



HUIYUAN ELECTRONIC CO.,LTD.  
慧源电子有限公司

## TECHNOLOGY DATA SHEET & SPECIFICATIONS

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MODEL: 5mm Helmet LED

### Features

- High efficiency
- Low Power consumption
- General purpose leads
- Selected minimum intensities
- Available on tape and reel
- Pb free



### Descriptions

- The series is specially designed for applications requiring higher brightness
- The LED lamps are available with different colors, intensities, epoxy colors, etc
- Superior performance in outdoor environment



### Usage Notes:

- Surge will damage the LED
- 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



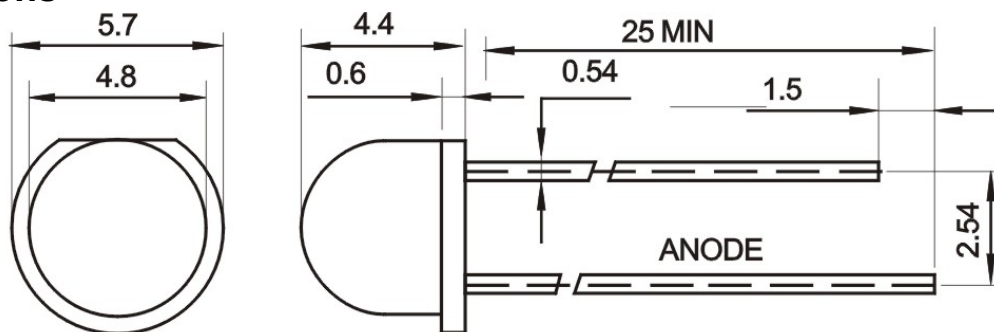
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MODEL: 5mm Helmet LED

### Device Selection Guide

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
5403R1C-LHB-B	AlGaInP	Red	Water clear
5434R1C-LHD-C			
5434R1C-LSA-E			
5403Y1C-LHB-B		Yellow	
5434Y1C-LHD-C			
5434Y1C-LSA-E			
5434G3C-LHE-A	InGaN	Green	
5434G3C-LSA-B		Blue	
5434B2C-LHC-A			
5434B2C-LHD-B			
5434B2C-LSA-C			
5434W2C-LHC-A		White	
5434W2C-LSB-C			

### Package Dimensions



UNIT:mm

### 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.

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### Electro-Optical Characteristics (T<sub>a</sub>=25°C)

Parameter	Symbol	Part No.	Parameter	Unit	Test Condition
Luminous Intensity	I <sub>v</sub>	5403R1C-LHB-B	200-400	mcd	IF=20mA(Note1)
		5434R1C-LHD-C	500-750		
		5434R1C-LSA-E	1000-2000		
		5403Y1C-LHB-B	200-400		
		5434Y1C-LHD-C	500-750		
		5434Y1C-LSA-E	1000-2000		
		5434G3C-LHE-A	1200-1800		
		5434G3C-LSA-B	1500-2000		
		5434B2C-LHC-A	400-600		
		5434B2C-LHD-B	600-800		
		5434B2C-LSA-C	1000-2000		
		5434W2C-LHC-A	400-600		
5434W2C-LSB-C	1500-2300				
Viewing Angle	2θ <sub>1/2</sub>	---	100	Deg	(Note 2)
Peak Emission Wavelength	λ <sub>p</sub>	Red	620-635	nm	IF=20mA
		Yellow	580-595		
		Green	520-535		
		Blue	460-470		
		White	---		
Spectral Line Half-Width	Δλ	---	15	nm	IF=20mA
Forward Voltage	V <sub>F</sub>	Red & Yellow	1.9-2.3	V	IF=20mA
		Green, Blue, White	2.9-3.3		
Reverse Current	I <sub>R</sub>	---	10	μA	VR=5V

### Note:

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



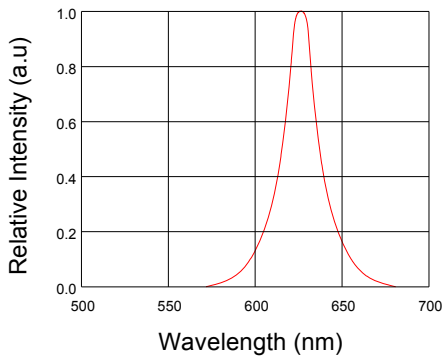
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MODEL: 5mm Helmet LED

