

<http://www.lc-led.com/products/b500rgb4h.html>

## **B500RGB4H: 5mm Color Changing RGB LED Lamp**

### **Quick Flashing Mode – 5mm T1 3/4 Color Changing LED Lamp (Water Clear)**

#### **PRODUCT DESCRIPTION**

- |   |  |
|---|--|
| (1) RoHs Compliant Part                                     | (4) Moisture & UV Resistance Epoxy Len                   |
| (2) Built in I.C. Chip with Tri-Color Red, Green & Blue LED | (5) Sun Light Viewable LED Lamp                          |
| (3) Color Changing Mode: R->G->B->RG->GB->RB->RGB at 0.3Hz  | (6) Rugged design suitable for both indoor & outdoor use |

#### **Absolute Maximum Rating (Ta = 25<sup>0</sup>C)**

PARAMETER	MAXIMUM RATING	UNITS
DC Forward Current	25	mA
Reverse Voltage (I <sub>R</sub> = 100μA)	5	V
Peak Pulse Forward Current (1)	100	mA
Derating Linear Value	0.4mA / <sup>0</sup> C	
Operating & Storage Temperature	-30 to +85	<sup>0</sup> C
Lead Soldering Temperature	260 <sup>0</sup> C for 6 seconds (1.0mm or 0.63 inch from Body)	

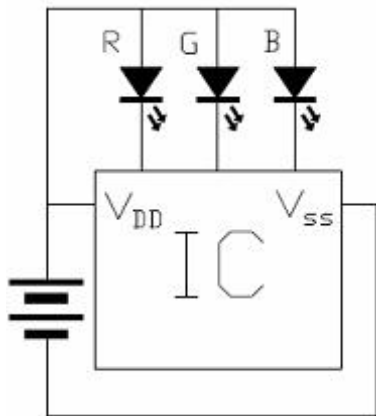
(1) Pulse conditions of 1/10 duty and 10msec width

#### **Electro-optical Characteristics (Ta = 25<sup>0</sup>C)**

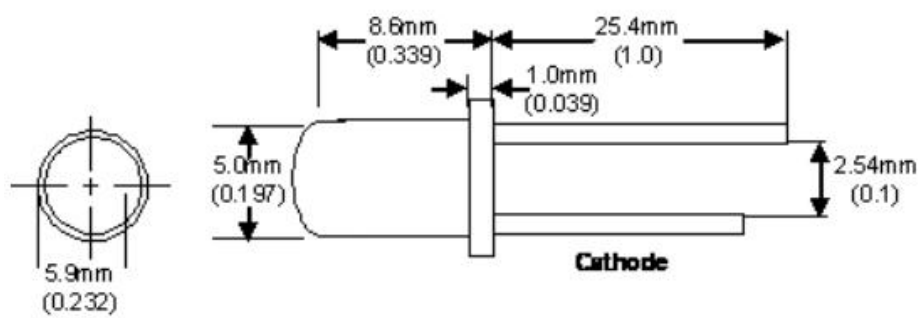
PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Forward Voltage (Red)	V <sub>F</sub>	I <sub>F</sub> = 20mA	1.8		2.2	V
Forward Voltage (Green)	V <sub>F</sub>	I <sub>F</sub> = 20mA	3.0		3.5	V
Forward Voltage (Blue)	V <sub>F</sub>	I <sub>F</sub> = 20mA	3.0		3.5	V
Dominant Wavelength (Red)	λ <sub>D</sub>	I <sub>F</sub> = 20mA		625		nm
Dominant Wavelength (Green)	λ <sub>D</sub>	I <sub>F</sub> = 20mA		520		nm
Dominant Wavelength (Blue)	λ <sub>D</sub>	I <sub>F</sub> = 20mA		465		nm
Viewing Angle	201/2	I <sub>F</sub> = 20mA		40		Deg.
Luminous Intensity (Red)	I <sub>V</sub>	I <sub>F</sub> = 20mA	1,500		2,500	mcd
Luminous Intensity (Green)	I <sub>V</sub>	V	5,000		8,000	mcd
Luminous Intensity (Blue)	I <sub>V</sub>	I <sub>F</sub> = 20mA	1,000		2,000	mcd

