



# Specification For Approval

**Customer:** \_\_\_\_\_  
**Product:** \_\_\_\_\_  
**Part No. :** YSR544W  
**Ref. No:** \_\_\_\_\_  
**Date:** 2009-09-12

| Made by Shenzhen Aglare Lighting Co. Ltd |           |                  |                |
|--|-----------|------------------|----------------|
| Production Dept                          | Q.C. Dept | Engineering Dept | Marketing Dept |
| Wen Liu                                  | Fang Yang | Jiang Yang       | Fang Wang      |

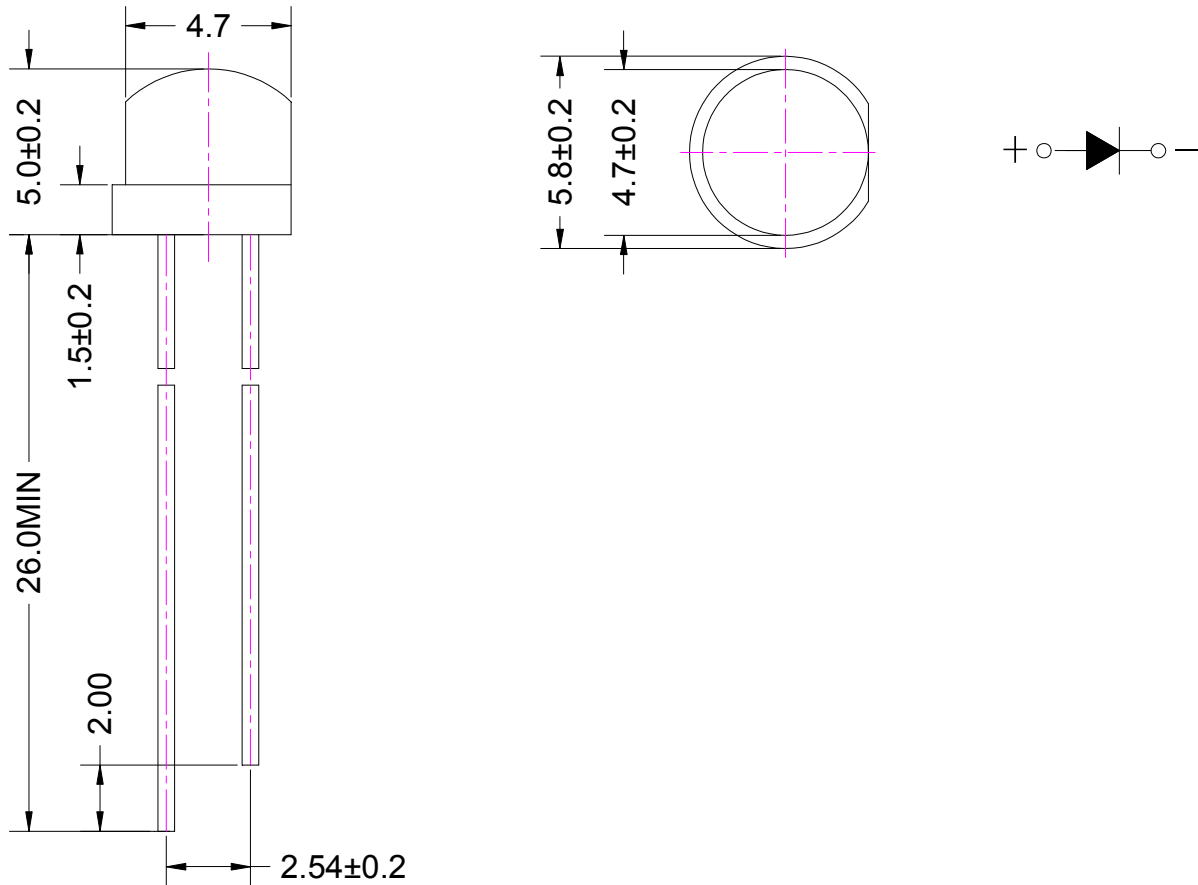
| Approved by      |                 |           |         |
|------------------|-----------------|-----------|---------|
| Engineering Dept | Production Dept | Q.C. Dept | Manager |
|                  |                 |           |         |



