



# YOLight™ Ultra Bright White LED Lamp YZ-WB5S20Y series

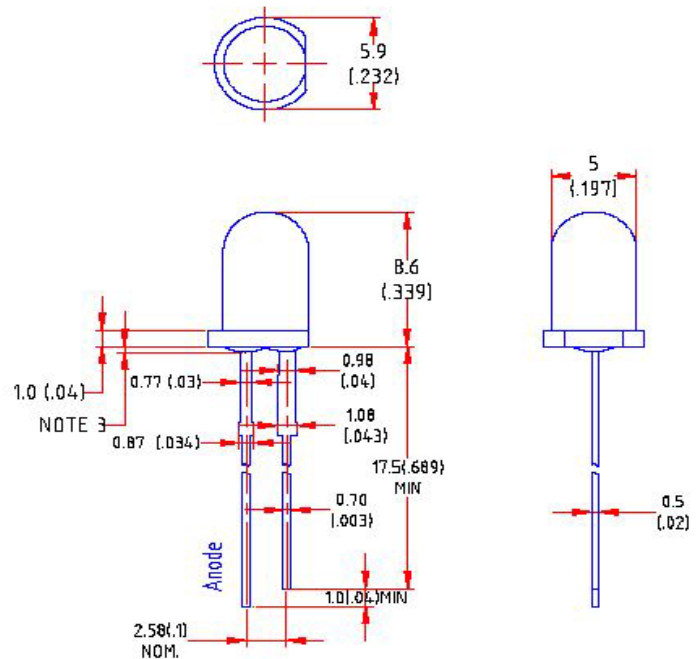
<b>Y</b>	<b>Z</b>	-	<b>W</b>	<b>B</b>	<b>5</b>	<b>S</b>	<b>20</b>	<b>Y</b>
Yolight	Product Code		Color	Color Note	Size	Shape	Angle 2θ ½	Stand-Off
			White	B Bin	5 mm	Sharp	20°	Yes

## FEATURES

- Highly Luminous Ultra Bright
- InGaN Technology Chip
- YAG Phospor
- Super Luminous Intensity 6800 mcd
- High Luminous Flux 2.2 lm
- Extremely Uniform White Light
- Water Clear Resin Package
- Precise A, B, C, D Color Bin Selections
- 5mm Resin Mold with 3mm size option
- Shape Options with Normal or Sharp
- Wide Viewing Angles 20°, 40°
- Stand-Off Options

- Channel Letter Lights
- Lantern Lights
- Solar Energy Lights
- Traffic Lights and Signals
- Automotive Interior Lights

## Package Dimensions



## BENEFITS

- Low Energy Consumptions
- Low Maintenance Costs
- High Application Design Flexibility
- High Reliability
- Prompt Shipment
- Very Competitive prices

## APPLICATIONS

- Torch / Miniature Flash Lights
- Garden Lights
- Microscope Illuminators (Ring Lights)
- Electronic Displays and Signals
- Legend Back Lights
- Optical Indicator Lights
- Display / Decoration Lights
- Cavity Lights/ Effect Lights
- Desk Lamp Lights

### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance  $\pm 0.25$  (0.01") mm unless otherwise noted.
3. Protruded resin under flange is 1.0mm (0.04") max.
4. Lead spacing is measured where the leads emerge from the package
5. Specifications are subject to change without prior notice.

## Delivery

- Bulk, 500 pieces per bag standard
- Ammo or Reel are available upon request

**CAUTION:** YZ-WB5S20Y series LEDs are *Class 1 ESD* sensitive. Static Electricity and surge damage the LEDs. It is recommended to use a wristband or anti-electrostatic glove when handling LEDs. All devices, equipment and machinery must be properly grounded.



