



Technical Data Sheet

POWER LED

30-01UTC/S463

Features

- . High Flux Output.
- . Low Profile.
- . Low Thermal Resistance.
- . Low Power Consumption
- . The phosphor filled in the reflector converts the blue emission of InGaN chip to ideal white.
- . Typical chromaticity coordinates $x=0.29$, $y=0.30$ according to CIE1931
- . The product itself will remain within RoHS compliant version.
- . Viewing angle 60°



Descriptions

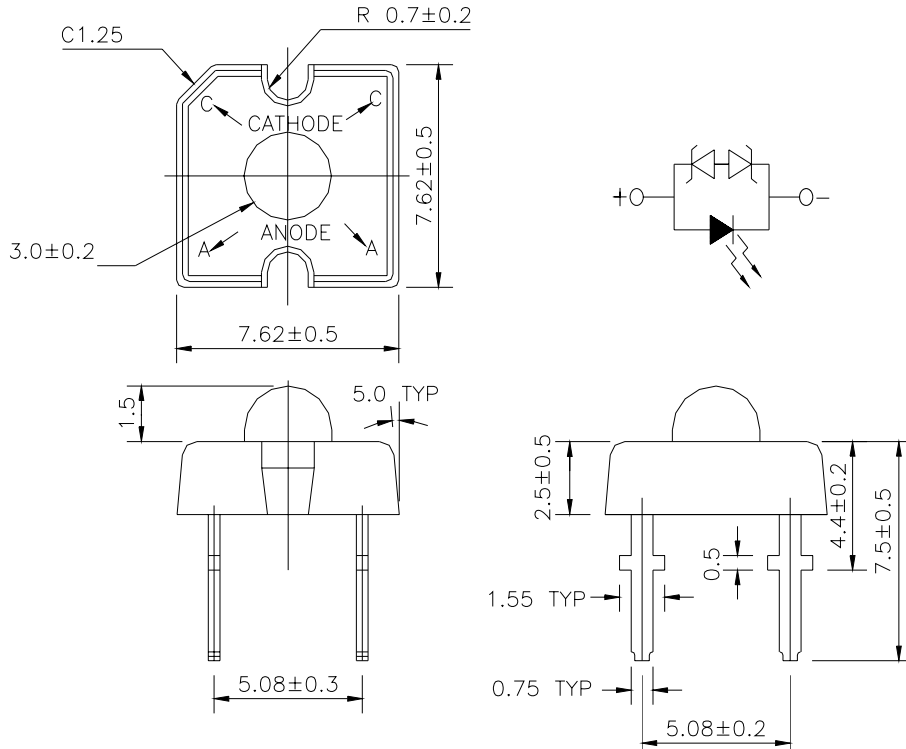
This revolutionary package design allows the light designer to reduce the number of LEDs required and provide a more uniform and unique illuminated appearance than with other LED solutions. This is possible through the efficient optical package design and high-current capabilities. The low profile package 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 | |
| 30-01UTC/S463 | InGaN/Sapphire | White | Water Clear |

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 $\pm 0.25\text{mm}$

Absolute Maximum Ratings (Ta=25°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 ~ +100 | °C |
| Storage Temperature | T_{stg} | -40 ~ +100 | °C |
| Soldering Temperature(T=5 sec) | T_{sol} | 260 ± 5 | °C |
| Power Dissipation | P_d | 120 | mW |
| Zener Reverse Current | I_Z | 100 | mA |
| Electrostatic Discharge | ESD | 4000 | V |

Electro-Optical Characteristics (Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Condition | Unit |
|--------------------------|----------------|------|------|------|----------------------|------|
| Forward Voltage | V _F | ---- | 3.5 | 4.0 | I _F =20mA | V |
| Reverse Current | I _R | ---- | ---- | 50 | V _R =5V | mA |
| Total Flux | Φ _v | 630 | 1000 | ---- | I _F =20mA | mlm |
| Viewing Angle | 2θ 1/2 | ---- | 60 | ---- | I _F =20mA | deg |
| Chromaticity Coordinates | x | ---- | 0.29 | ---- | I _F =20mA | ---- |
| | y | ---- | 0.30 | ---- | | ---- |
| Zener Reverse Voltage | V _Z | 5.8 | ---- | ---- | I _Z =5mA | V |

