



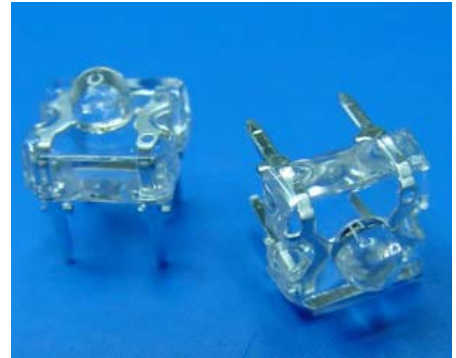
Technical Data Sheet

POWER LED

31-01SUGC/S463

Features

- . High Flux Output.
- . Designed for High Current Operation.
- . Low Thermal Resistance.
- . Low Profile.
- . Viewing angle 40°
- . Packaged in Tubes for Use with Automatic Insertion Equipment.
- . The product itself will remain within RoHS compliant version.
- . ESD-withstand voltage: up to 4KV



Descriptions

This revolutionary package design allows the light designer to reduce the number of LEDs required and provide a more uniform and unique illuminated appearance than with other LED solutions. This is possible through the efficient optical package design and high-current capabilities.

The low profile package can be easily coupled with reflectors or lenses to efficiently distribute light and provide the desired light appearance.

Applications

- . Automotive Exterior Lighting
- . Electronic Signs and Signals
- . Special Lighting application

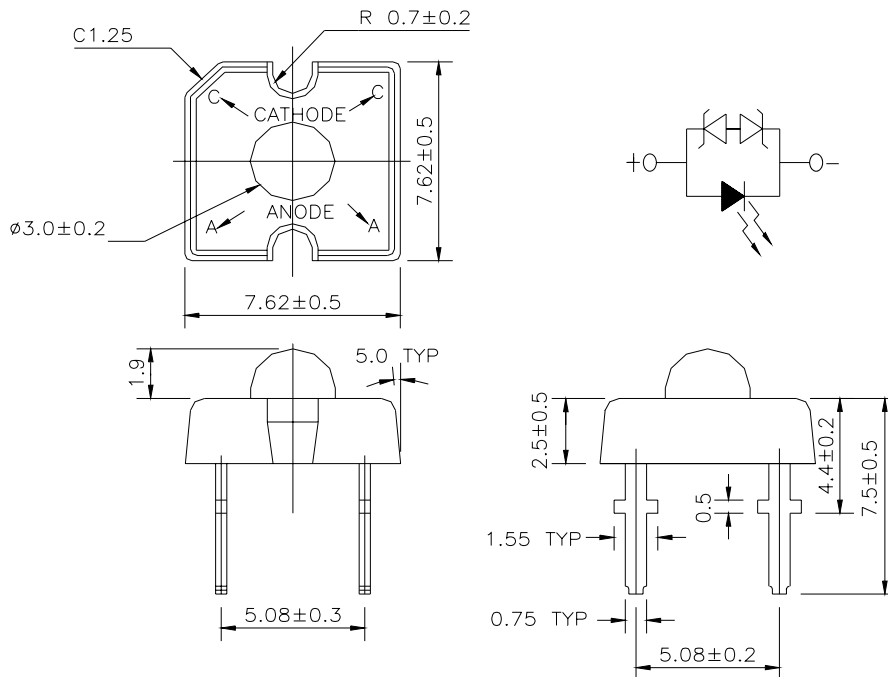
Device Selection Guide

PART NO.	Chip		Lens Color
	Material	Emitted Color	
31-01SUGC/S463	InGaN/Sapphire	Super Green	Water Clear

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Package Dimensions



Notes: 1.All dimensions are in millimeters

2.An epoxy meniscus may extend about 1.5mm(0.059") down the leads

3.Tolerances unless dimensions ± 0.25 mm

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Units
Continuous Forward Current	I_F	30	mA
Peak Forward Current(Duty 1/10 @ 1KHZ)	I_{FP}	100	mA
Reverse Voltage	V_R	5	V
Operating Temperature	T_{opr}	-40 ~ +85	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 ~ +100	$^\circ\text{C}$
Soldering Temperature(T=5 sec)	T_{sol}	260 ± 5	$^\circ\text{C}$
Zener Reverse Current	I_Z	100	mA
Power Dissipation	P_d	120	mW
Electrostatic Discharge	ESD	4000	V