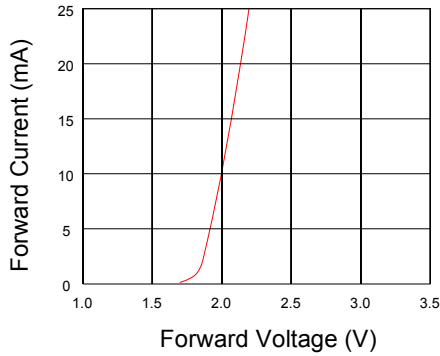
### Typical Electro-Optical Characteristics Curves

Red

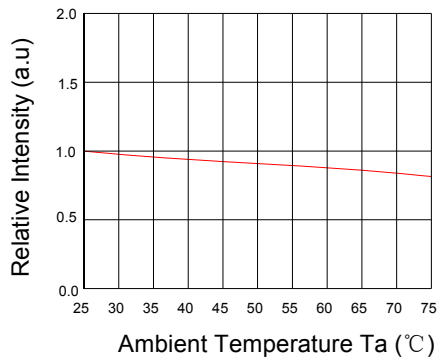
Relative Intensity VS. Wavelength



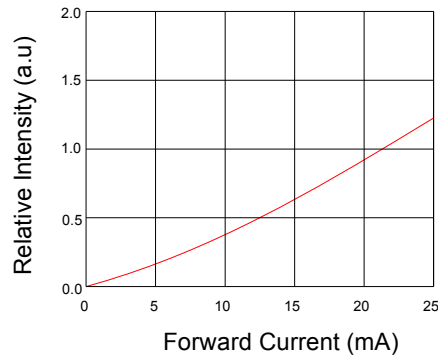
Forward Current VS. Forward Voltage



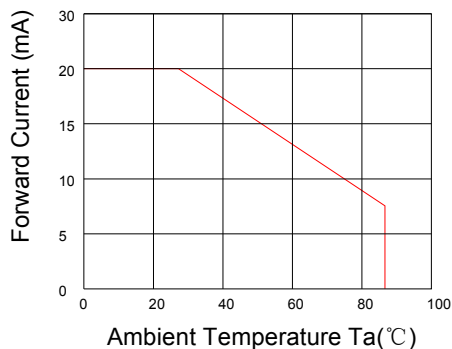
Relative Intensity VS. Ambient Temp



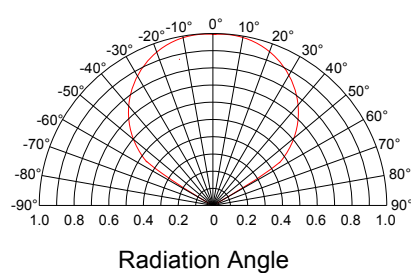
Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.



Radiation Characteristics



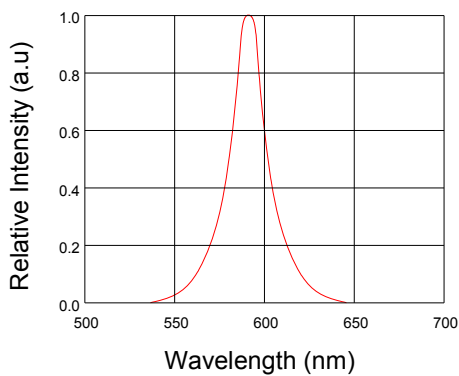


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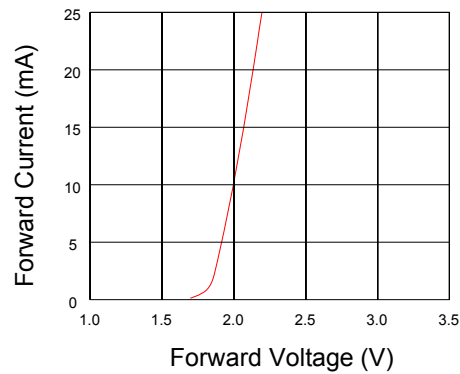
### MODEL: 5mm Helmet LED