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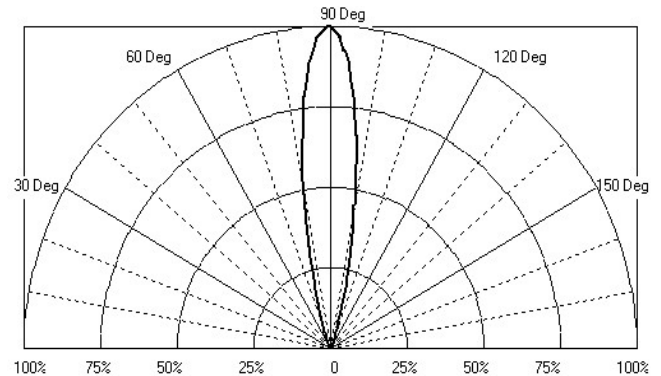
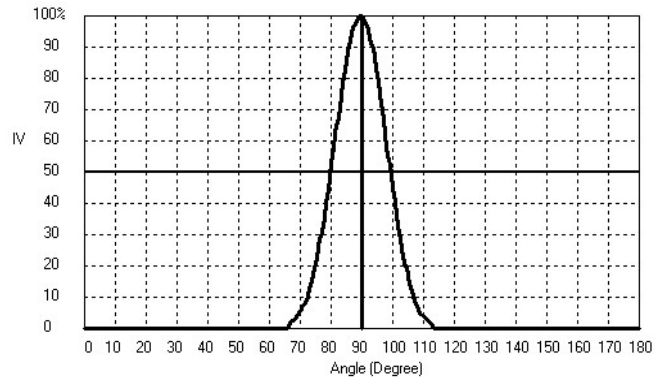
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## Absolute Maximum Ratings at Ta = 25°C

Forward Voltage	V <sub>f</sub>	3.4 ± 0.3 V
Continuous Forward Current	I <sub>f</sub>	30 mA
Power Dissipation	P <sub>d</sub>	120 mW
Peak Forward Current	I <sub>fp</sub>	150 mA
Derating Factor		0.40 mA/ °C
Reverse Voltage	V <sub>r</sub>	5 V
Operating Temperature	T <sub>op</sub>	-25 ~ +85°C
Storage Temperature	T <sub>stg</sub>	-35 ~ +100°C
Soldering Temperature	T <sub>sd</sub>	260°C / 5 Sec

## Typical Electrical / Optical Characteristics Curves at Ta = 25°C

Beam Pattern



## Luminous Intensity I<sub>v</sub> at I<sub>f</sub> = 20 mA

Type	Rank R			Rank S	
	Unit: mcd	Min.	Typ.	Max/Min.	Typ
YZ-WB5S20	4800	5600	6800	8000	9500
YZ-WB5N40	1000	1200	1500	2800	3600

Notes: Viewing Angle 40° with Normal Lens Shape

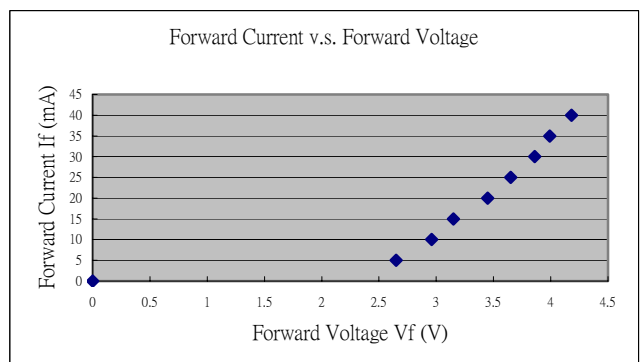
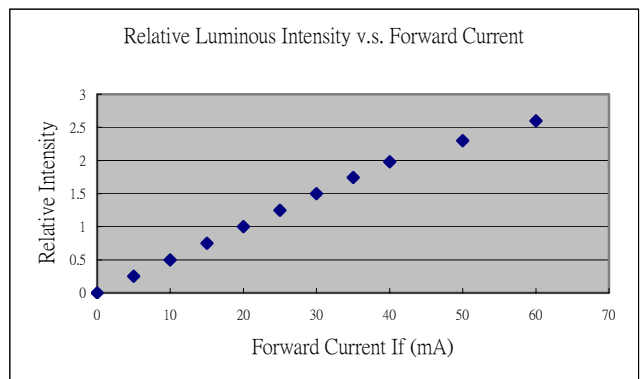
## Luminous Flux Φ<sub>v</sub> at I<sub>f</sub> = 20 mA

Type	Rank R			Rank S	
	Unit: lm	Min.	Typ.	Max/Min.	Typ
YZ-WB5S20	1.8	2.0	2.2	2.4	2.6
YZ-WB5N40	1.8	2.0	2.2	2.4	2.6

