

# YOLight™ Ultra Bright White LED Lamp

## YZ-WS 5 series

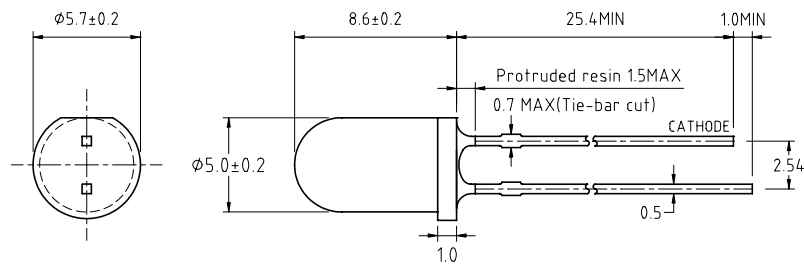
<b>Y</b>	<b>Z</b>	<b>-</b>	<b>W</b>	<b>S</b>	<b>5</b>	<b>S</b>	<b>20</b>
Yolight	Product Code		Color	Color Note	Size	Shape	Angle 2θ ½
			White	Sunny	5 mm	Sharp	20°

### FEATURES

- Highly Luminous Ultra Bright
- InGaN Technology Chip
- YAG Phosphor
- Super Luminous Intensity 9200 mcd
- High Luminous Flux 2.4 lm
- Extremely Uniform White Light
- Water Clear Resin Package
- 5mm Resin Mold with 3mm size option
- Shape Options with Normal or Sharp
- Wide Viewing Angles 20°, 40°
- Stand-Off Options

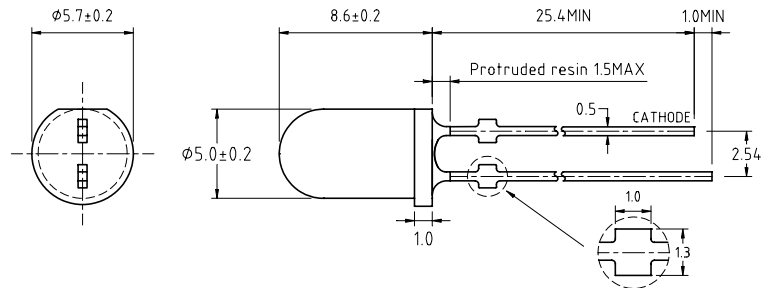
- Cavity Lights/ Effect Lights
- Desk Lamp Lights
- Channel Letter Lights
- Lantern Lights

### Package Dimensions



### BENEFITS

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



### APPLICATIONS

- Model Railroad and Auto Headlights
- Torch / Miniature Flash Lights
- Garden Lights
- Microscope Illuminators (Ring Lights)
- Electronic Displays and Signals
- Legend Back Lights
- Optical Indicator Lights
- Display / Decoration 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-WS 5 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.



# YOLight™ Ultra Bright White LED Lamp

## YZ-WS 5 series

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

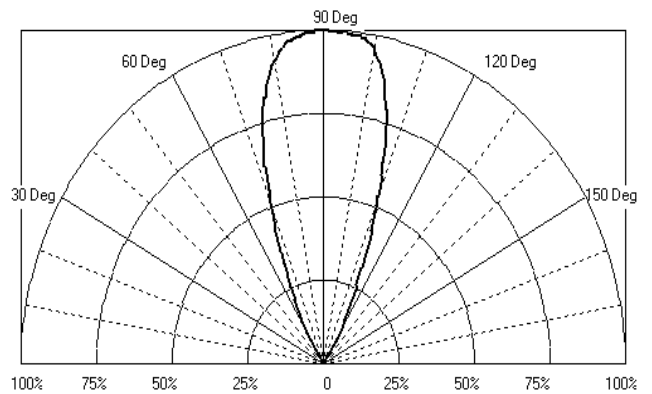
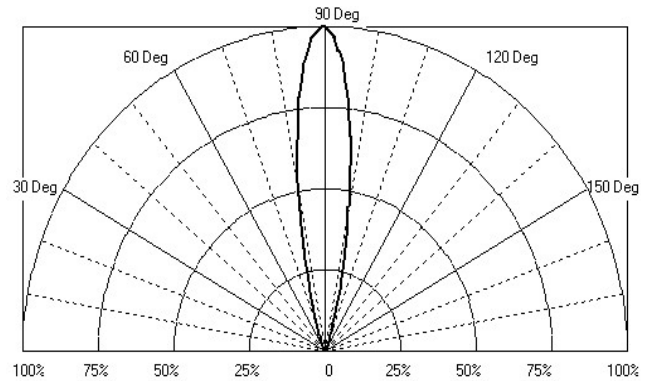
### Absolute Maximum Ratings at Ta = 25°C