## 1 . P/N: YSR544W

## 2 . Package Dimensions (mm)

Tolerance:  $\pm 0.25(0.01)$



Unit : mm

Color : Red

Lens-color : Water clear

Emitting Material : AlGaInP

Drawing by : volitation

**3. YSR544W Characteristic****LIGHT EMITTING DIODE LAMPS****Absolute maximum ratings****(Ta=25°C)**

|  | Symbol | Value   | Unit |
|--|--------|---------|------|
| Forward current                        | If     | 30      | mA   |
| Reverse voltage                        | Vr     | 5       | V    |
| Power dissipation                      | Pd     | 110     | mW   |
| Operating temperature range            | Top    | -25~+80 | °C   |
| Storage temperature range              | Tstg   | -30~+80 | °C   |
| Peak pulsing current (1/8 duty f=1KHz) | Ifp    | 125     | mA   |

**Electro-Optical characteristics****(Ta=25°C)**

| Parameter                   | Test Condition | Symbol  | Value  |      |      | Unit |
|-----------------------------|----------------|---------|--------|------|------|------|
|                             |                |         | Min    | Typ  | Max  |      |
| Wavelength at peak emission | If=20mA        | peak    | 620    | 630  | 635  | nm   |
| Spectral half bandwidth     | If=20mA        |         |        | 10   |      |      |
| Forward voltage             | If=20mA        | Vf      | 1.8    |      | 2.4  | V    |
| Luminous intensity          | If=20mA        | Iv      | 5000   | 7000 | 9000 | mcd  |
| Viewing angle at 50% IV     | If=10mA        |         | --     | 8    | --   | Deg  |
| Reverse current             | Vr=5V          | Ir      | --     | --   | 5    | µA   |
| Useful life                 | -              | IF=20mA | 100000 |      |      | H    |



## 4 . Typical electric performance graphs

Typical Electrical/Optical Characteristics Curves  
( $T_a=25^\circ$  Unless Otherwise Noted)

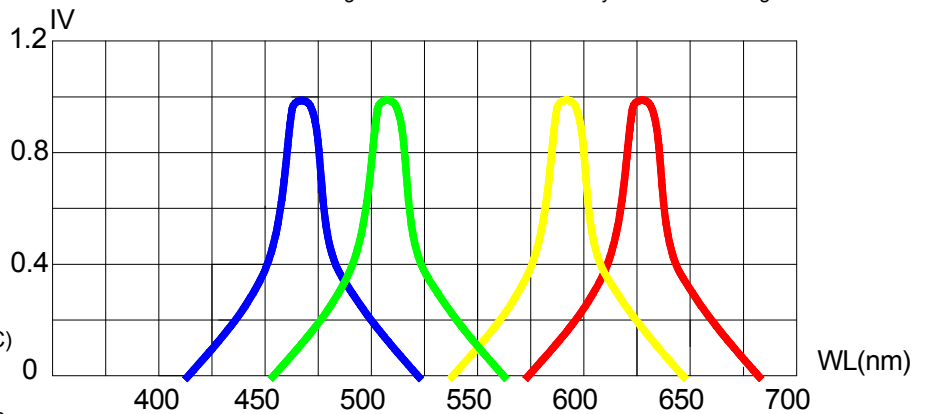
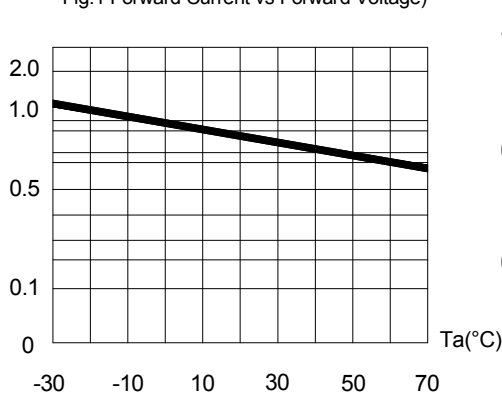
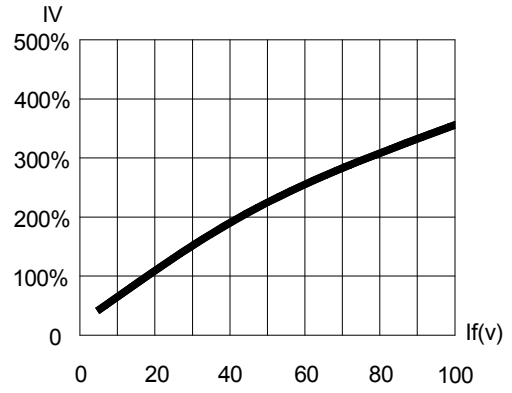
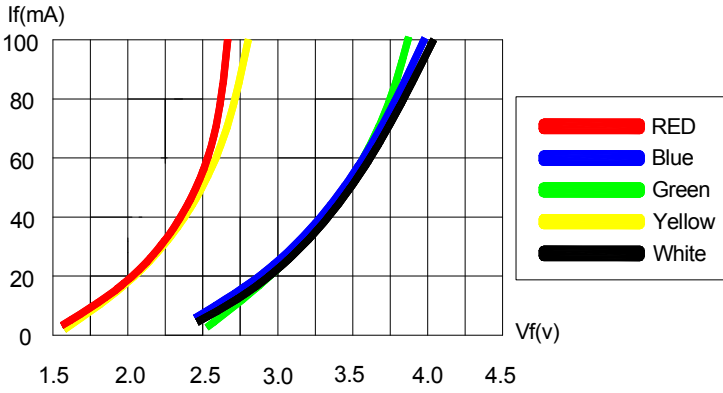


