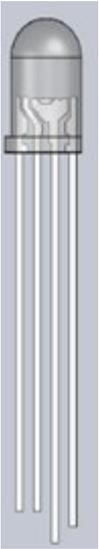


Lamp

339-9SUGSURSUBW/S1296



Features

- Popular T-1 3/4 round package.
- High efficiency.
- Built in red, yellow, and green chips.
- Selected minimum intensities.
- Available on tape and reel.
- The product itself will remain within RoHS compliant version

Descriptions

- The series is specially designed for applications requiring higher brightness
- The LED lamps are available with different colors, intensities, epoxy, colors, etc.

Applications

- Status indicators.
- Commercial use.
- Advertising Signs.
- Computer

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
339-9SUGSURSUBW/S1296	InGaN	Brilliant Green	White diffused
	AlGaInP	Brilliant orange	
	InGaN	Super Blue	

Absolute Maximum Ratings (Ta=25 °C)

Parameter	Symbol	Red	Blue	Green	Units
Forward Current	I_F	50	30	30	mA
Pulse Forward Current (Duty 1/10 @ 1KHz)	I_{FP}	100	100	100	mA
Operating Temperature	T_{opr}	-40 ~ +85			
Storage Temperature	T_{stg}	-40 ~ +100			
Electrostatic Discharge	ESD	2000	150	150	V
Soldering Temperature	T_{sol}	260			
Power Dissipation	P_d	120	100	100	mW
Reverse Voltage	V_R	5			V

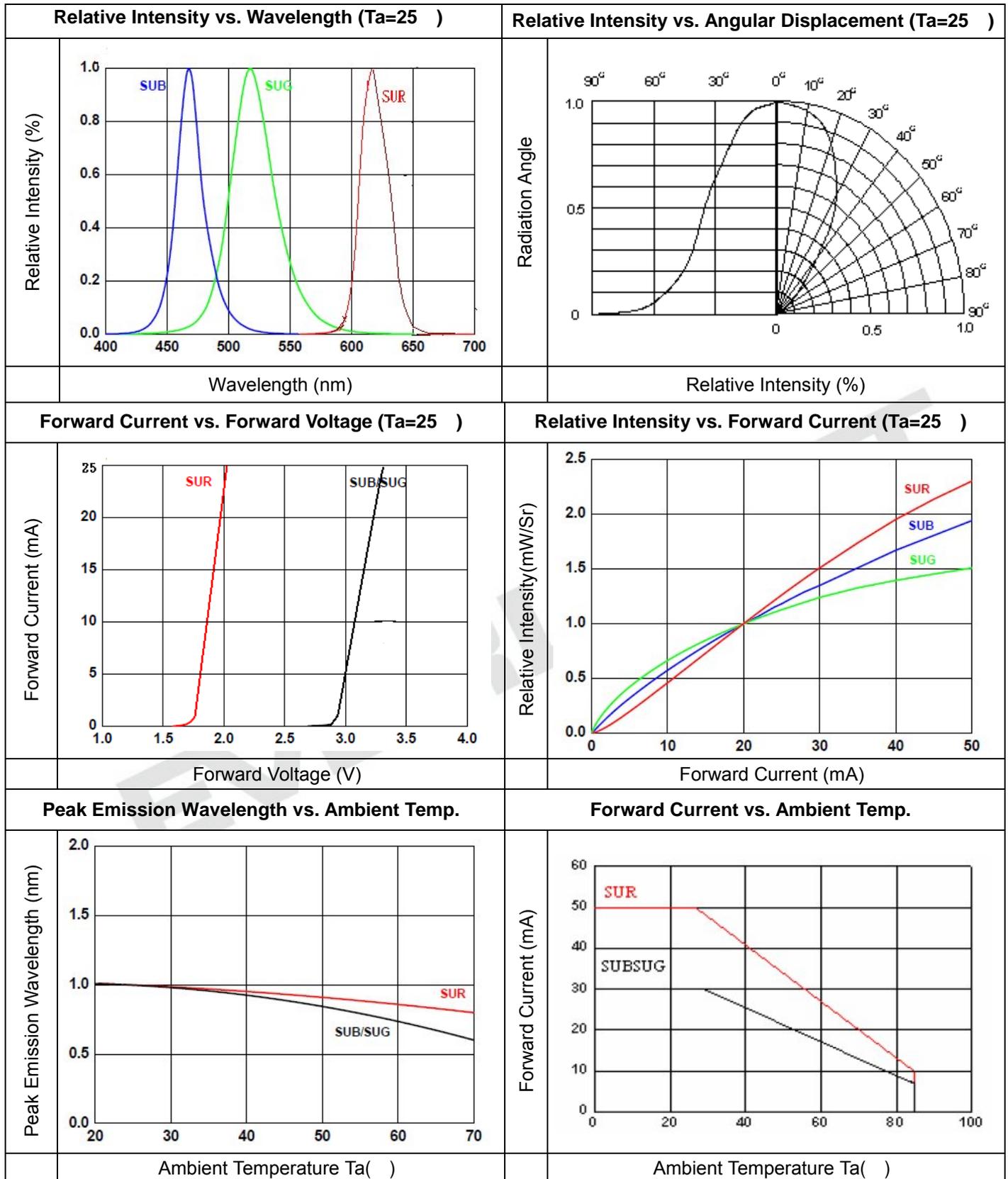
Notes: *Soldering time 5 seconds.

