



HUIYUAN OPTO-ELECTRONIC CO.,LTD.

TECHNOLOGY DATA SHEET & SPECIFICATIONS

MODEL: 5039R2G3B2C-ESB

Features

- *UNIFORM LIGHT OUTPUT
- *LOW POWER CONSUMPTION
- *I.C. COMPATIBLE
- *LONG LIFE-SOLID STATE RELIABILITY
- *COMMON ANODE



Descriptions

- *The Red source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode
- *The Green source color devices are made with InGaN on sic Light Emitting Diode
- *The Blue source color devices are made with InGaA1N on sic Light Emitting Diode.

Usage Notes:

- *The ultra bright LED is an electrostatic insensitive device, so static electricity and surge will damage the LED. It is required to wear a wrist-band when handling the LED. All device, equipment, machinery, desk and ground must be properly grounded
- *When using LED, it must use a protective resistor in series with DC current about 20mA

Applications

- *Status indicators
- *Commercial use
- *Advertising Signs
- *Back lighting

Device Selection Guide



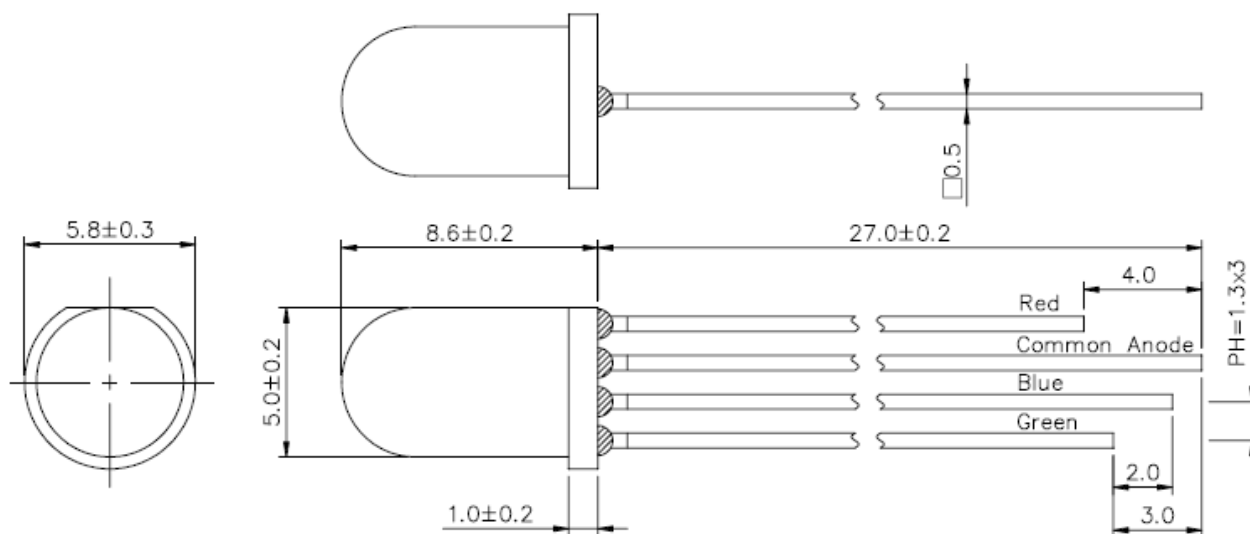
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LED Part No.	Chip		Lens Color
	Material	Emitted Color	
5039R2G3B2C-ESB	AlGaInP	Red	Water clear
	InGaN	Green	
	InGaN	Blue	

Package Dimensions



Notes:

- *Other dimensions are in millimeters, tolerance is 0.25mm except being specified.
- *Protruded resin under flange is 1.5mm Max LED.
- *Bare copper alloy is exposed at tie-bar portion after cutting.

Electro-Optical Characteristics (Ta=25℃)



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Parameter	Symbol	Device	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	Red Green Blue	1500 2000 1500	---	2300 2700 2200	mcd	IF=20mA
Viewing Angle	2θ1/2	Red Green Blue	---	45	---	Deg	(Note 1)
Peak Emission Wavelength	λ _p	Red Green Blue	635 520 460	---	650 530 470	nm	IF=20mA
Spectral Line Half-Width	Δλ	Red Green Blue	15 15 25	---	25 25 35	nm	IF=20mA
Forward Voltage	V _F	Red Green Blue	1.9 2.9 2.9	---	2.3 3.3 3.3	V	IF=20mA
Reverse Current	I _R	Red Green Blue	---	---	10	μA	VR=5V

Note:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. θ1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.



