



## Technical Data Sheet

### 5.0mm Multi-Color Round Type LED Lamps

#### 336SURSYGW/S530-A3

#### ■ Features :

- Two chips are matched for uniform light output, wide viewing angle
- Long life-solid state reliability
- I.C. compatible/Low power consumption
- Pb free
- The product itself will remain within RoHS compliant version.



#### ■ Descriptions :

- The 336 LED lamps contain two integral chips and is available as both bicolor and bipolar types.
- The Hyper Red and Super Yellow Green light is emitted by diodes of AlGaInP and AlGaInP respectively.
- Type of bicolor lamps are both White Diffused and Color Diffused while the bicolor are Water Clear.

#### ■ Applications :

- TV set
- Monitor
- Telephone
- Computer

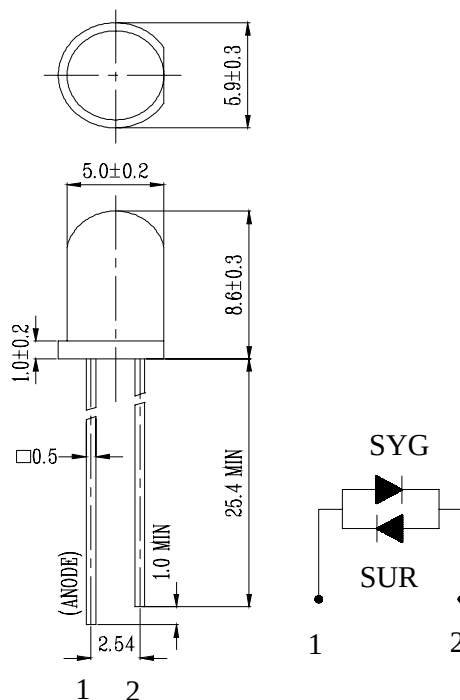
| PART NO.           | Chip     |                    | Lens Color     |
|--------------------|----------|--------------------|----------------|
|                    | Material | Emitted Color      |                |
| 336SURSYGW/S530-A3 | AlGaInP  | Hyper Red          | White Diffused |
|                    | AlGaInP  | Super Yellow Green |                |

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### Package Dimensions



- Notes:**
1. All dimensions are in millimetres
  2. An epoxy meniscus may extend about 1.5mm(0.059") down to the lead.
  3. Tolerances unless Dimension  $\pm 0.25\text{mm}$ .

### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

| Parameter               | Symbol             | Rating      |    | Unit             |
|-------------------------|--------------------|-------------|----|------------------|
| Forward Current         | $I_F$              | SUR/S530    | 25 | mA               |
|                         |                    | SYG/S530    | 25 |                  |
| Operating Temperature   | $T_{opr}$          | -40 to +85  |    | $^\circ\text{C}$ |
| Storage Temperature     | $T_{stg}$          | -40 to +100 |    | $^\circ\text{C}$ |
| Soldering Temperature   | $T_{sol}$          | $260 \pm 5$ |    | $^\circ\text{C}$ |
| Electrostatic Discharge | ESD                | 2000        |    | V                |
| Power Dissipation       | $P_d$              | SUR/S530    | 60 | mW               |
|                         |                    | SYG/S530    | 60 |                  |
| Peak Forward Current    | $I_F(\text{Peak})$ | SUR/S530    | 60 | mA               |
|                         |                    | SYG/S530    | 60 |                  |
| Reverse Voltage         | $V_R$              | 5           |    | V                |

Note: \*1:IFP Conditions --Pulse Width  $\leq 1\text{msec}$  and Duty  $\leq 1/10$ .

\*2:Soldering time  $\leq 5$  seconds.



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#### Electro-Optical Characteristics (Ta=25°C)

| Parameter                    | Symbol                    | Min. | Typ. | Max. | Unit | Condition              |
|------------------------------|---------------------------|------|------|------|------|------------------------|
| Luminous Intensity           | I <sub>v</sub> SUR/S530   | 16   | 32   | /    | mcd  | I <sub>F</sub> = 20 mA |
|                              | SYG/S530                  | 16   | 32   | /    |      |                        |
| Viewing Angle                | 2 $\theta$ 1/2            | /    | 90   | /    | deg  | I <sub>F</sub> = 20 mA |
| Peak Wavelength              | $\lambda_p$ SUR/S530      | /    | 632  | /    | nm   | I <sub>F</sub> = 20 mA |
|                              | SYG/S530                  | /    | 575  | /    |      |                        |
| Dominant Wavelength          | $\lambda_d$ SUR/S530      | /    | 624  | /    | nm   | I <sub>F</sub> = 20 mA |
|                              | SYG/S530                  | /    | 573  | /    |      |                        |
| Spectrum Radiation Bandwidth | $\Delta \lambda$ SUR/S530 | /    | 20   | /    | nm   | I <sub>F</sub> = 20 mA |
|                              | SYG/S530                  | /    | 20   | /    |      |                        |
| Forward Voltage              | V <sub>F</sub> SUR/S530   | /    | 2.0  | 2.4  | V    | I <sub>F</sub> = 20 mA |
|                              | SYG/S530                  | /    | 2.0  | 2.4  |      |                        |

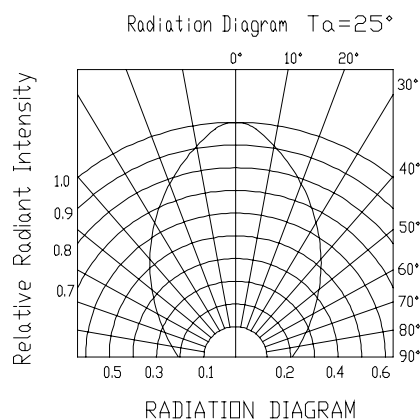
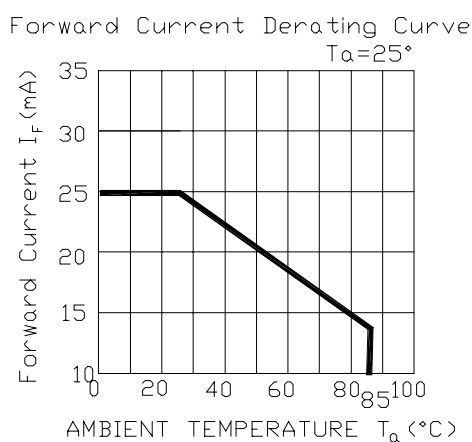
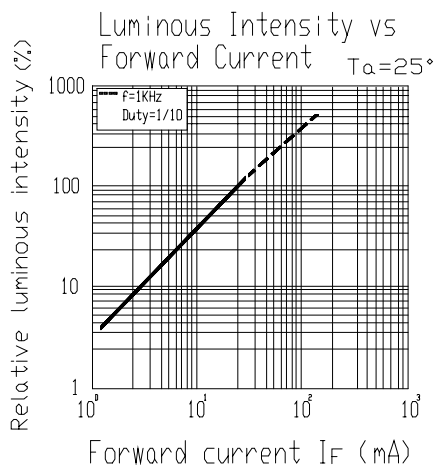
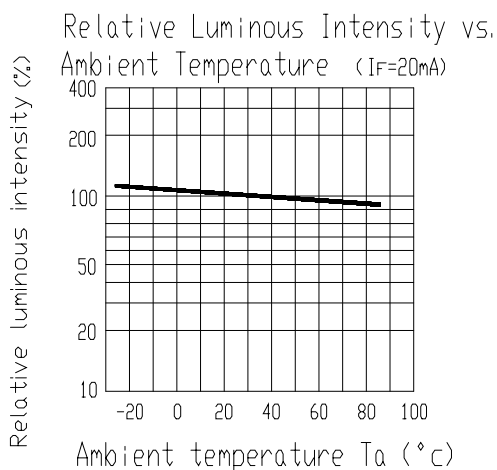
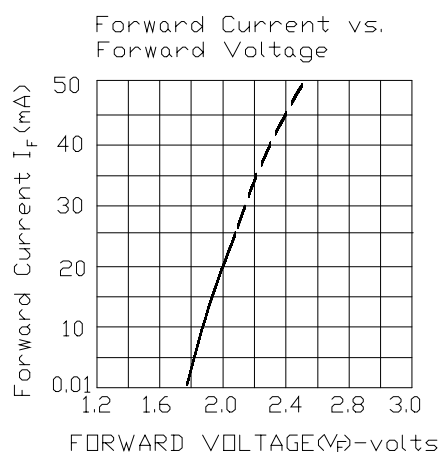
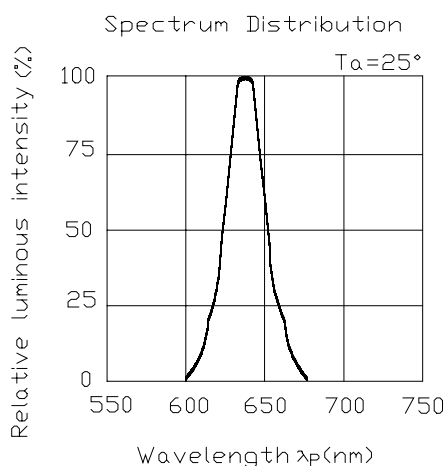
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### Typical Electro-Optical Characteristic Curves:

(SUR)





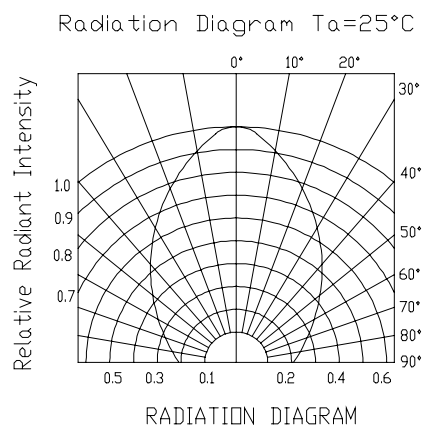
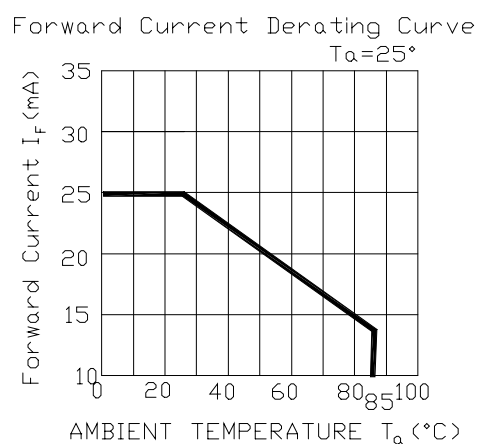
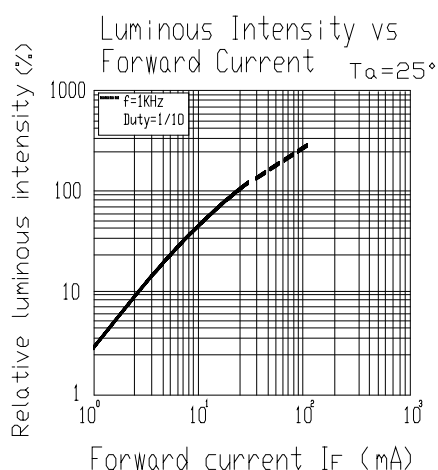
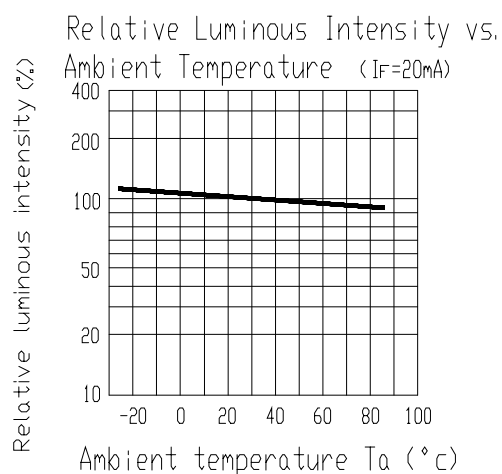
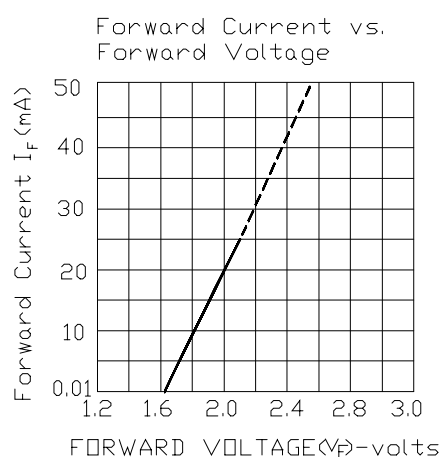
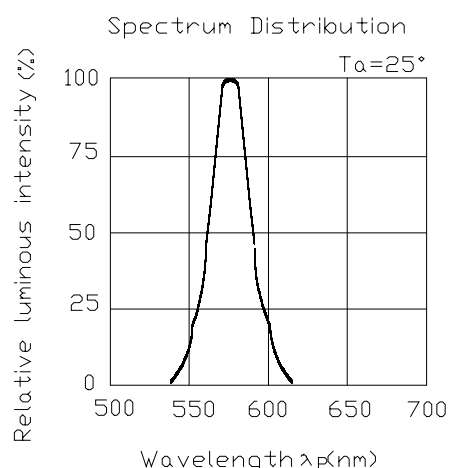
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**336SURSYGW/S530-A3**