Electro-Optical Characteristics (Ta=25 °C)

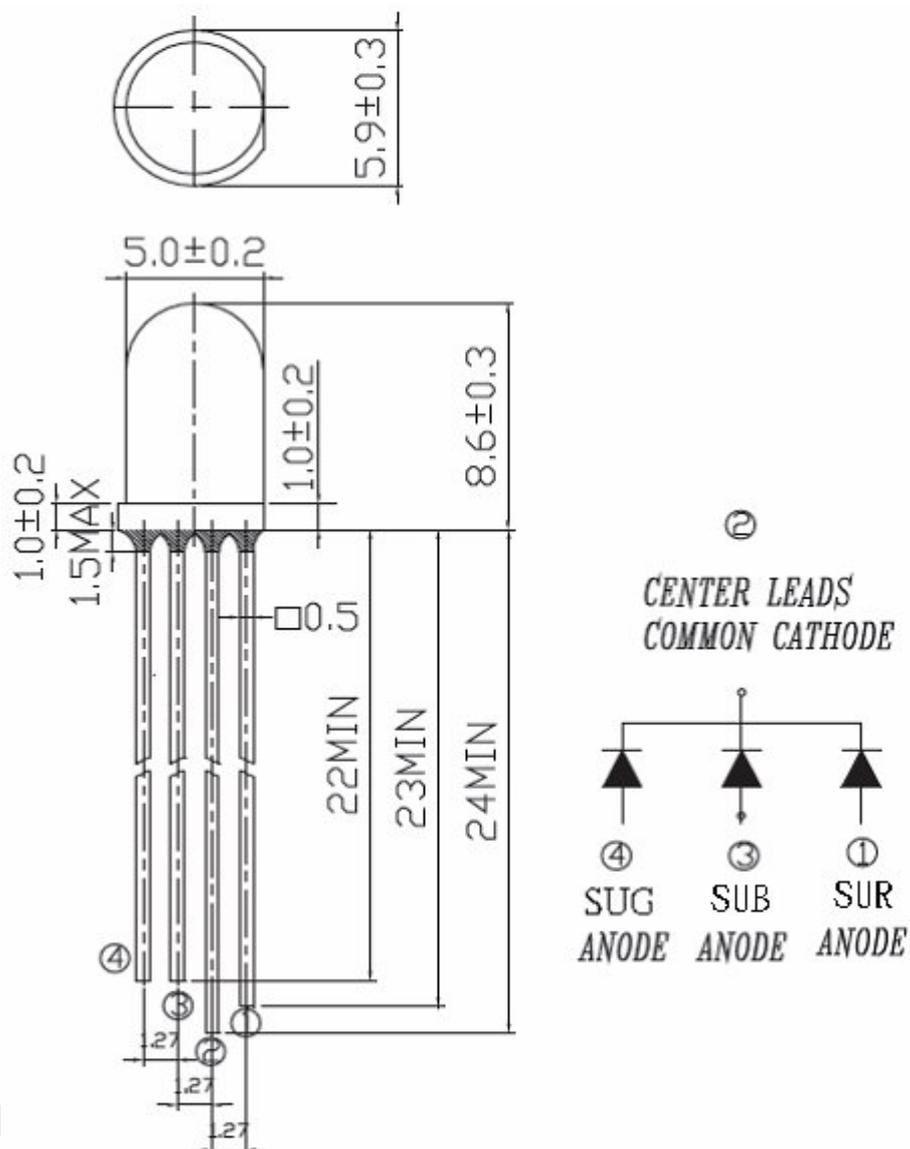
Parameter	Symbol	Color	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	IV	SUR	200	---	565	mcd	
		SUB	100	---	360		
		SUG	565	----	1800		
Viewing Angle	2θ1/2	SUR				deg	
		SUB	----	70	----		
		SUG					
Dominant Wavelength	λD	SUR	610	----	625		IF=20mA
		SUB	460	----	475		
		SUG	520	----	535		
Peak Wavelength	λp	SUR		623		nm	
		SUB	----	462	----		
		SUG		516			
Spectrum half-width	λ	SUR		20			
		SUB	----	35	----		
		SUG		35			
Forward Voltage	VF	SUR	1.6	----	2.4	V	
		SUB	2.6	----	3.6		
		SUG	2.8	----	3.6		
Reverse Current	IR	SUR			10	μA	VR=5V
		SUB	----	----	50		
		SUG			50		

