

PRELIMINARY SPEC



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: LF5WAEMBGMB

High Efficiency Red
Blue
Green

Features

- ONE RED, ONE GREEN AND TWO BLUE 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.

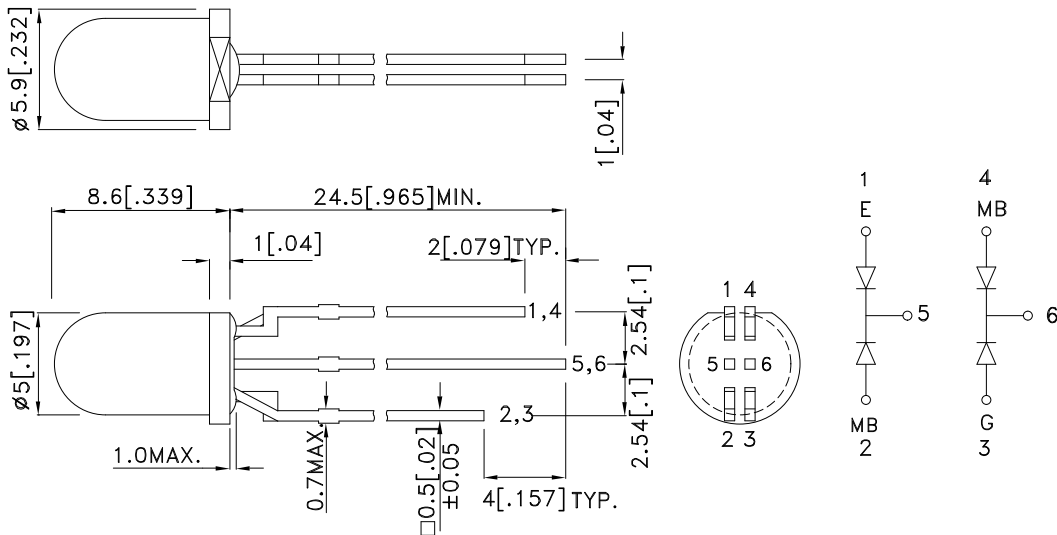
The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

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
λ_{peak}	Peak Wavelength	High Efficiency Red Blue Green	627 430 565		nm	I _F =20mA
λ_D [1]	Dominant Wavelength	High Efficiency Red Blue Green	625 466 568		nm	I _F =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	High Efficiency Red Blue Green	45 60 30		nm	I _F =20mA
C	Capacitance	High Efficiency Red Blue Green	15 100 15		pF	V _F =0V;f=1MHz
V _F [2]	Forward Voltage	High Efficiency Red Blue Green	2 3.8 2.2	2.5 4.5 2.5	V	I _F =20mA
I _R	Reverse Current	High Efficiency Red Blue Green		10 10 10	uA	V _R =5V

Notes:

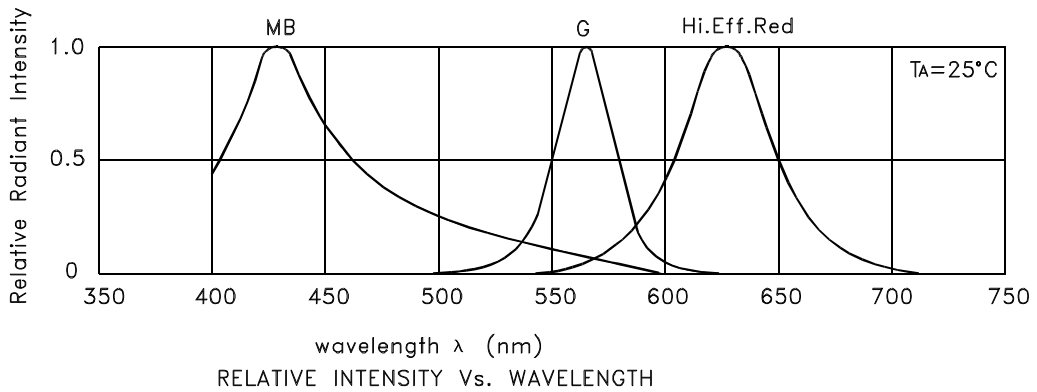
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