Yellow

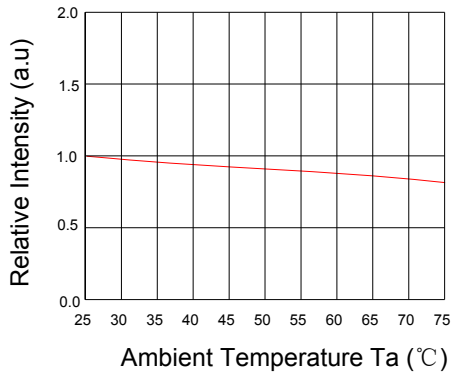
Relative Intensity VS. Wavelength



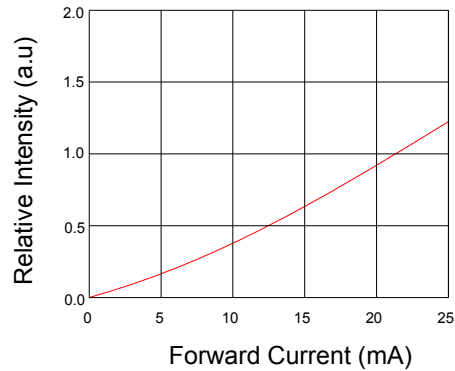
Forward Current VS. Forward Voltage



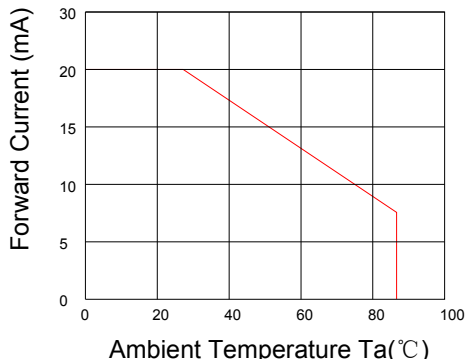
Relative Intensity VS. Ambient Temp



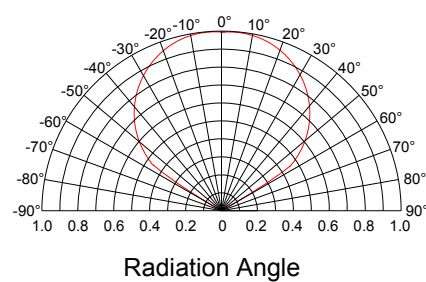
Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.



Radiation Characteristics



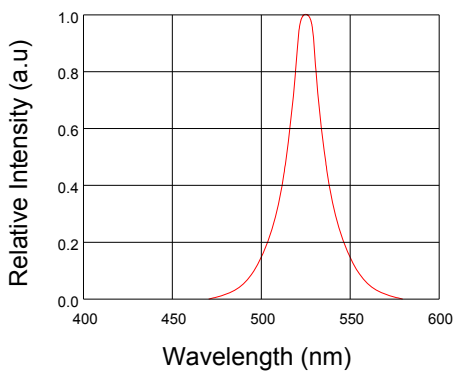


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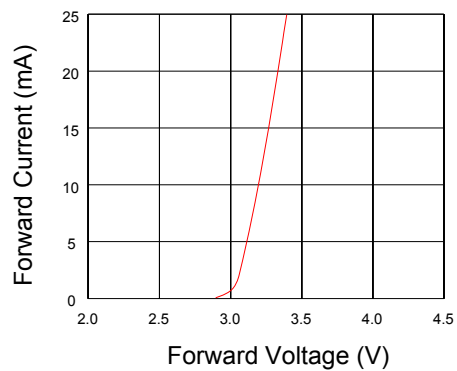
### MODEL: 5mm Helmet LED