Rank

30-01UTC/S463

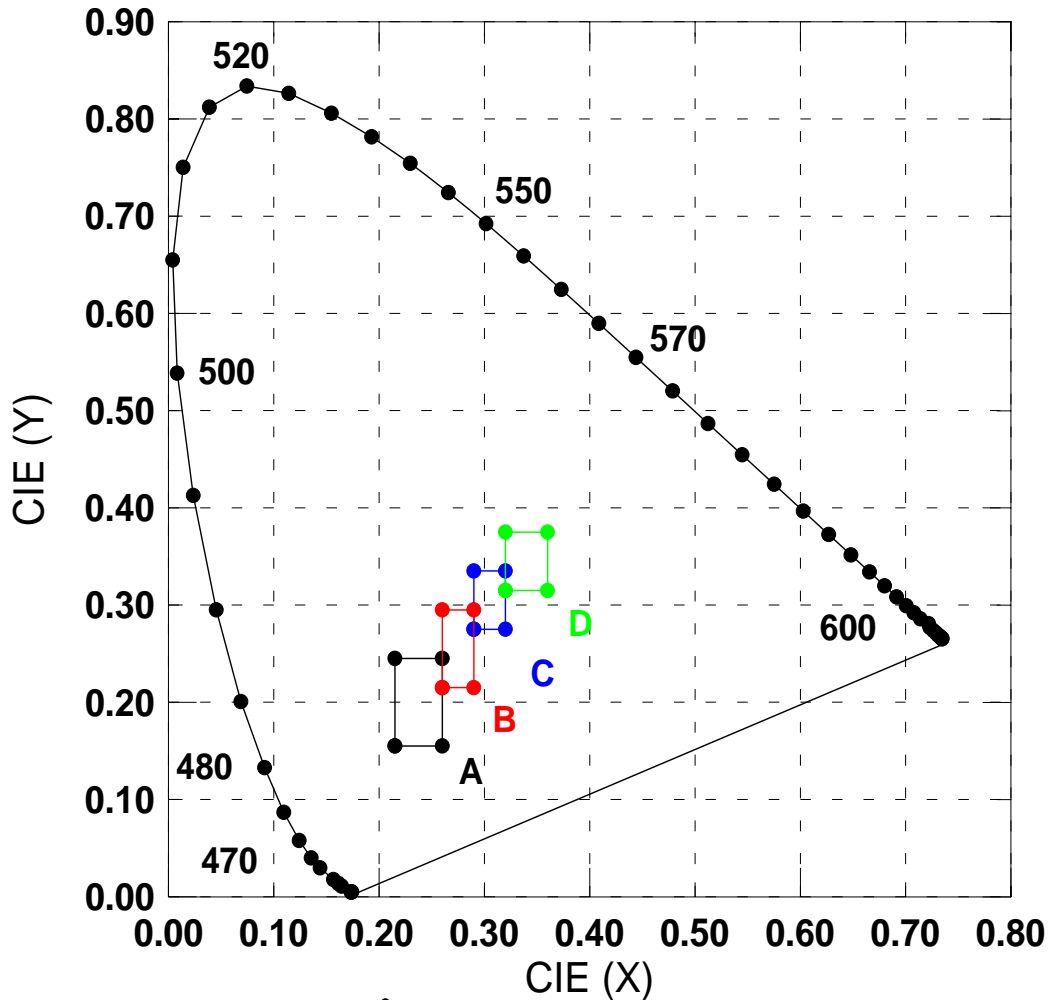
 (1) (2) (3)

| (1) V _F (V) | | | (2) Color | | | (3) Φ _v (mlm) | | |
|------------------------|------|------|-----------|------|------|--------------------------|------|------|
| Bin. | Min. | Max. | Bin. | Min. | Max. | Bin. | Min. | Max. |
| 0 | 2.80 | 3.00 | A1 | ---- | ---- | V | 630 | 1250 |
| 1 | 3.00 | 3.20 | A2 | ---- | ---- | W | 1000 | 2000 |
| 2 | 3.20 | 3.40 | B1 | ---- | ---- | X | 1600 | 3200 |
| 3 | 3.40 | 3.60 | B2 | ---- | ---- | | | |
| 4 | 3.60 | 3.80 | C1 | ---- | ---- | | | |
| 5 | 3.80 | 4.00 | C2 | ---- | ---- | | | |
| | | | D1 | ---- | ---- | | | |
| | | | D2 | ---- | ---- | | | |