Fig.4 Relative Luminous Intensity vs Wavelength

### Directive Characteristics

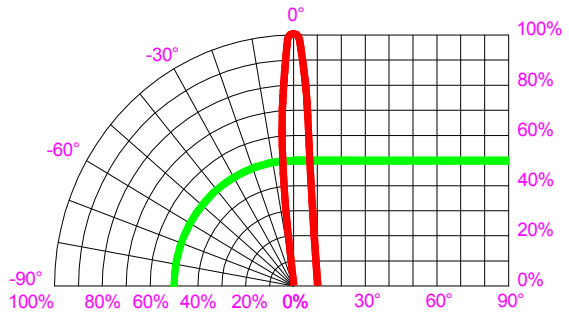


Fig.6 Relative Luminous Intensity vs viewing angle

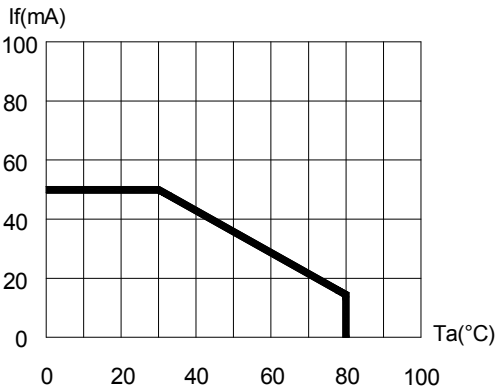


Fig.5 Maximum Forward Current vs Ambient Temperature



## 5 . Samples test report

| No. | Item   | Testing conditions                              | Test cycle | Test samples no. | Ac/Re |
|-----|--|---|------------|------------------|-------|
| 1   | Tin-plated test                                      | Temp: 260°C±5°C                                 | 5 secd.    | 76 PCS           | 0/1   |
| 2   | Back & forth test under high & low temp at intervals | High temp.: +85°C 30min to 5min to -55°C 30min  | 50 bout    | 76 PCS           | 0/1   |
| 3   | Heat pounding test                                   | High emp.: +100°C 30min To 10sec to -10°C 30min | 50 bout    | 76 PCS           | 0/1   |
| 4   | High storage temp.                                   | Temperature: 100°C                              | 1000 Hr.   | 76 PCS           | 0/1   |
| 5   | Low storage temp.                                    | -55°C   | 1000 Hr.   | 76 PCS           | 0/1   |
| 6   | Life span test                                       | VF=1.9V IF=20mA                                 | 1000 Hr.   | 76 PCS           | 0/1   |
| 7   | Test under high temp.& high Humidity                 | 85°C/85%RH                                      | 1000 Hr.   | 76 PCS           | 0/1   |

## 6 . Points For Attention

### (I) SOLDER CONDITIONS

i Iron Soldering: the Iron ( max 30W) end temperature less than 300°C, soldering time≤3 seconds, soldering position is minim 2mm from body.

ii Dip Soldering: Max temperature is 260°C, time ≤5, the position is minim 2mm from body.

### (II) PIN MOULDING METHOD

i Bracket must be bent only if 2mm from colloid.

ii Bracket mould must be finished by fixture or professionals.

iii Bracket mould must be finished before soldering.

iv Bracket mould should assure the consistent between the pin, the distance gap of leads and the circuit board.

### (III)LED ASSEMBLY METHOD

i. It should be pay attention to the ordering of all the devices in case of wrong polarity. Devices can't be too close to the heat components, working conditions can't surpass the limits.

ii. It should not assemble LED when the leads are deformed.

iii. When decide to assemble in holes, accurately account the sizes of holes and holes distance of the line base

iv. Suggest using guard sheath positioning

v. It should avoid any kinds of quake or force on LED, before the soldering temperature returns normal.

### (IV) CLEANING

It should be very cautious. When clean the body with chemicals. Some chemicals may bring damages to the surface, and bring color fading, such as, Trichloroethylene, Acetone. Should use ethanol to wipe, dip for no more than 3 minutes under the normal temperature.