Green

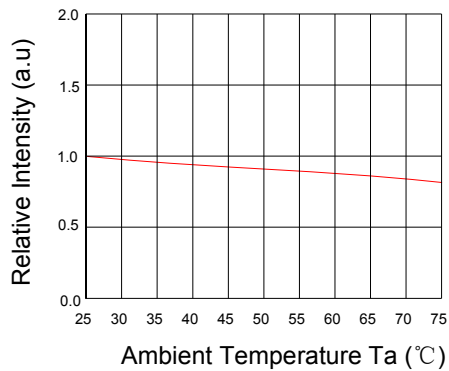
Relative Intensity VS. Wavelength



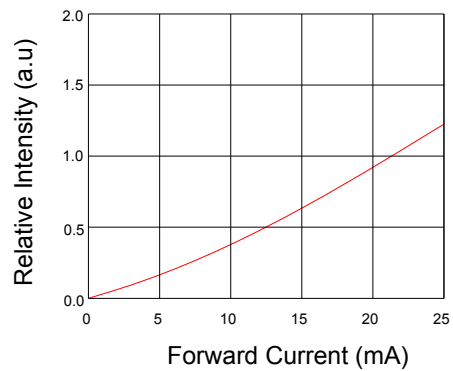
Forward Current VS. Forward Voltage



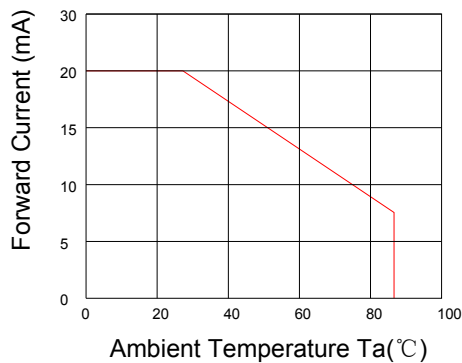
Relative Intensity VS. Ambient Temp



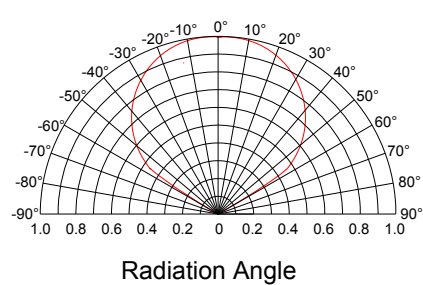
Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.



Radiation Characteristics



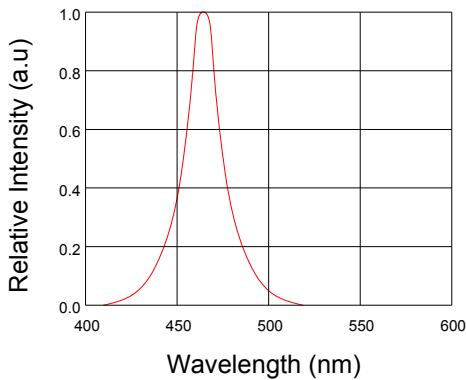


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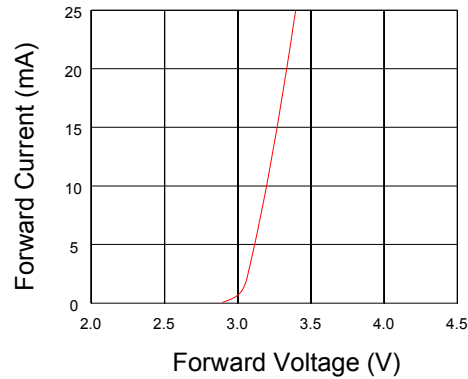
### MODEL: 5mm Helmet LED

Blue

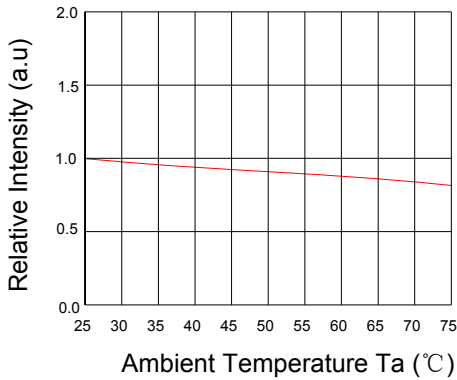
Relative Intensity VS. Wavelength



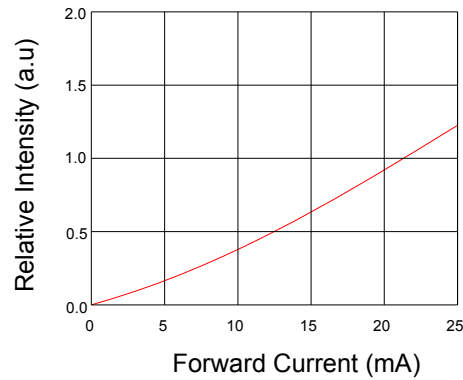
Forward Current VS. Forward Voltage



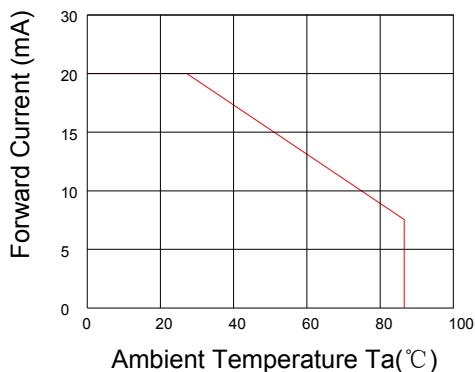
Relative Intensity VS. Ambient Temp



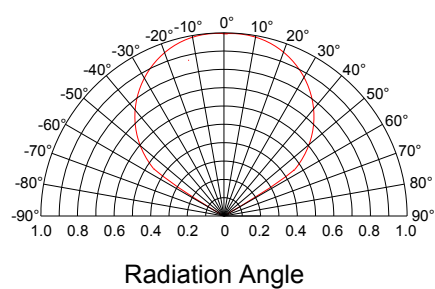
Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.