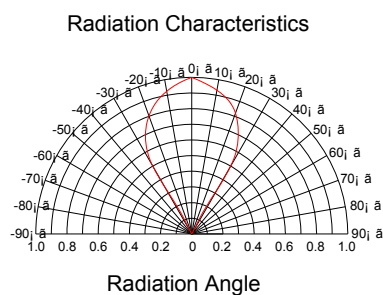
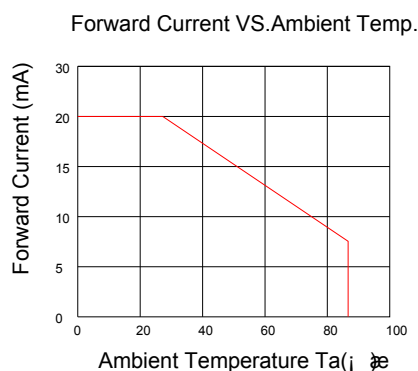
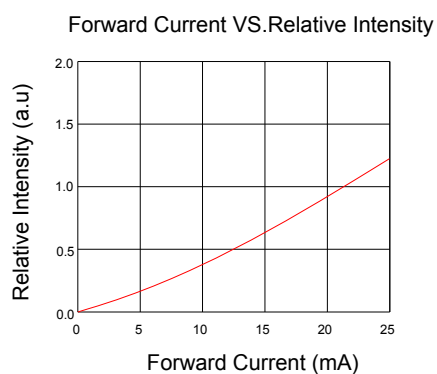
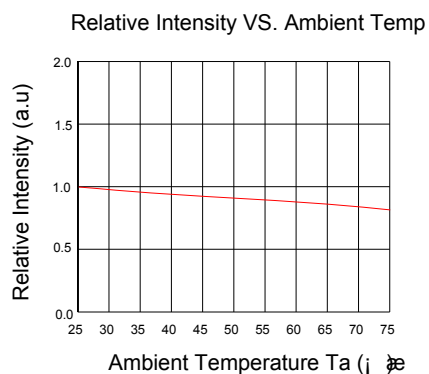
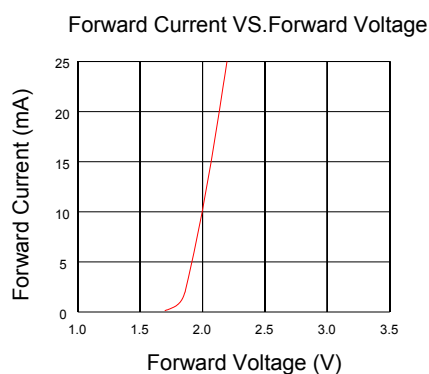
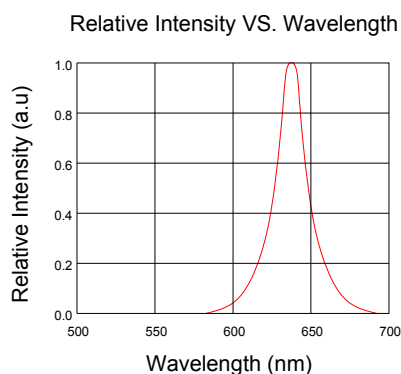
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Typical Electro-Optical Characteristics Curves

RED





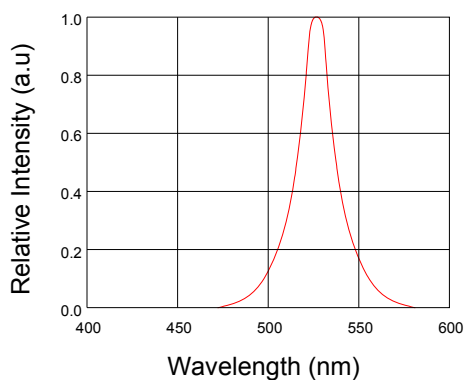
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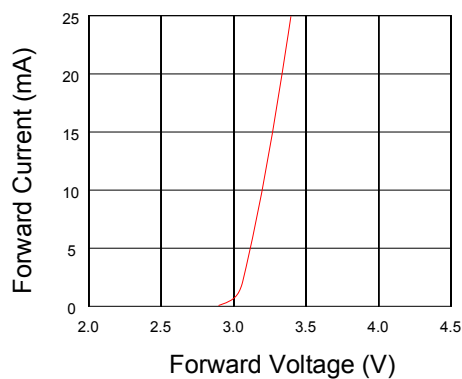
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Green