Notes: Viewing Angle 40° with Normal Lens Shape

## Color Bin Limits at I<sub>f</sub> = 20 mA

Bin	Color Rendering Index	Approximate Color Temperature °K
A	50 ~ 65	6500 ~ 10000
B	70 ~ 95	5500 ~ 6500
C	85 ~ 100	4500 ~ 5500
D	70 ~ 85	3500 ~ 4500





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			White	B Bin	5 mm	Sharp	20°	Yes

## Color Ranks

Conventional A-Rank, Approximate Color Temperature = 6500 ~ 10000°K

	<b>Rank A</b>			
X	0.280	0.264	0.283	0.296
Y	0.248	0.267	0.305	0.276

Conventional B-Rank, Approximate Color Temperature = 5500 ~ 6500°K

	<b>Rank B0</b>			
X	0.287	0.283	0.330	0.330
Y	0.295	0.305	0.360	0.339
	<b>Rank B1</b>			
X	0.296	0.287	0.330	0.330
Y	0.276	0.295	0.339	0.318

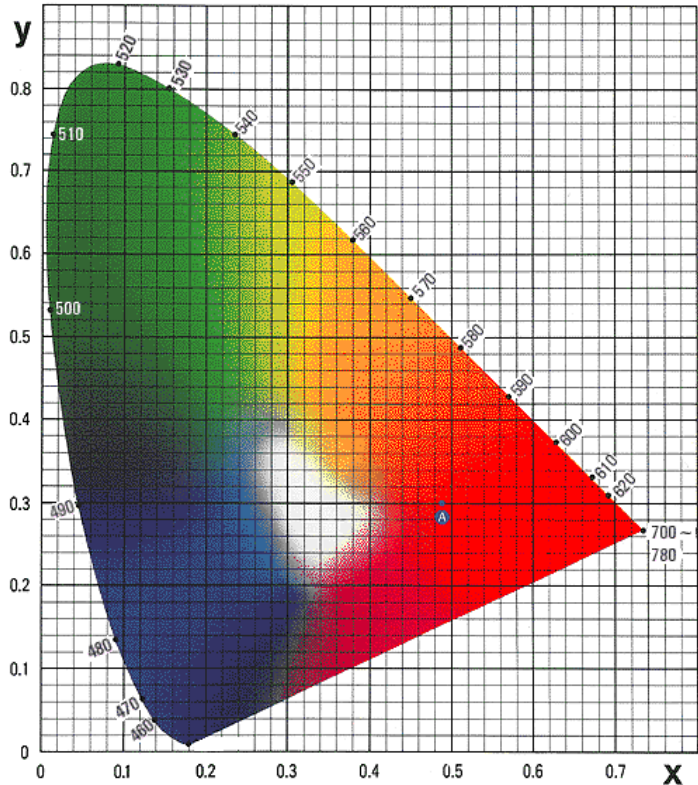
Conventional C-Rank, Approximate Color Temperature = 4500 ~ 5500°K

	<b>Rank C</b>			
X	0.330	0.330	0.361	0.356
Y	0.318	0.360	0.385	0.351

Conventional D-Rank, Approximate Color Temperature = 3500 ~ 4500°K

	<b>Rank D</b>			
X	0.350	0.382	0.443	0.393
Y	0.310	0.451	0.481	0.340

## ICI Chromaticity Diagram



### Notes:

1. The luminous intensity is measured by the CIE 1931 eye-response method with Tolerance ±15%.
2. The chromaticity coordinates are derived from the CIE 1931 chromaticity diagram and represent the perceived colors of the device.
3. Color Note:  
A: A Bin / B: B Bin / C: C Bin / D: D Bin
4. Lens Size:  
5: 5mm standard / 3: 3mm Option
5. Lens Shape:  
N: Normal Shape / S: Sharp Shape
6. Angle 2θ ½:  
20: 18°±3° / 40: 42°±3°
7. Stand Off:  
N: No Stand-Off / Y: With Stand-Off

Note: All data showing in this product specification are measured by proper experiment conditions and instruments. However, those data may be different due to variations of testing instruments and conditions.