### Operating Characteristics (Ta = 25°C)

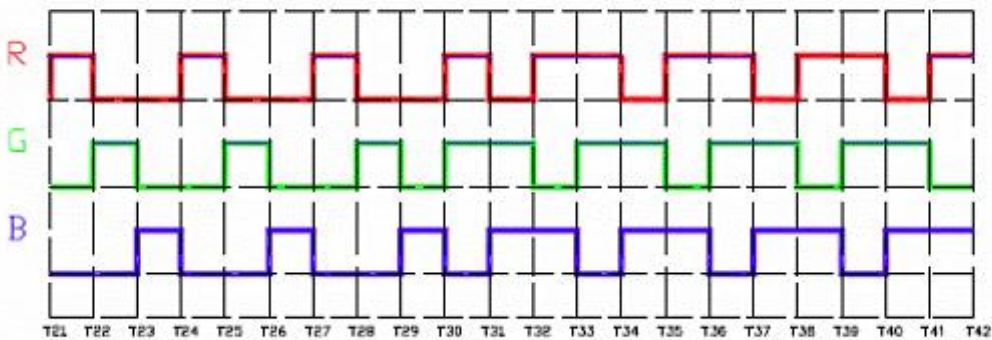
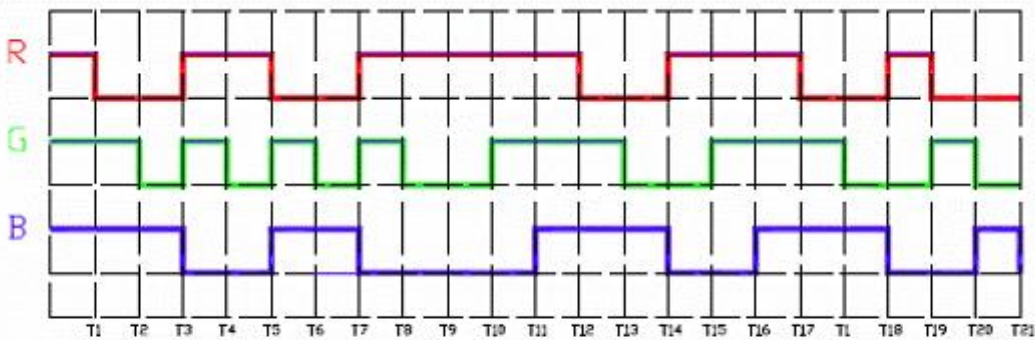
PARAMETER	SYMBOL		MIN.	TYP.	MAX.	UNIT
Operating Voltage	VDD		3.0	4.5	5.0	V
Driver Current	I	$V_{DS} = 1.2V$		40		mA
Power Consumption	P	$V_{DD} = 4.5V$		180		mW
Flash Frequency	F	External $\pm 30\%$		1.7		Hz



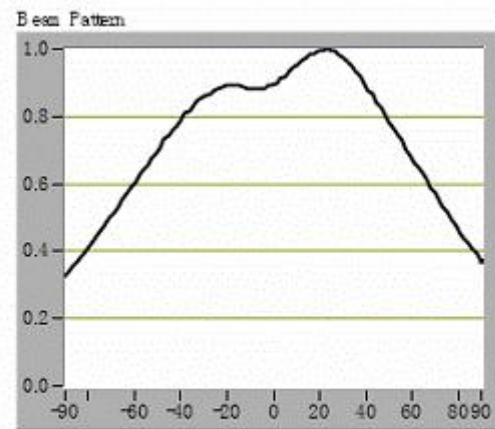
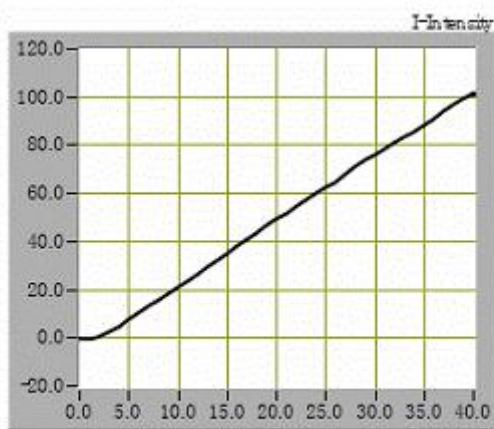
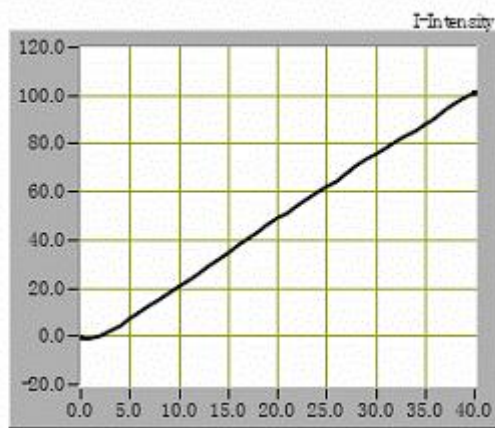
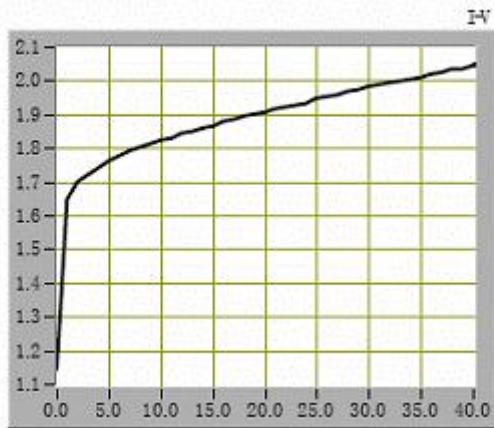
### DEVICE DRAWING