Forward Voltage	V <sub>f</sub>	3.2 ± 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



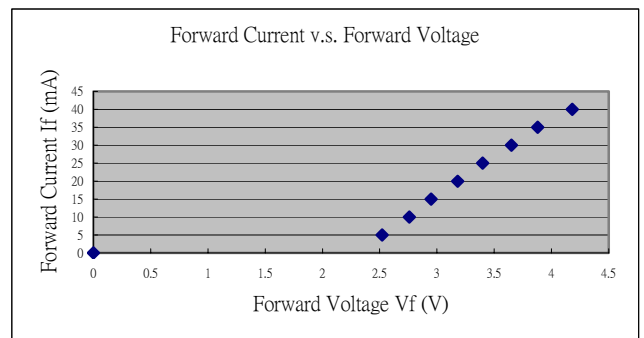
### Luminous Intensity I<sub>v</sub> at I<sub>f</sub> = 20 mA

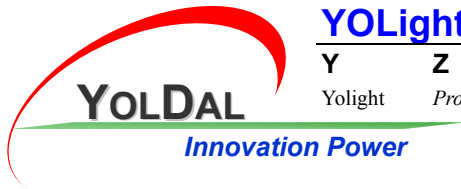
Type	Rank R			Rank S		
	Unit: mcd	Min.	Typ.	Max/Min.	Typ	Max
YZ-WS 5S20	5600	6800	8000	9200	11000	
YZ-WS 5N40	1500	1800	2300	2800	3600	

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	Max
YZ-WS 5S20	1.8	2.0	2.2	2.4	2.6	
YZ-WS 5N40	1.8	2.0	2.2	2.4	2.6	





# YOLight™ Ultra Bright White LED Lamp

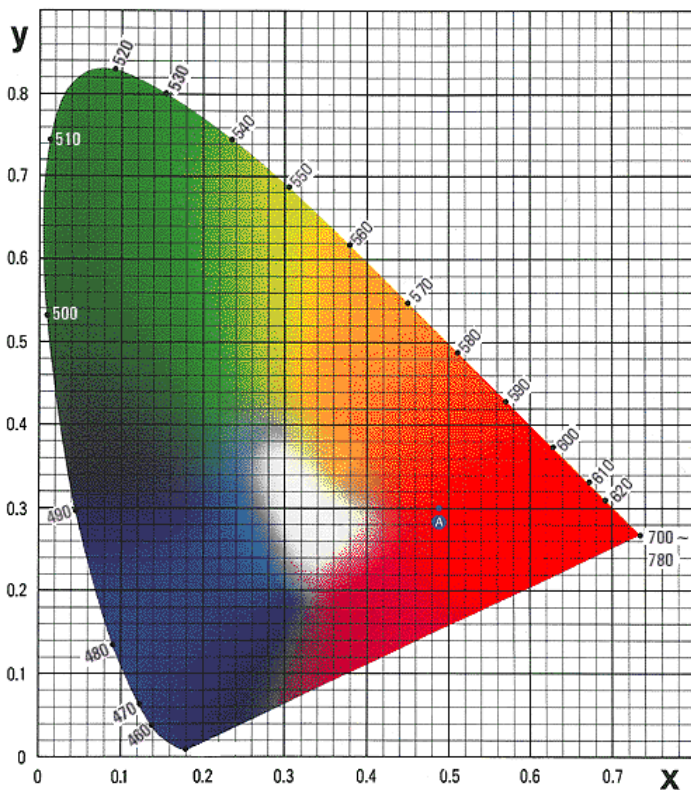
## YZ-WS 5 series

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

### Sunny White Color Coordinates

X	0.441	0.443	0.485	0.481
Y	0.462	0.426	0.427	0.463

### ICI Chromaticity Diagram



#### Notes:

1. The luminous intensity is measured by the CIE 1931 eye-response method with Tolerance  $\pm 15\%$ .
2. The chromaticity coordinates are derived from the CIE 1931 chromaticity diagram and represent the perceived colors of the device.
3. Color Note: Sunny White
4. Lens Size:  
5: 5mm standard / 3: 3mm Option
5. Lens Shape:  
N: Normal Shape / S: Sharp Shape
6. Angle 2θ ½:  
20:  $18^\circ \pm 3^\circ$  / 40:  $42^\circ \pm 3^\circ$
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.