*Measurement Uncertainty of Forward Voltage : ±0.1V

*Measurement Uncertainty of Luminous Intensity: ±15%

CIE Chromaticity Diagram



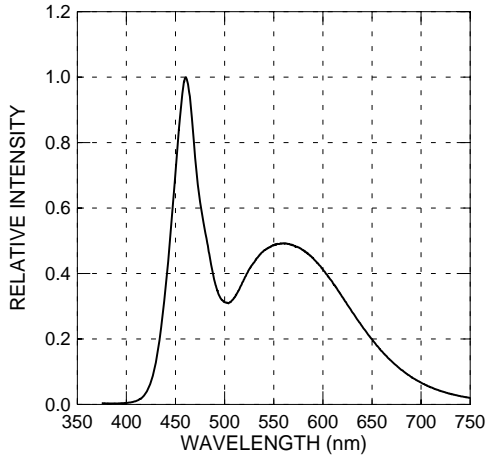
Color Ranks (IF=20mA , Ta=25°C)

| Color Ranks | CIE X | | CIE Y | |
|-------------|-------|-------|-------|-------|
| | Min. | Max. | Min. | Max. |
| A1 | 0.215 | 0.245 | 0.155 | 0.215 |
| A2 | 0.245 | 0.260 | 0.185 | 0.245 |
| B1 | 0.260 | 0.275 | 0.215 | 0.275 |
| B2 | 0.275 | 0.290 | 0.245 | 0.295 |
| C1 | 0.290 | 0.305 | 0.275 | 0.315 |
| C2 | 0.305 | 0.320 | 0.295 | 0.335 |
| D1 | 0.320 | 0.340 | 0.315 | 0.355 |
| D2 | 0.340 | 0.360 | 0.335 | 0.385 |

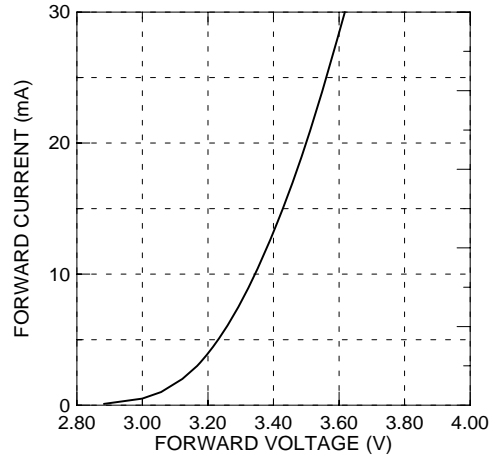
Measurement uncertainty of the color coordinates : ±0.01