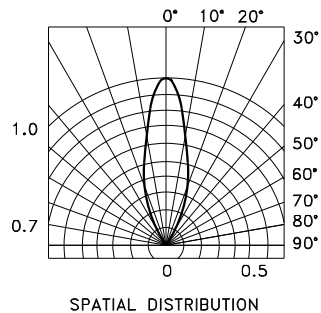
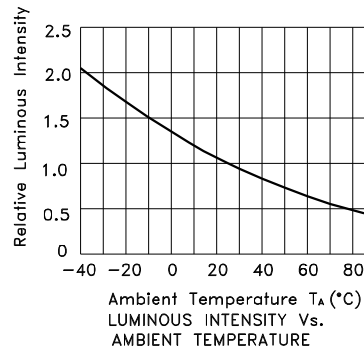
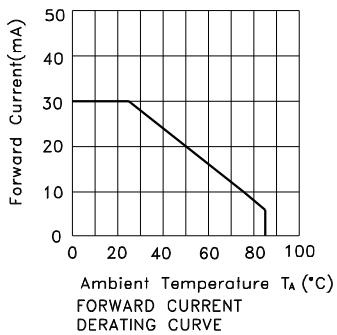
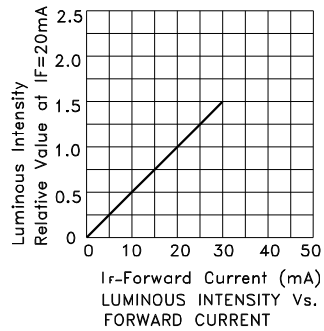
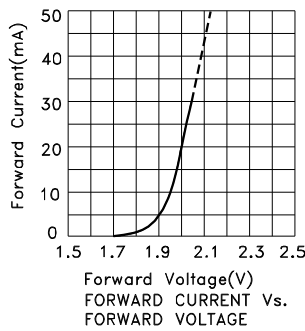
Parameter	High Efficiency Red	Blue	Green	Units
Power dissipation	75	135	62.5	mW
DC Forward Current	30	30	25	mA
Peak Forward Current [1]	160	150	140	mA
Reverse Voltage	5			V
Operating/Storage Temperature	-40°C To +85°C			
Lead Solder Temperature [2]	260°C For 3 Seconds			
Lead Solder Temperature [3]	260°C For 5 Seconds			

Notes:

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

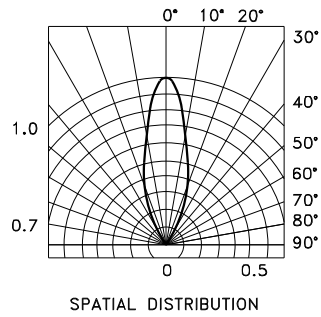
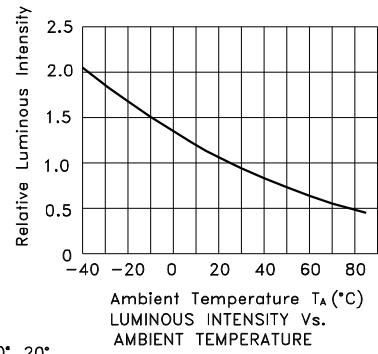
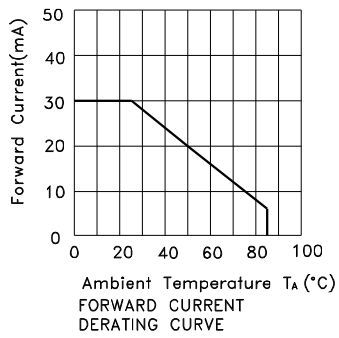
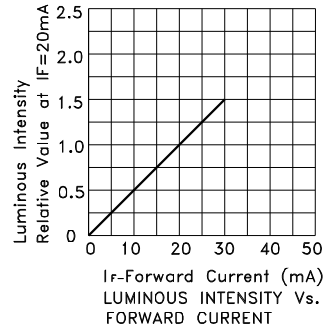
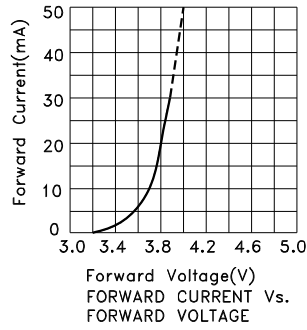