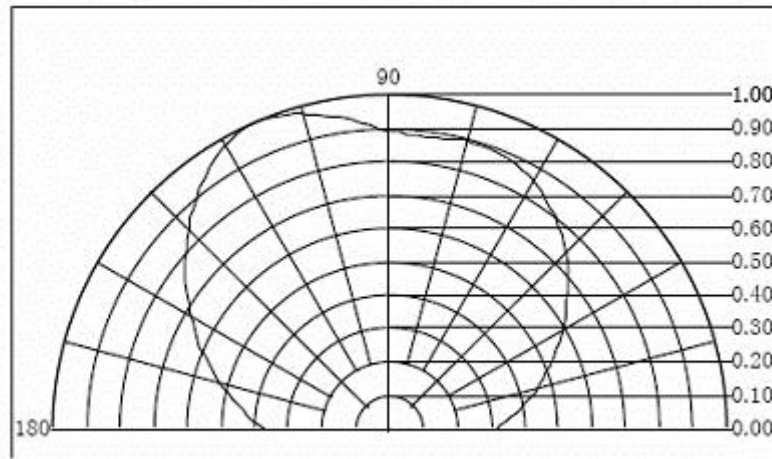
### RGB Color Mixing Diagram



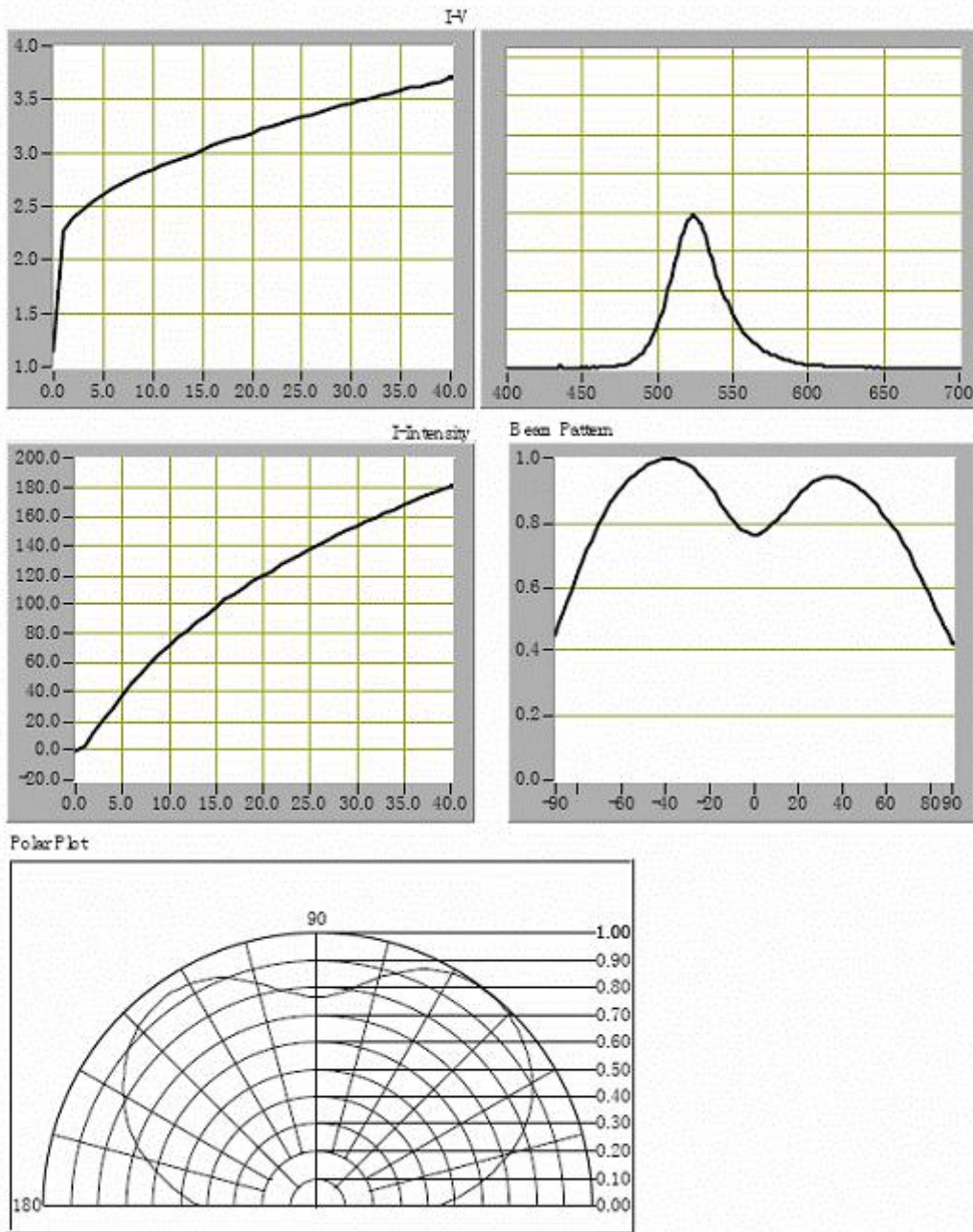
**RED COLOR:**



PolarPlot



**GREEN COLOR:**



### BLUE COLOR:

