

**Power LED**  
**White Light**  
**Ultra Bright LED**  
**Lead (Pb) Free Product - RoHS Compliant**  
**HXHP-E3LV**

### Features

- **feature of the device:** o feature of the device: extremely wide viewing angle; long life time due to enhanced resin material
- **color coordinates:** x = 0.44, y = 0.43 acc. to CIE 1931 (white)
- **typ. color temperature:** 3000 K
- **viewing angle:** Lambertian Emitter (120°)
- **technology:** InGaN
- **grouping parameter:** luminous intensity, color coordinates
- **assembly methods:** suitable for all SMT assembly methods
- **soldering methods:** IR reflow soldering and TTW soldering
- **preconditioning:** acc. to JEDEC Level 2
- **ESD-withstand voltage:** ESD sensitive device

### Applications

- outdoor displays
- backlighting (LCD, switches, keys, displays, illuminated advertising)
- interior and exterior automotive lighting
- substitution of micro incandescent lamps, reading lamps
- emergency lighting
- signal and symbol luminaire
- marker lights (e.g. steps, exit ways, etc.)

### Ordering Information

| Type      | Color of Emission | Luminous flux ( $I_F=700mA$ ) |                |
|-----------|-------------------|-------------------------------|----------------|
|           |                   | Min $I_V$ (lm)                | Typ $I_V$ (lm) |
| HXHP-E3LV | white             | 39.8                          | 60             |

*Note: The above Type Numbers represent the order groups which include only a few brightness groups. Only one group will be shipped on each reel (there will be no mixing of two groups on each reel). E.g. HXHP-E3LV will be shippable for any one reel.*

*In order to ensure availability, single brightness groups will not be orderable.*

*In a similar manner for colors where chromaticity coordinate groups are measured and binned, single chromaticity coordinate groups will be shipped on any one reel. E.g. HXHP-E3LV will be shippable.*

*In order to ensure availability, single chromaticity coordinate groups will not be orderable.*

**Maximum Ratings**

| Parameter                                   | Symbol         | Value       |      |      | Unit |
|---|----------------|-------------|------|------|------|
|   |                | Min         | Type | Max  |      |
| Luminous flux <sup>(1)</sup>                | $\Phi_V^{(2)}$ | 39.8        | 60   | --   | lm   |
| Correlated color temperature <sup>(3)</sup> | CCT            | 2650        | --   | 3800 | k    |
| CRI   | $R_a$          | --          | 80   | --   |      |
| Forward voltage <sup>(4)</sup>              | $V_F$          | 3.0         | 3.7  | 4.0  | V    |
| Forward current                             | $I_F$          | --          | 0.7  | --   | A    |
| Power dissipation                           | $P_D$          | --          | 2.6  | --   | W    |
| Junction temperature                        | $T_J$          | --          | --   | 120  | °C   |
| Operation temperature                       | $T_{OP}$       | -40~+105    |      |      | °C   |
| Storage temperature                         | $T_{ST}$       | -40~+120    |      |      | °C   |
| ESD sensitivity <sup>(5)</sup>              |                | ±20,000 HBM |      |      | V    |

(1) SSC maintains a tolerance of  $\pm 10\%$  on flux and power measurements.

(2)  $\Phi_V$  is the total luminous flux output as measured with an integrated sphere.

(3) Dominant wavelength is derived from the CIE 1931 Chromaticity diagram. A tolerance of  $\pm 0.5\text{nm}$  for dominant wavelength