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Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Condition	Unit
Total Flux	Φ_v	1000	1600	----	I _F =20mA	mlm
Viewing Angle	$2\theta_{1/2}$	----	40	----	I _F =20mA	deg
Peak Wavelength	λ_p	----	518	----	I _F =20mA	nm
Dominant Wavelength	λ_d	----	525	----	I _F =20mA	nm
Spectrum Radiation Bandwidth	$\Delta\lambda$	----	35	----	I _F =20mA	nm
Forward Voltage	V _F	----	3.5	4.0	I _F =20mA	V
Reverse Current	I _R	----	----	50	V _R =5V	uA
Zener Reverse Voltage	V _Z	5.8	----	----	I _Z =5mA	V

Rank

31-01SUGC/S463



(1)



(2)



(3)

(1) V _F (V)			(2) λ_d (nm)			(3) Φ_v (mlm)		
Bin	Min	Max	Bin	Min	Max	Bin	Min	Max
0	2.80	3.00	1	520	526	W	1000	2000
1	3.00	3.20	2	525	531	X	1600	3200
2	3.20	3.40						
3	3.40	3.60						
4	3.60	3.80						
5	3.80	4.00						

*Measurement Uncertainty of Forward Voltage : $\pm 0.1V$

*Measurement Uncertainty of Luminous Intensity: $\pm 15\%$

Typical Electro-Optical Characteristics Curves

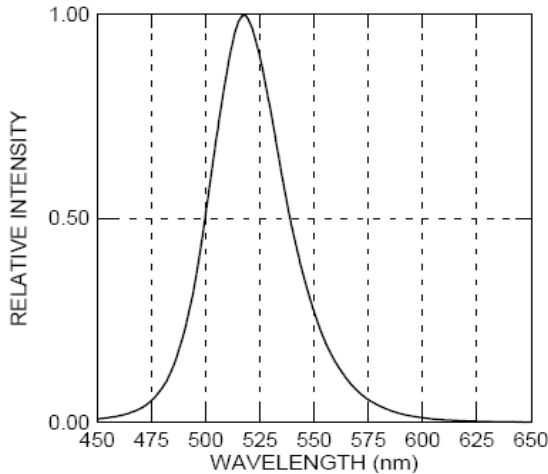


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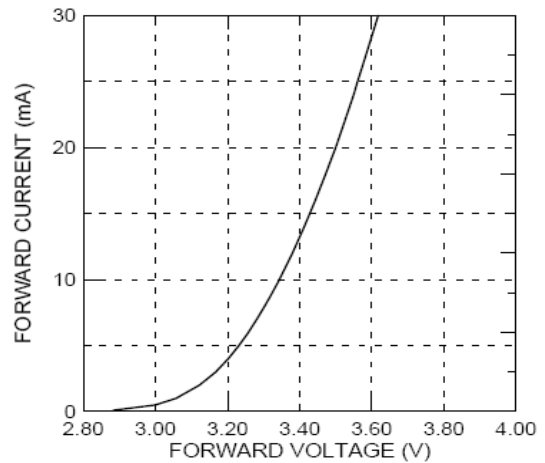
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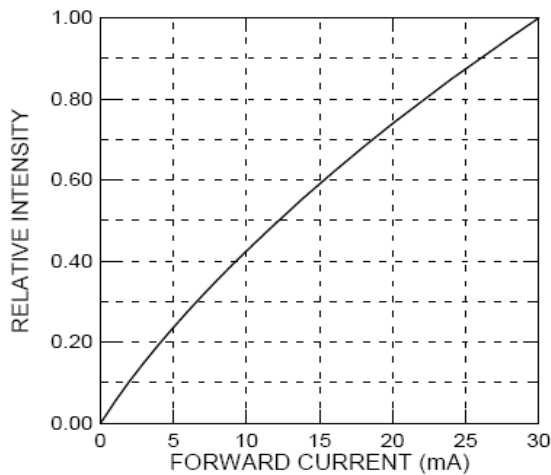
Relative Intensity vs. Wavelength