LF5WAEMBGMB High Efficiency Red



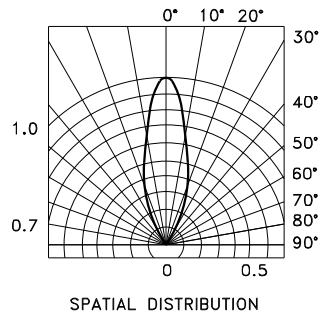
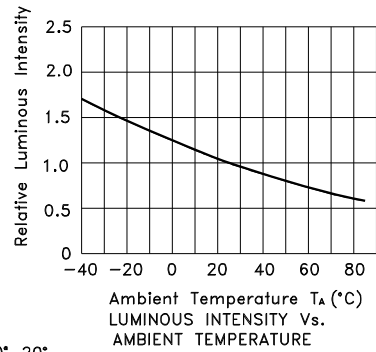
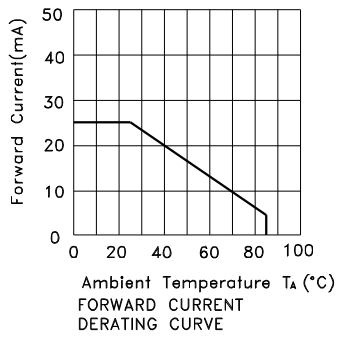
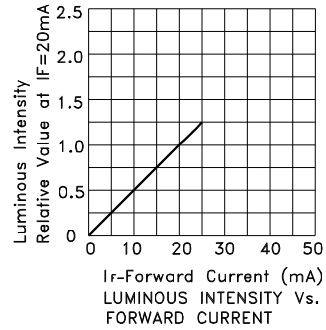
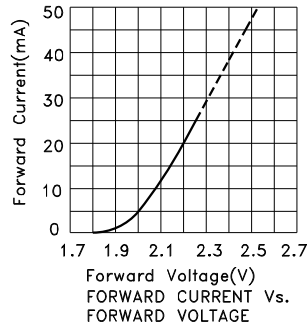
Kingbright

Blue



Kingbright

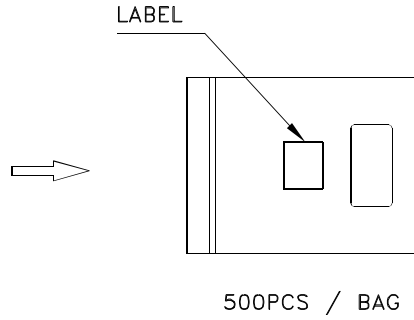
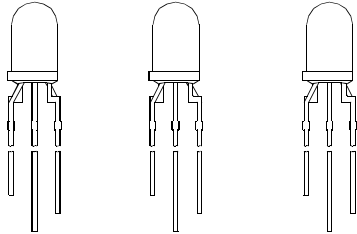
Green



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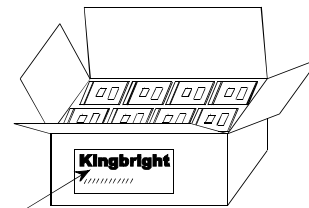
PACKING & LABEL SPECIFICATIONS

LF5WAEMBGMB




20K / 9# BOX

OUTSIDE LABEL



OUTSIDE LABEL

10K / 5# BOX

Kingbright	
P/N0: LF5WAxxx	
QTY: 500 pcs	Q.C. Q C XX XX XXXX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 xxxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	