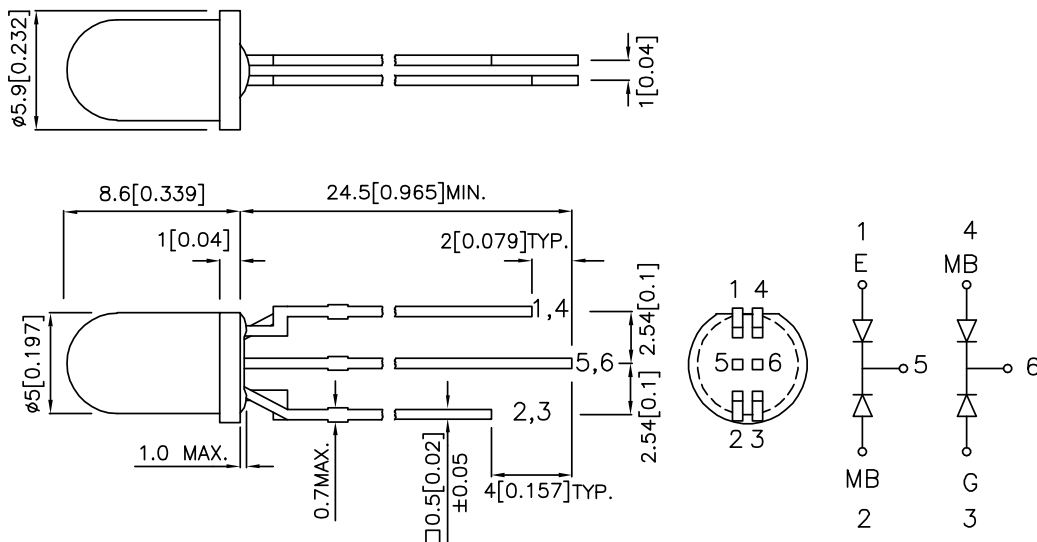
The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

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 leads emerge from the package.
4. Specifications are subject to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
LF5WAEMBGMB	HIGH EFFICIENCY RED (GaAsP/GaP)	WATER CLEAR	10	40	30°
	BLUE (GaN)		18	45	
	GREEN (GaP)		10	30	
	BLUE (GaN)		18	45	

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity / luminous flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	High Efficiency Red Blue Green	627 430 565		nm	IF=20mA
λD [1]	Dominant Wavelength	High Efficiency Red Blue Green	625 466 568		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	High Efficiency Red Blue Green	45 60 30		nm	IF=20mA
C	Capacitance	High Efficiency Red Blue Green	15 100 15		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	High Efficiency Red Blue Green	2.0 3.8 2.2	2.5 4.5 2.5	V	IF=20mA
IR	Reverse Current	High Efficiency Red Blue Green		10 10 10	uA	VR= 5V

Notes:

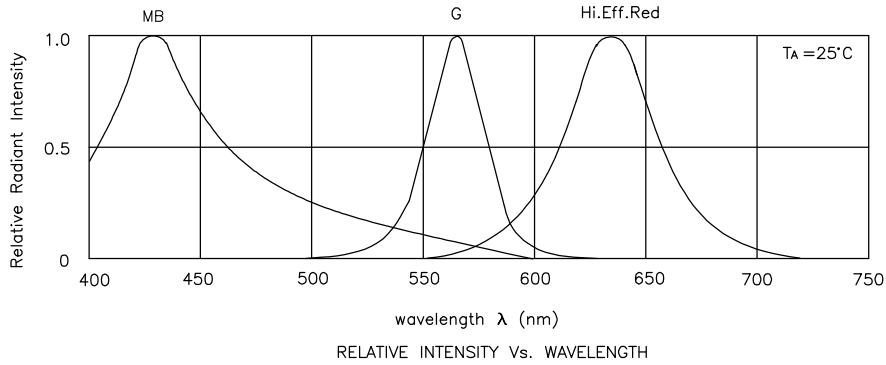
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

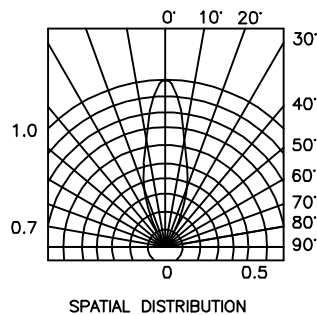
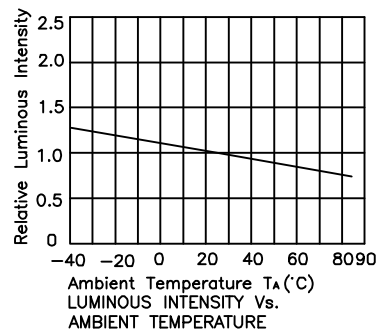
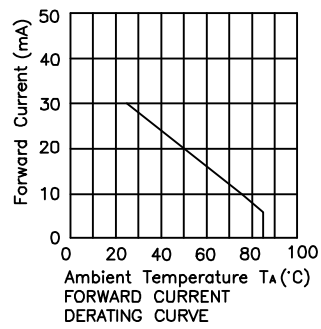
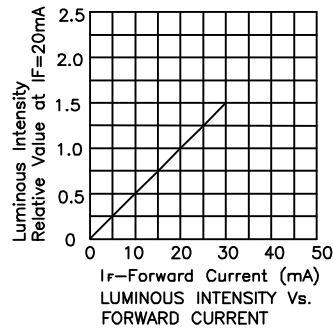
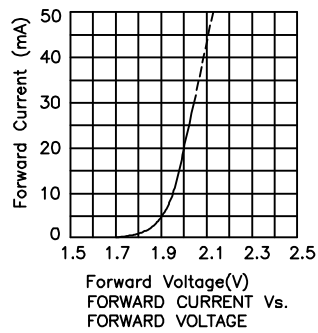
Parameter	High Efficiency Red	Blue	Green	Units
Power dissipation	105	105	105	mW
DC Forward Current	30	30	25	mA
Peak Forward Current [1]	160	150	140	mA
Reverse Voltage	5	5	5	V
Operating / Storage Temperature	-40°C TO +85°C			
Lead Solder Temperature [2]	260°C For 3 Seconds			
Lead Solder Temperature [3]	260°C For 5 Seconds			

Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.

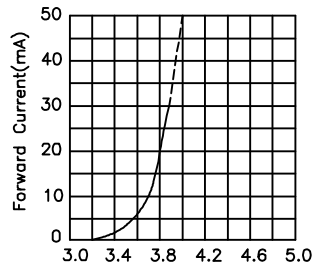


LF5WAEMBGMBC High Efficiency Red

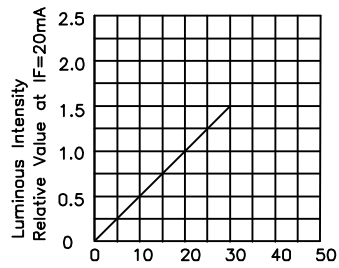


Kingbright

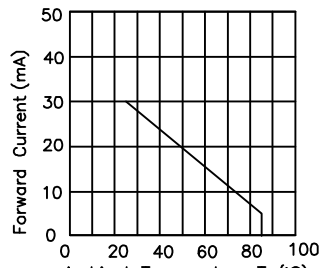
Blue



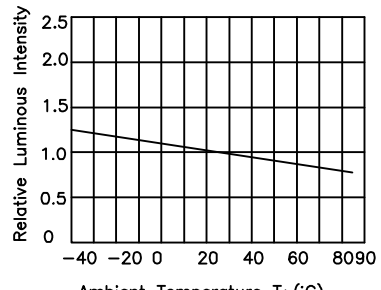
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



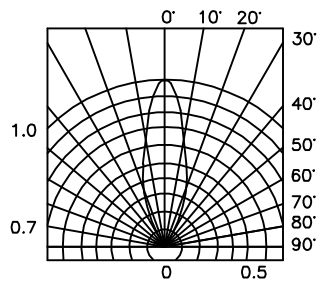
IF-Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



Ambient Temperature T_A (°C)
FORWARD CURRENT
DERATING CURVE



Ambient Temperature T_A (°C)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

Kingbright

Green

