

LAMP

339-9SUGSURSUBC/S1174



Features

- High efficiency.
- Selected minimum intensities.
- Available on tape and reel.
- The product itself will remain within RoHS compliant version
- Compliance with EU REACH
- Compliance Halogen free. (Br <900 ppm, Cl<900 ppm, Br+Cl <1500 ppm)

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.
- Message board

Device Selection Guide

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
339-9SUGSURLSUBC/S1174	InGaN	Super Green	Water Clear
	AlGaInP	Hyper red	
	InGaN	Super Blue	

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	SUB/SUG	SUR	Units
Forward Current	I _F	30	50	mA
Pulse Forward Current (Duty1/10@ 1KHz)	I _{FP}	100	100	mA
Operating Temperature	T _{opr}	-40 ~ +85	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +100	-40 ~ +100	°C
Soldering Temperature	T _{sol}	260 ±5	260 ±5	°C
Power Dissipation	P _d	100	120	mW
Reverse Voltage	V _R	5	5	V

***Notes: Soldering time ≤ 5 seconds.**

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Color	Min.	Typ.	Max.	Unit	Condition	
Luminous Intensity	I _v	SUG	900	1800	3600	mcd	I _F =20mA	
		SUR	1125	1425	2250			
		SUB	565	900	1800			
Viewing Angle	2θ1/2	SUG	-----	20	-----	deg		
		SUR		25				
		SUB		35				
Peak Wavelength	λ _p	SUG	-----	518	-----	nm		
		SUR		632				
		SUB		468				
Dominant Wavelength	λ _D	SUG	-----	525	-----		nm	
		SUR		624				
		SUB		470				
Spectrum half-width	Δλ	SUG	-----	35	-----			V
		SUR		20				
		SUB		35				
Forward Voltage	V _F	SUG	-----	3.5	4.0	μA		
		SUR		2.0	2.6			
		SUB		3.5	4.0			
Reverse Current	I _R	SUG	-----	-----	50		V _R =5V	
		SUR			10			
		SUB			50			

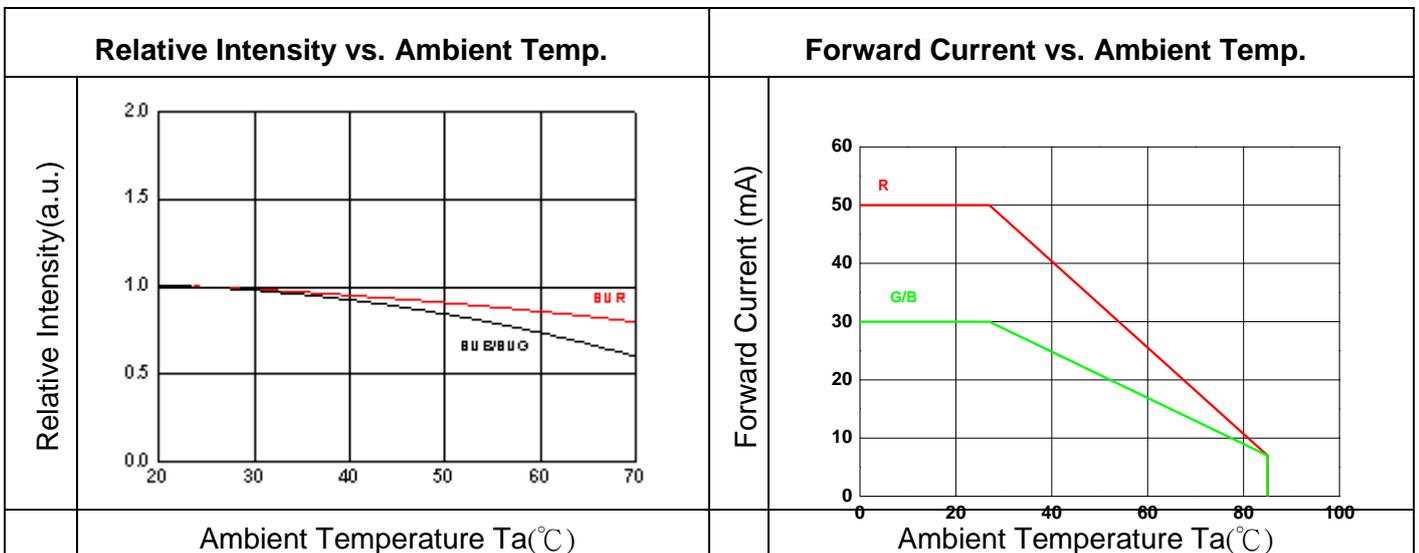
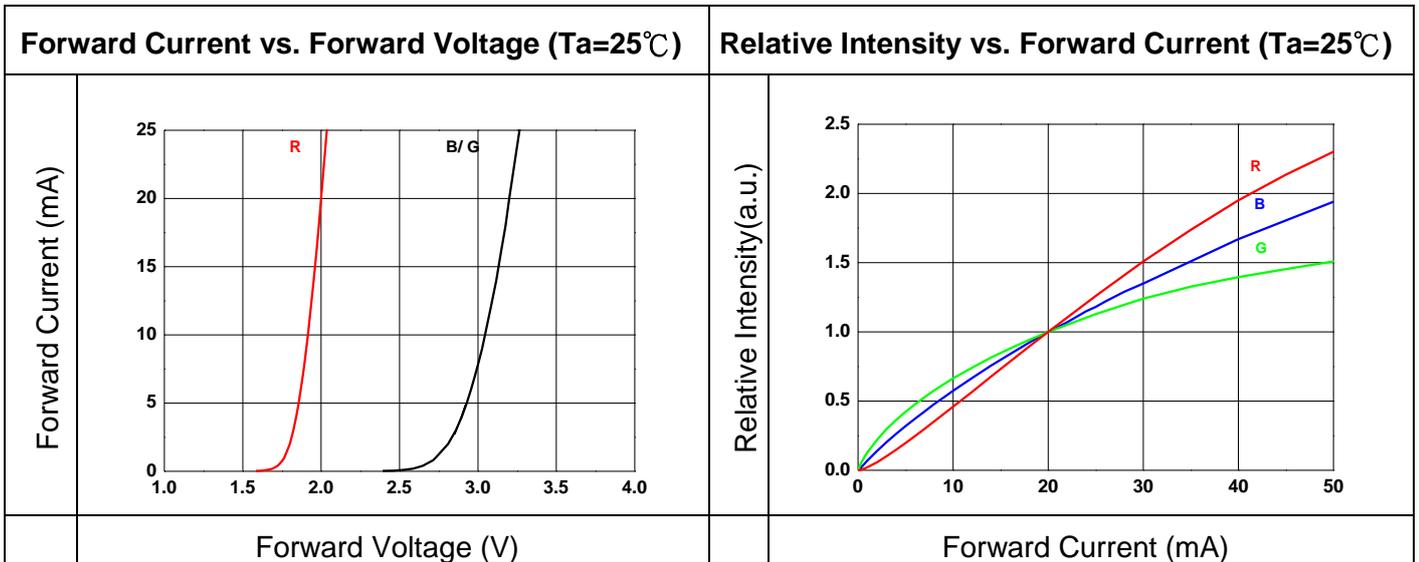
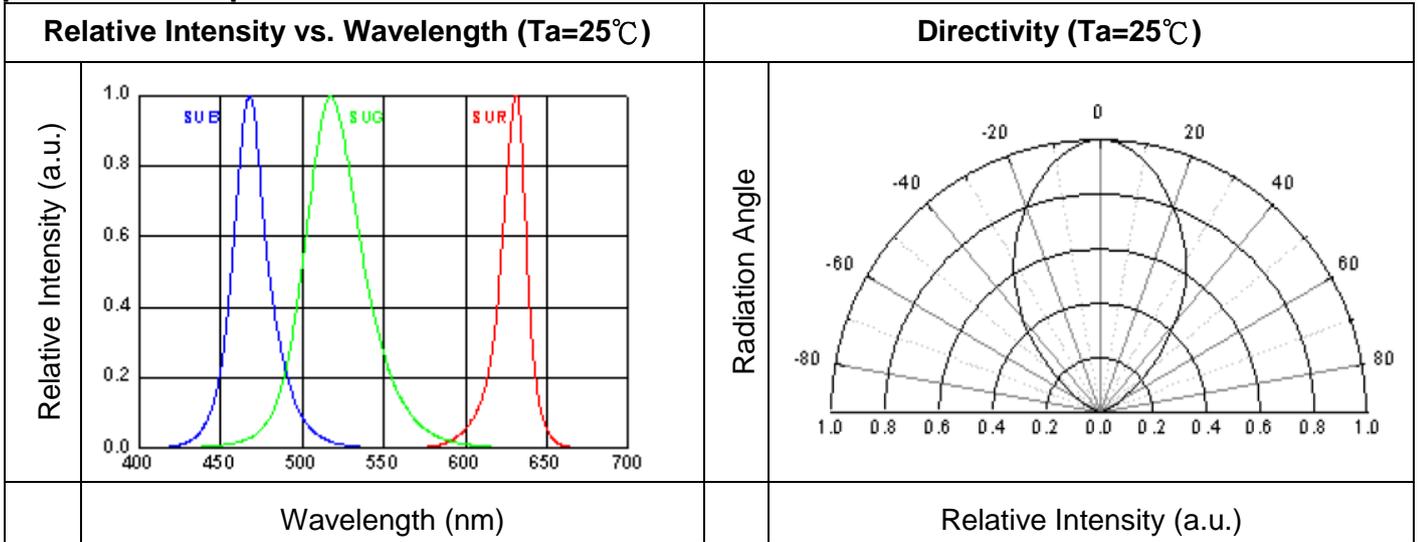
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*Measurement Uncertainty of Forward Voltage: ±0.1V

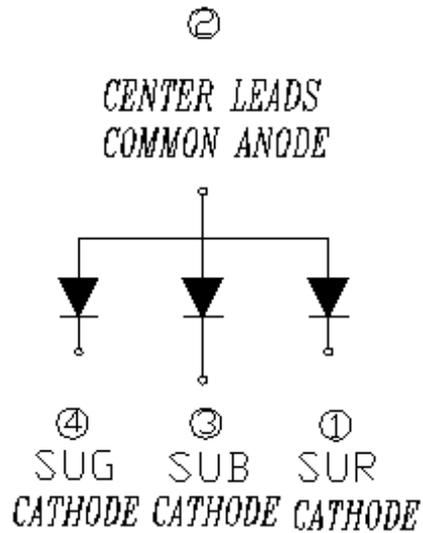
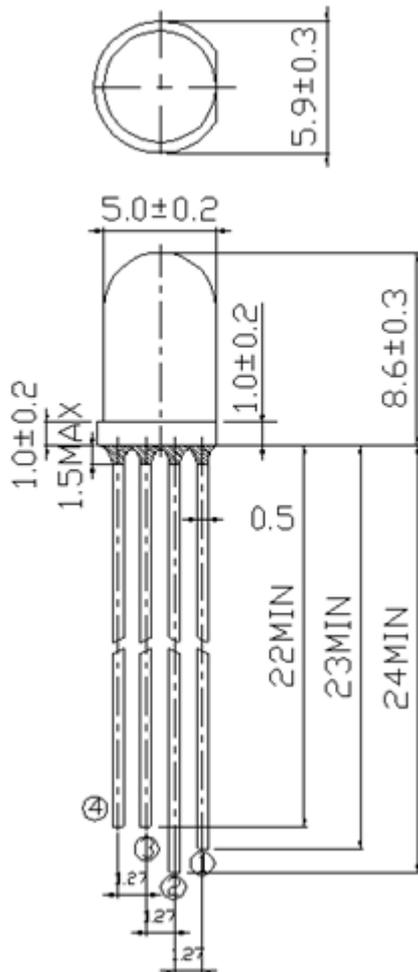
*Measurement Uncertainty of Luminous Intensity: ±10%

*Measurement Uncertainty of Dominant Wavelength ±1.0nm

Typical Electro-Optical Characteristics Curves



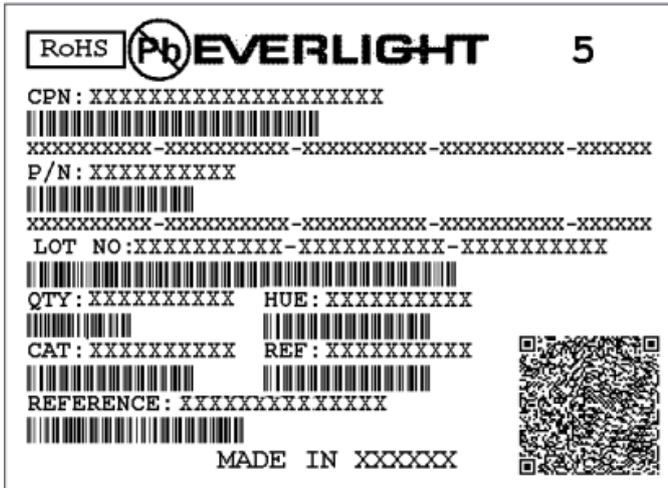
Package Dimensions



Note: Note:

- 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.

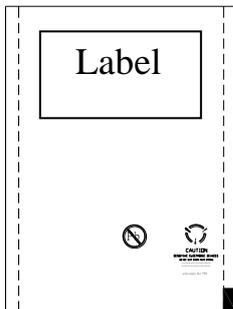
Label Explanation



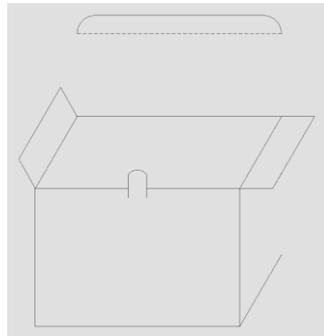
- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Ranks of Luminous Intensity and Forward Voltage
- HUE: Rank of Dominant Wavelength
- REF: Reference
- LOT No: Lot Number

Packing Specification

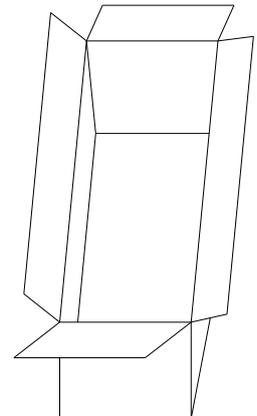
■ Anti-electrostatic bag



■ Inner Carton



■ Outside Carton



■ Packing Quantity

1. Min 200pcs to Max 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

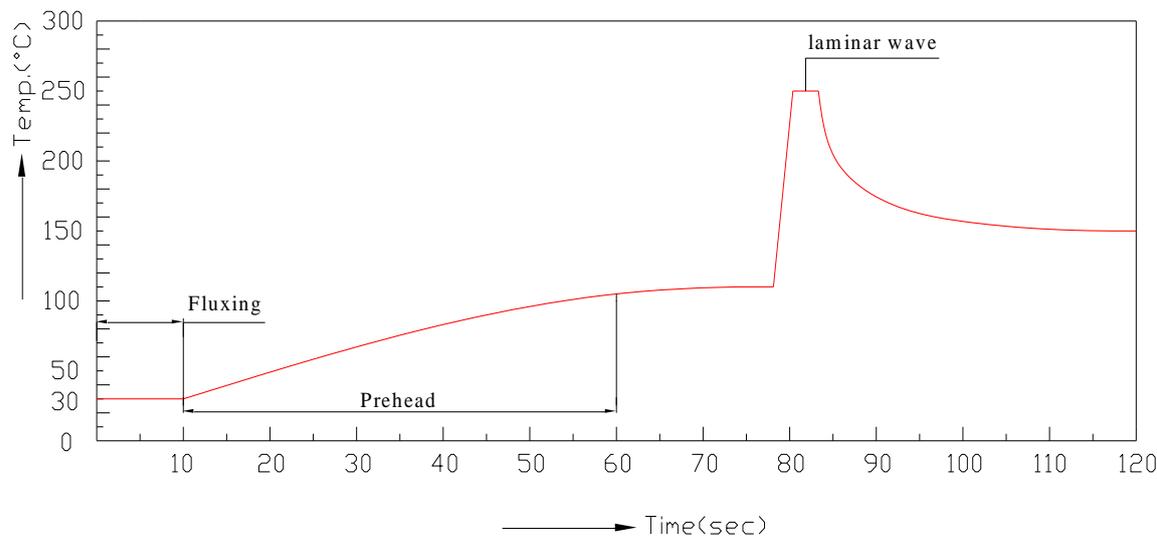
- The LEDs should be stored at 30°C or less and 70%RH or less after being shipped from Everlight and the storage life limits are 3 months. If the LEDs are stored for 3 months or more, they can be stored for a year in a sealed container with a nitrogen atmosphere and moisture absorbent material.
- Please 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°C Max. (30W Max.)	Preheat temp.	100°C 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)

- The products are sensitive to static electricity or surge voltage. ESD can damage a die and its reliability.

When handling the products, the following measures against electrostatic discharge are strongly recommended:

Eliminating the charge

Grounded wrist strap, ESD footwear, clothes, and floors

Grounded workstation equipment and tools

ESD table/shelf mat made of conductive materials

- Proper grounding is required for all devices, equipment, and machinery used in product assembly.

Surge protection should be considered when designing of commercial products.

- If tools or equipment contain insulating materials such as glass or plastic, the following measures against electrostatic discharge are strongly recommended:

Dissipating static charge with conductive materials

Preventing charge generation with moisture

Neutralizing the charge with ionizers

DISCLAIMER

1. EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
4. 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 the 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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