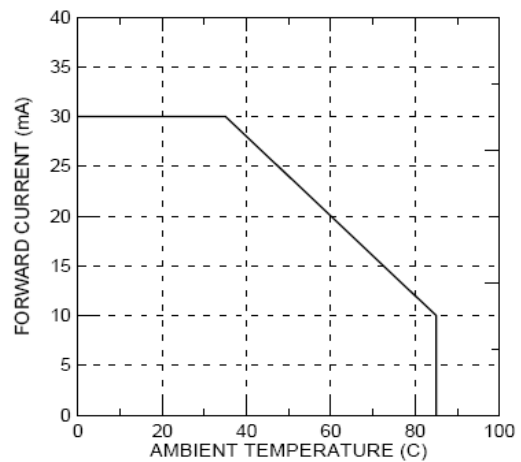
Forward Current vs. Forward Voltage



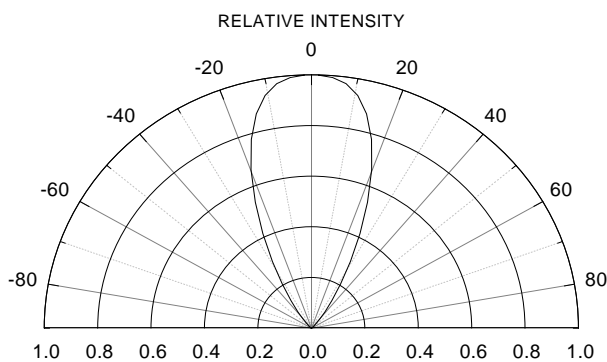
Relative Intensity vs. Forward Current



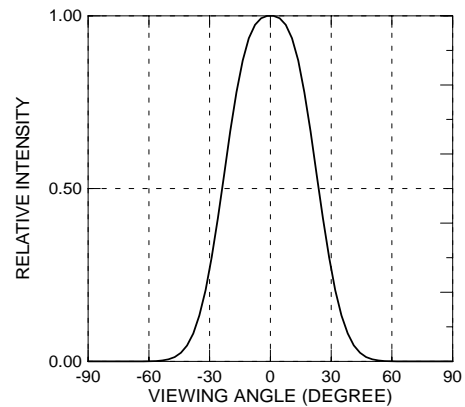
Forward Current vs. Ambient Temp.



Relative Intensity vs. Angle Displacement



Relative Intensity vs. Off Axis Angle






Label Form Specification



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EVERLIGHT	
CPN:	
P/N:	
	RoHS
31-01SUGC/S463	
QTY :	CAT:
	HUE:
LOT NO :	REF:
	
MADE IN TAIWAN	

CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Space

REF: Reference

LOT No: Lot Number

MADE IN TAIWAN: Production Place

Notes

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

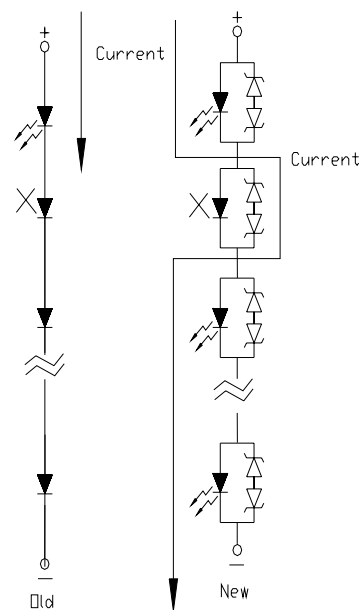


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- When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
- These specification sheets include materials protected under copyright of EVERLIGHT corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent.
- Below the zener reference voltage V_z , all the current flows through LED and as the voltage rises to V_z , the zener diode "breakdown." If the voltage tries to rise above V_z current flows through the zener branch to keep the voltage at exactly V_z .
- When the LED is connected using serial circuit, if either piece of LED is no light up but current can't flow through causing others to light down. In new design, the LED is parallel with zener diode. if either piece of LED is no light up but current can flow through causing others to light up.



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