Typical Electro-Optical Characteristics Curves

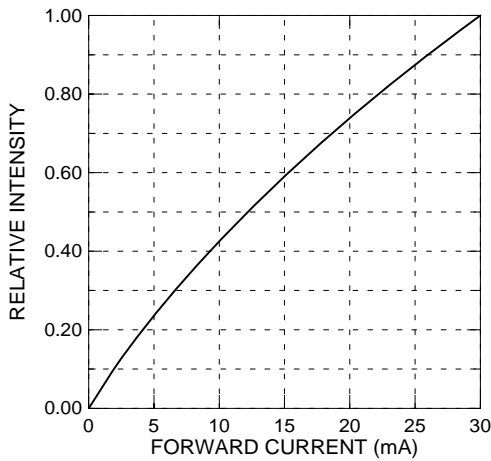
Relative Intensity vs. Wavelength



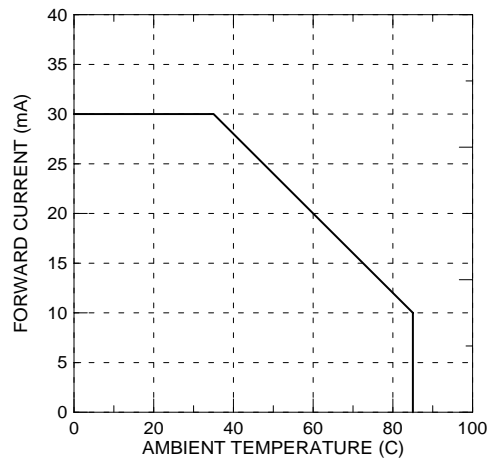
Forward Current vs. Forward Voltage



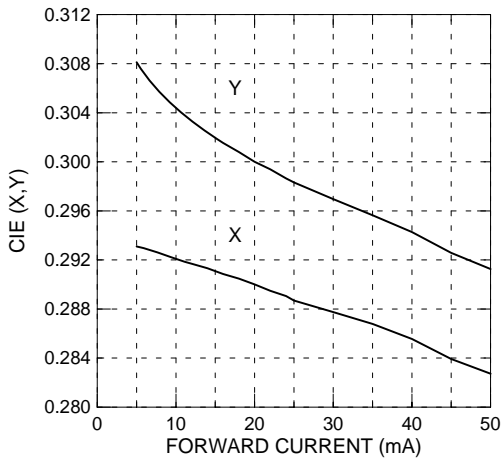
Relative Intensity vs. Forward Current



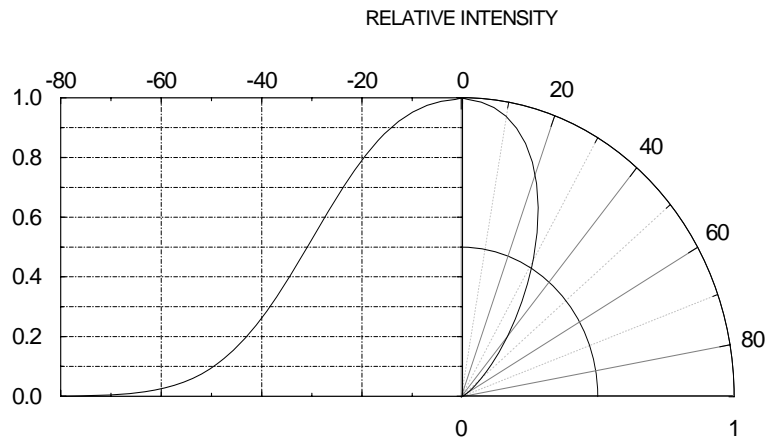
Forward Current vs. Ambient Temp.



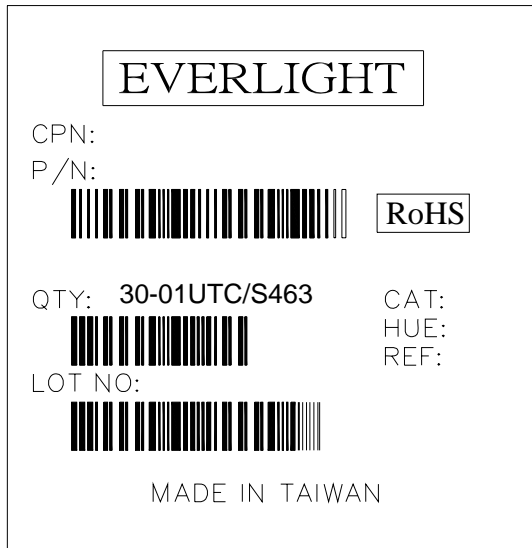
Chromaticity Coordinate vs. Forward Current



Radiation Characteristics



Label Form Specification



CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Color Bin Grade

HUE: Space

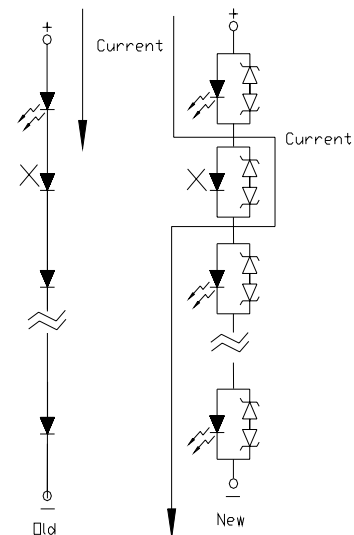
REF: Reference

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.
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.
3. 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.
4. 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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