*Measurement Uncertainty of Luminous Intensity: ±10%
 *Measurement Uncertainty of Dominant Wavelength ±1.0nm
 *Measurement Uncertainty of Forward Voltage: ±0.1V

Typical Electro-Optical Characteristics Curves



Package Dimensions

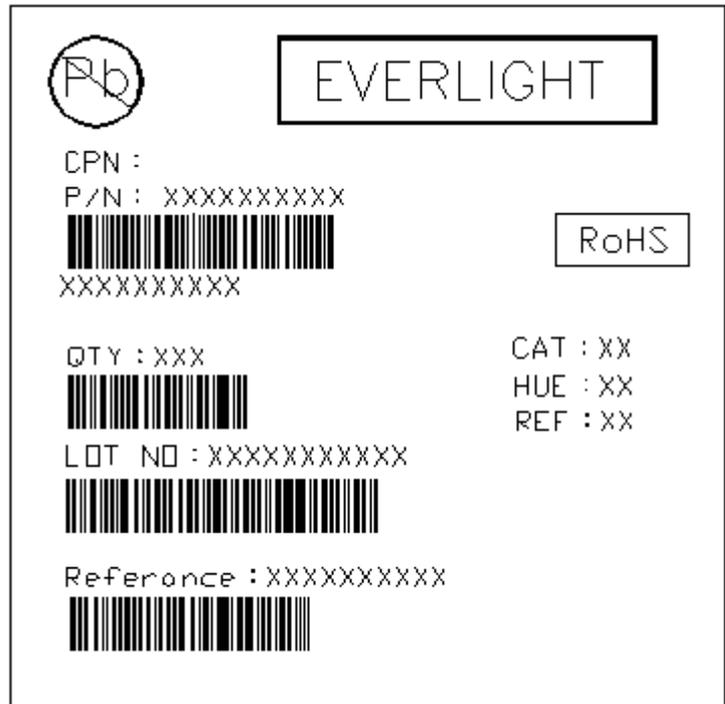
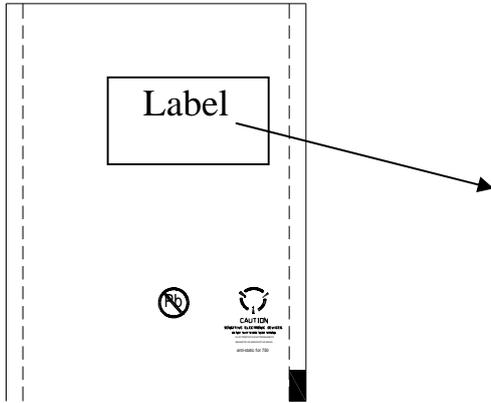


Notes:

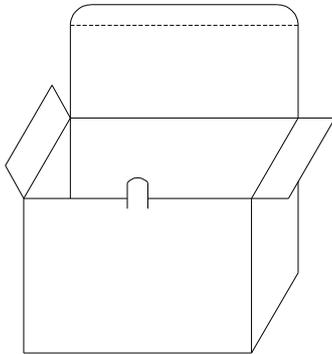
- All dimensions are in millimeters, tolerance is 0.25mm except being specified.
- Lead spacing is measured where the lead emerges from the package.
- Protruded resin under flange is 1.5mm Max LED.

Packing Specification

Anti-electrostatic bag

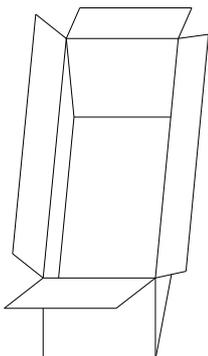


Inner Carton



Label Form Specification
 CPN: Customer's Production Number
 P/N : Production Number
 QTY: Packing Quantity
 CAT: Rank of Luminous Intensity
 HUE: Rank of Dominant Wavelength
 REF: Reference
 LOT No: Lot Number
 MADE IN TAIWAN: Production Place

Outside Carton



- Packing Quantity
1. 500 PCS/1 Bag, 5 Bags/1 Inner Carton
 2. 10 Inner Cartons/1 Outside Carton

Notes

1. Lead Forming

- During lead formation, the leads should be bent at a point at least 3mm from the base of the epoxy bulb.
- Lead forming should be done before soldering.
- Avoid stressing the LED package during leads forming. The stress to the base may damage the LED's characteristics or it may break the LEDs.
- Cut the LED leadframes at room temperature. Cutting the leadframes at high temperatures may cause failure of the LEDs.
- When mounting the LEDs onto a PCB, the PCB holes must be aligned exactly with the lead position of the LED. If the LEDs are mounted with stress at the leads, it causes deterioration of the epoxy resin and this will degrade the LEDs.