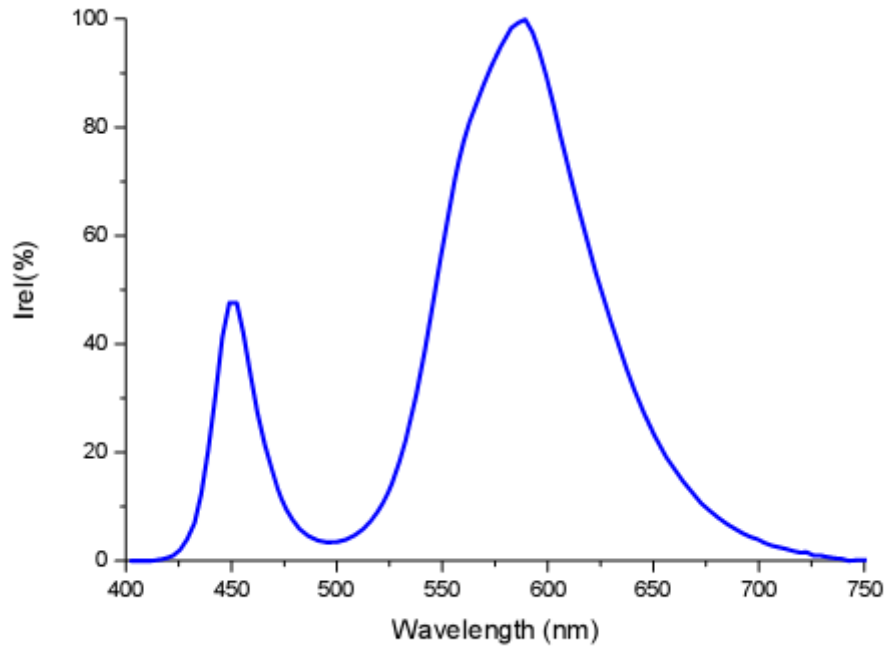
(4) A tolerance of  $\pm 0.06\text{V}$  on forward voltage measurements

(5) It is included the zener chip to protect the product from ESD. (Request)

### Relative Spectral Emission

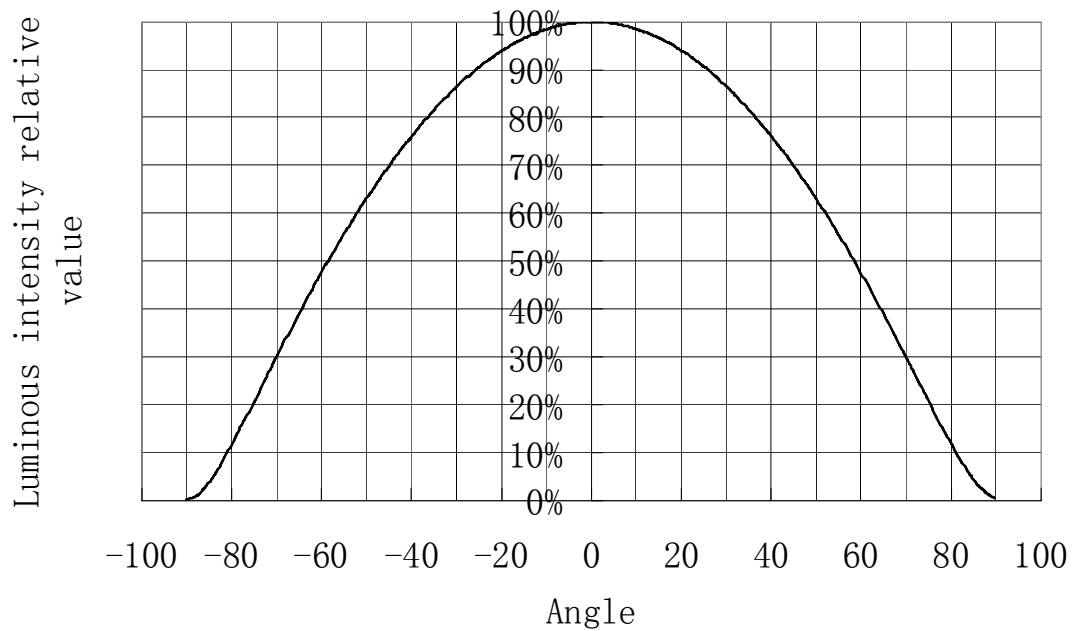
$V(\lambda)$  = Standard eye response curve

$\Phi_{rel} = f(\lambda)$ ;  $T_A = 25\text{ }^\circ\text{C}$ ;  $I_F = 700\text{mA}$

