

## 5mm LEDs

Order code	Manufacturer code	Description
56-0672	n/a	5MM DIFFUSED MULTICOLOUR LED. (RC)

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The enclosed information is believed to be correct, Information may change without notice due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 20/02/2007

LF5WAEMBGMBW 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.

### Description

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

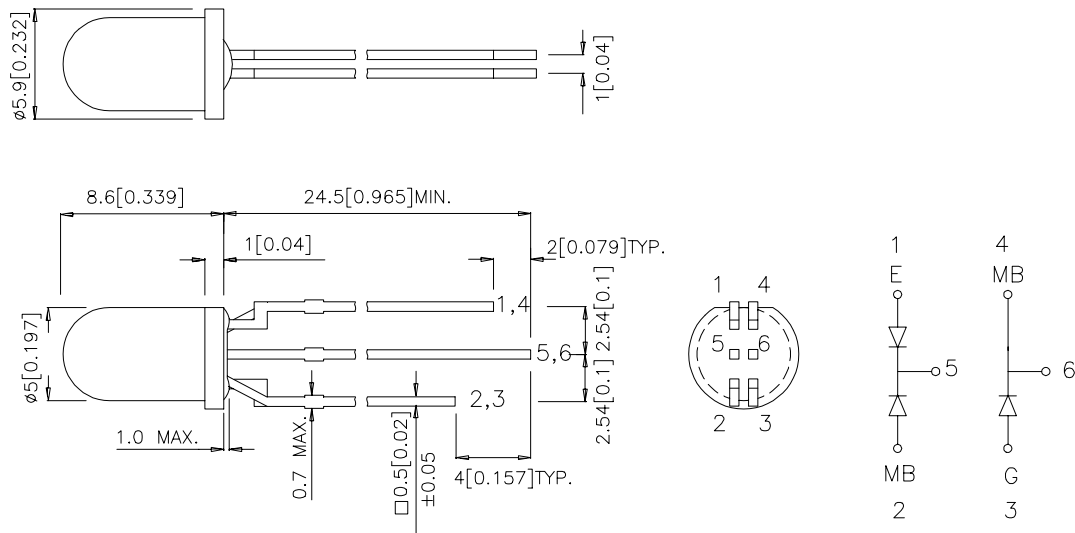
The Blue source color devices are made with GaN on SiC Light Emitting Diode.

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.

The 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) @ 20 mA		Viewing Angle
			Min.	Typ.	2θ1/2
LF5WAEMBGBMW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	12	30	60°
	BLUE(GaN)		12	20	
	GREEN (GaP)		12	25	
	BLUE(GaN)		12	20	

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

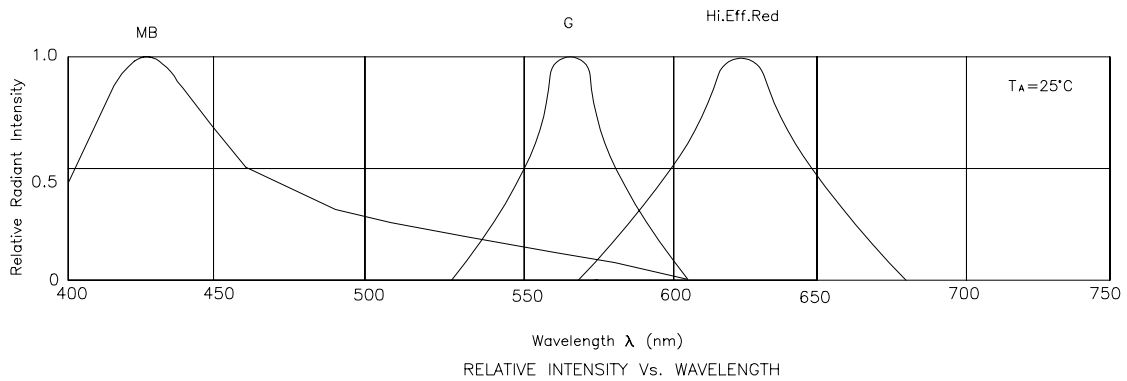
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	High Efficiency Red Blue Green	627 430 565		nm	IF=20mA
λ <sub>D</sub>	Wavelength At Peak	High Efficiency Red Blue Green	625 455 568		nm	IF=20mA
Δλ <sub>1/2</sub>	Spectral Line Halfwidth	High Efficiency Red Blue Green	45 60 30		nm	IF=20mA
C	Capacitance	High Efficiency Red Blue Green	15 65 15		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub>	Forward Voltage	High Efficiency Red Blue Green	2.0 4.0 2.2	2.5 4.5 2.5	V	IF=20mA
I <sub>R</sub>	Reverse Current	All	10		μA	V <sub>R</sub> = 5V

## Absolute Maximum Ratings at T<sub>A</sub>=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 Temperature	-40°C To +85°C	-40°C To +80°C	-40°C To +85°C	
Storage Temperature	-40°C To +85°C			
Lead Soldering Temperature [2]	260°C For 5 Seconds			

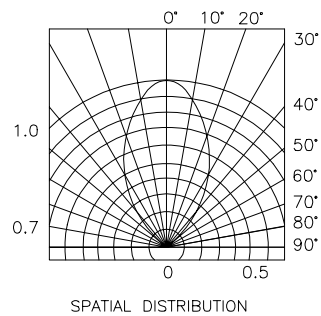
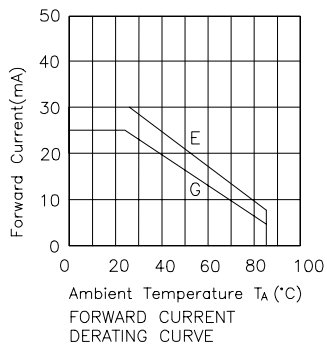
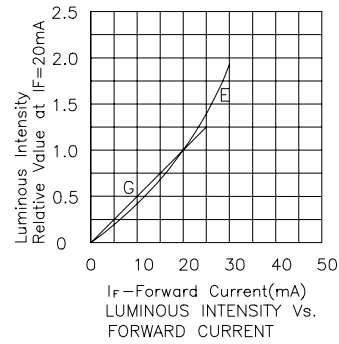
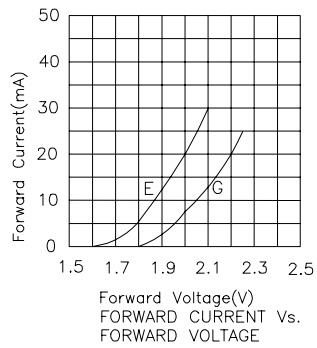
Notes:

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



## LF5WAEMBGMBW

### High Efficiency Red / Green



## Blue