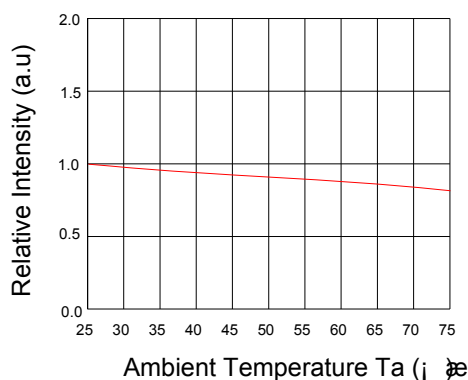
Relative Intensity VS. Wavelength



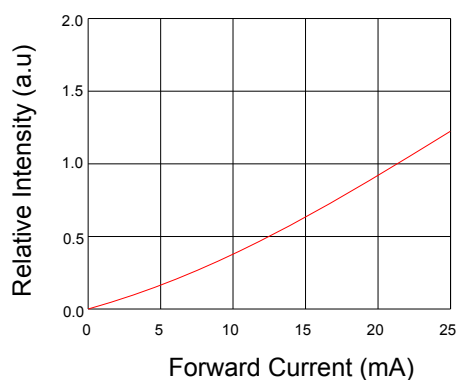
Forward Current VS. Forward Voltage



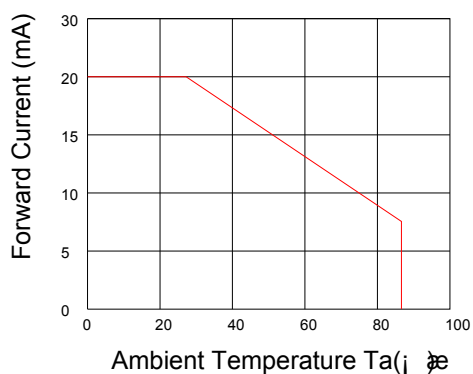
Relative Intensity VS. Ambient Temp



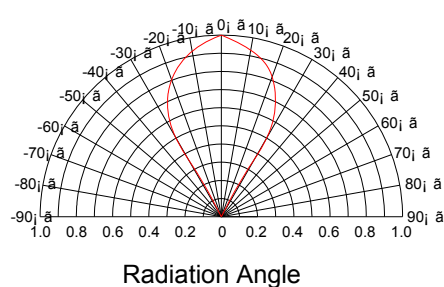
Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.



Radiation Characteristics





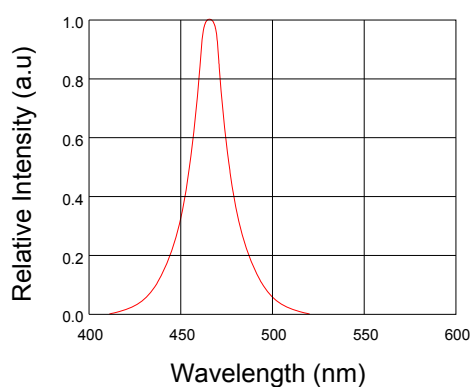
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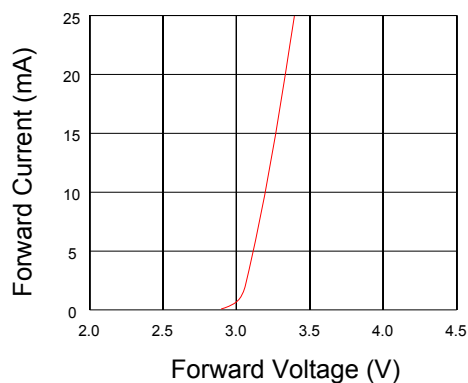
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Blue

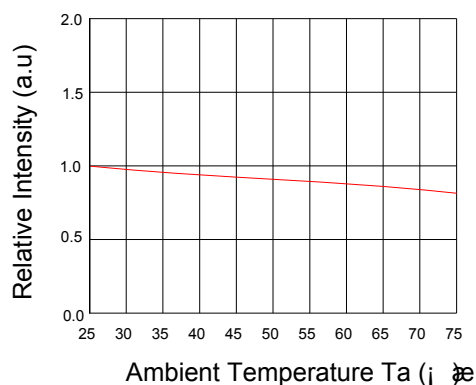
Relative Intensity VS. Wavelength



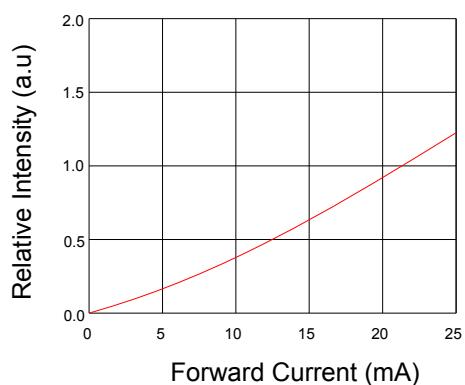
Forward Current VS. Forward Voltage



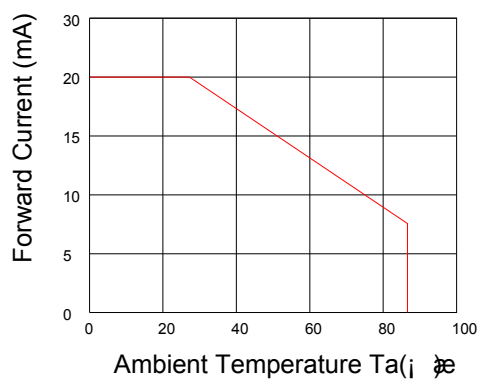
Relative Intensity VS. Ambient Temp



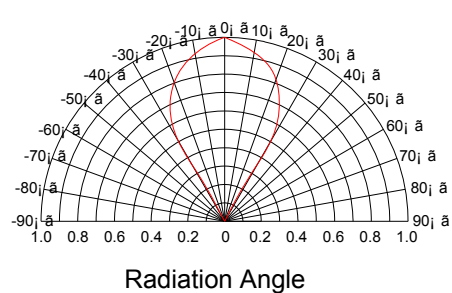
Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.



Radiation Characteristics





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Notes

1. Above specification may be changed without notice. HYLEd will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. HYLEd assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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