2. Storage

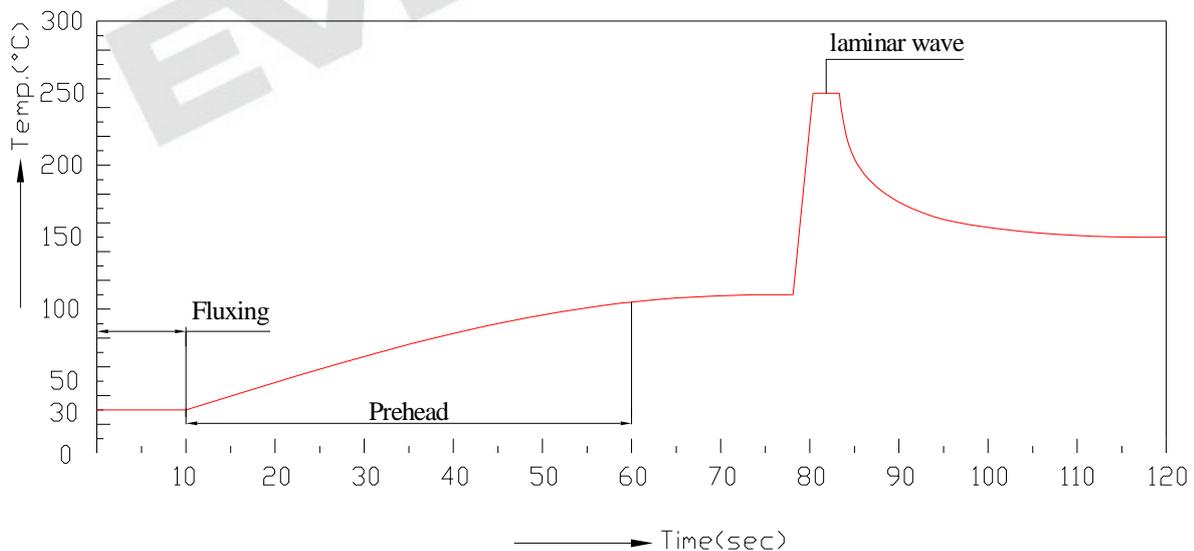
- The LEDs should be stored at 30°C or less and 70%RH or less after being shipped from Everlight and the storage life limits are 3 months. If the LEDs are stored for 3 months or more, they can be stored for a year in a sealed container with a nitrogen atmosphere and moisture absorbent material.
- Please avoid rapid transitions in ambient temperature, especially, in high humidity environments where condensation can occur.

3. Soldering

- Careful attention should be paid during soldering. When soldering, leave more than 3mm from solder joint to epoxy bulb, and soldering beyond the base of the tie bar is recommended.
- Recommended soldering conditions:

Hand Soldering		DIP Soldering	
Temp. at tip of iron	300 Max. (30W Max.)	Preheat temp.	100 Max. (60 sec Max.)
Soldering time	3 sec Max.	Bath temp. & time	260 Max., 5 sec Max
Distance	3mm Min. (From solder joint to epoxy bulb)	Distance	3mm Min. (From solder joint to epoxy bulb)

- Recommended soldering profile



- Avoiding applying any stress to the lead frame while the LEDs are at high temperature particularly when

soldering.

- Dip and hand soldering should not be done more than one time
- After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- A rapid-rate process is not recommended for cooling the LEDs down from the peak temperature.
- Although the recommended soldering conditions are specified in the above table, dip or handsoldering at the lowest possible temperature is desirable for the LEDs.
- Wave soldering parameter must be set and maintain according to recommended temperature and dwell time in the solder wave.

4.Cleaning

- When necessary, cleaning should occur only with isopropyl alcohol at room temperature for a duration of no more than one minute. Dry at room temperature before use.
- Do not clean the LEDs by the ultrasonic. When it is absolutely necessary, the influence of ultrasonic cleaning on the LEDs depends on factors such as ultrasonic power and the assembled condition. Ultrasonic cleaning shall be pre-qualified to ensure this will not cause damage to the LED.

5.Heat Management

- Heat management of LEDs must be taken into consideration during the design stage of LED application. The current should be de-rated appropriately by referring to the de-rating curve found in each product specification.
- The temperature surrounding the LED in the application should be controlled. Please refer to the data sheet de-rating curve.

6.ESD (Electrostatic Discharge)

- Electrostatic discharge (ESD) or surge current (EOS) can damage LEDs.
- An ESD wrist strap, ESD shoe strap or antistatic gloves must be worn whenever handling LEDs.
- All devices, equipment and machinery must be properly grounded.
- Use ion blower to neutralize the static charge which might have built up on surface of the LEDs plastic lens as a result of friction between LEDs during storage and handing.

7.Other

- Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
- 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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