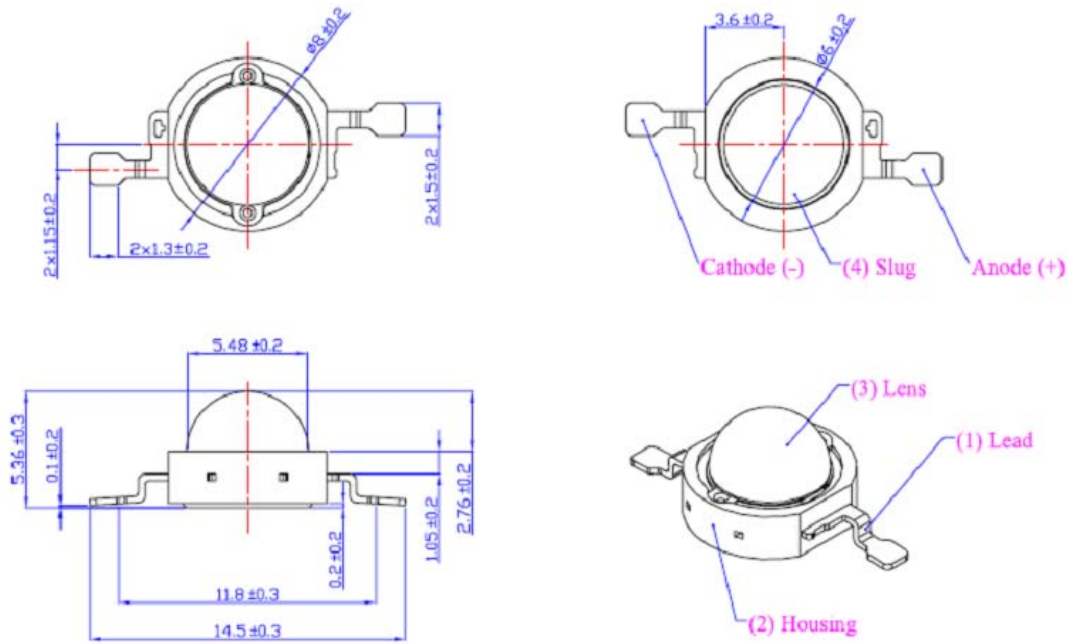


### Radiation Characteristic

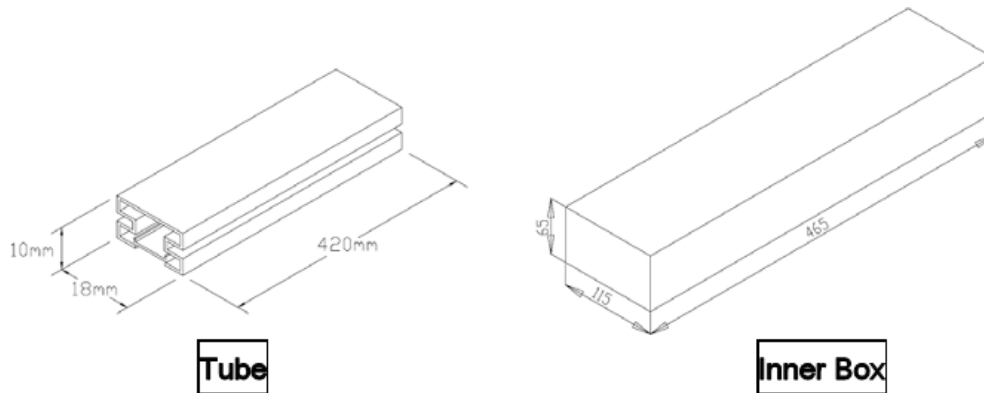
$\Phi_{rel} = f(\varphi)$ ;  $T_A = 25\text{ }^\circ\text{C}$



**Package Outlines**

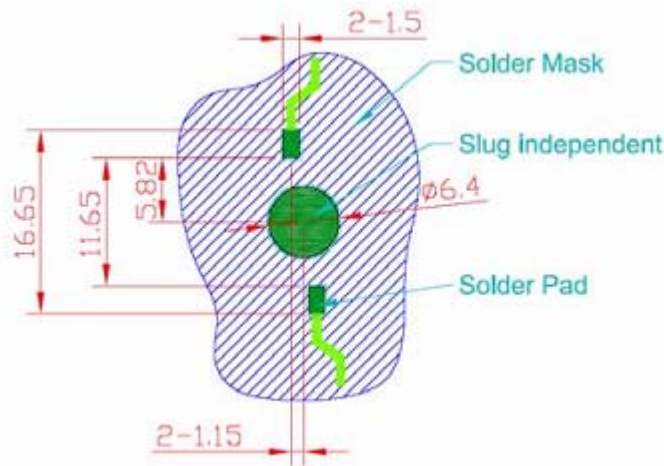


**Method of Taping / Polarity and Orientation**



**Recommended Solder Pad**

IR Reflow Soldering



**Soldering Conditions**

Preconditioning acc. to JEDEC Level 2

IR Reflow Soldering Profile for lead free soldering (acc. to J-STD-020B)