#### Typical Electro-Optical Characteristic Curves:

(SYG)





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#### ■ Reliability test items and conditions:

The reliability of products shall be satisfied with items listed below.

Confidence level : 97%

LTPD : 3%

| NO | Item                             | Test Conditions                                | Test Hours/Cycle | Sample Size | Failure Judgment Criteria                                           | Ac/Re |
|----|----------------------------------|------------------------------------------------|------------------|-------------|---------------------------------------------------------------------|-------|
| 1  | Solder Heat                      | TEMP : 260°C ± 5 °C                            | 10 SEC           | 76 PCS      | $I_v \leq I_{vt} * 0.5$<br>or<br>$V_f \geq U$<br>or<br>$V_f \leq L$ | 0/1   |
| 2  | Temperature Cycle                | H : +100°C 15min<br>§ 5 min<br>L : -40°C 15min | 300 CYCLES       | 76 PCS      |                                                                     | 0/1   |
| 3  | Thermal Shock                    | H : +100°C 5min<br>§ 10 sec<br>L : -10°C 5min  | 300 CYCLES       | 76 PCS      |                                                                     | 0/1   |
| 4  | High Temperature Storage         | TEMP : 100°C                                   | 1000 HRS         | 76 PCS      |                                                                     | 0/1   |
| 5  | Low Temperature Storage          | TEMP : -40°C                                   | 1000 HRS         | 76 PCS      |                                                                     | 0/1   |
| 6  | DC Operating Life                | TEMP : 25°C<br>I <sub>F</sub> = 20mA           | 1000 HRS         | 76 PCS      |                                                                     | 0/1   |
| 7  | High Temperature / High Humidity | 85°C / 85% RH                                  | 1000 HRS         | 76 PCS      |                                                                     | 0/1   |

**Note :** I<sub>vt</sub> : The test I<sub>v</sub> value of the chip before the reliability test  
I<sub>v</sub> : The test value of the chip that has completed the reliability test  
U : Upper Specification Limit  
L : Lower Specification Limit



# Technical Data Sheet

## 5.0mm Multi-Color Round Type LED Lamps

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### Packing Quantity Specification

1.500PCS/1Bag , 5Bags/1Box

2.10Boxes/1Carton

### Label Form Specification



CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Peak Wavelength

REF: Reference

LOT No: Lot Number

MADE IN TAIWAN: Production Place

MADE IN TAIWAN

### Notes

1. Above specification may be changed without notice. EVERLIGHT 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. EVERLIGHT 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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