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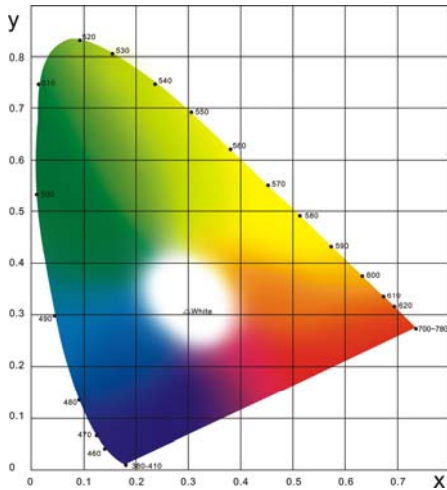
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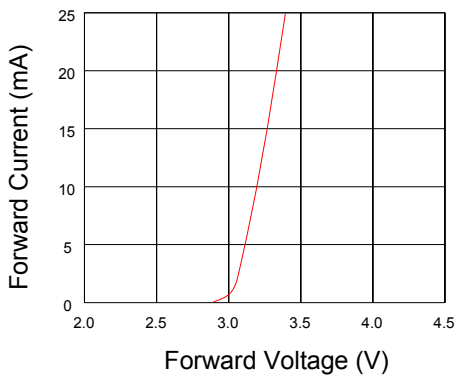
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**MODEL: 5mm Helmet LED**

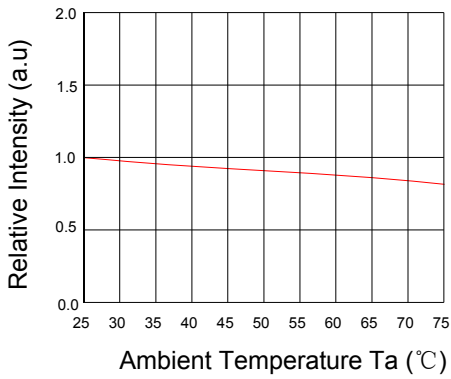
White



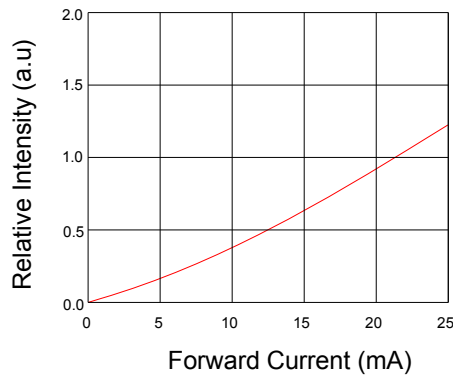
Forward Current VS.Forward Voltage



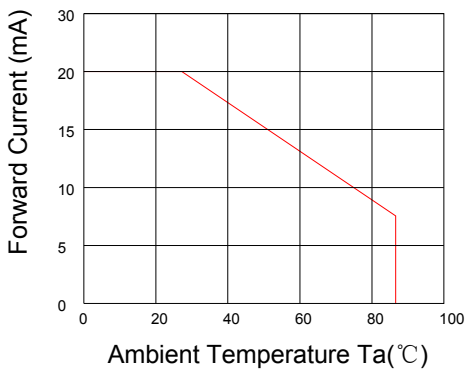
Relative Intensity VS. Ambient Temp



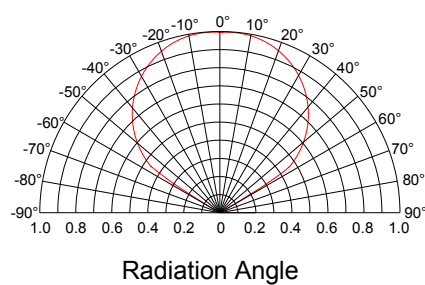
Forward Current VS.Relative Intensity



Forward Current VS.Ambient Temp.



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### Notes

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