



## Technical Data Sheet

### 5.0 mm Round LED (T-1 3/4 )

**3384-15UTC/S400-X9**

#### Features

- Popular T-1 colorless 5mm package.
- High luminous power.
- Typical chromaticity coordinates  $x=0.29$ ,  $y=0.28$  according to CIE1931.
- Bulk, available taped on reel.
- Pb free .
- The product itself will remain within RoHS compliant version.



#### Descriptions

- The series is designed for application required high luminous intensity.
- The phosphor filled in the reflector converts the blue emission of InGaN chip to ideal white.

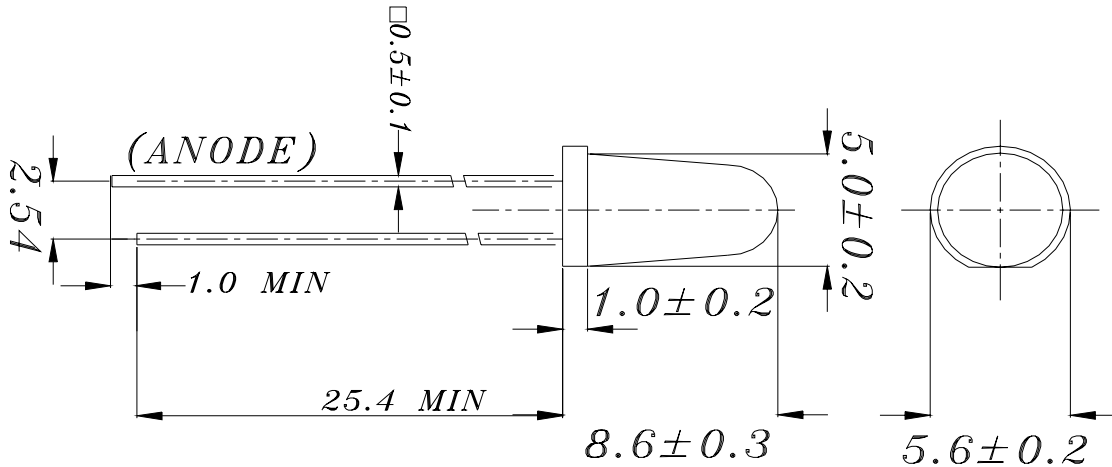
#### Applications

- Outdoor Displays
- Optical Indicators
- Backlighting
- Marker Lights

#### Device Selection Guide

PART NO.	Chip		Lens Color
	Material	Emitted Color	
3384-15UTC/S400-X9	InGaN/Sapphire	White	Water Clear

**Package Dimensions**



**Notes:**

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

**Absolute Maximum Ratings (Ta=25°C)**

Parameter	Symbol	Rating	Unit
Continuous Forward Current	$I_F$	25	mA
Reverse Voltage	$V_R$	5	V
Operating Temperature	$T_{opr}$	-30 ~ +85	°C
Storage Temperature	$T_{stg}$	-40 ~ +100	°C
Soldering Temperature (T=5 sec)	$T_{sol}$	260 ± 5	°C
Power Dissipation	$P_d$	110	mW
Electrostatic Discharge	ESD	150	V



## **3384-15UTC/S400-X9**

### **Electro-Optical Characteristics (Ta=25°C)**

<b>Parameter</b>	<b>Symbol</b>	<b>Condition</b>	<b>Min.</b>	<b>Typ.</b>	<b>Max.</b>	<b>Units</b>
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20mA	--	3.2	4.0	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	--	--	50	uA
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> =20mA	5000	8000	--	mcd
Viewing Angle	2θ <sub>1/2</sub>	I <sub>F</sub> =20mA	--	15	--	deg
Chromaticity Coordinates	x	I <sub>F</sub> =20mA	--	0.29	--	--
	y	---	--	0.28	--	--

### **Luminous Intensity Combination (mcd at 20mA)**

<b>I<sub>V</sub> Ranks</b>	<b>Z</b>	<b>Z1</b>	<b>Z2</b>	<b>Z3</b>
<b>Min.</b>	5000	8000	11000	14000
<b>Max.</b>	8000	11000	14000	17000

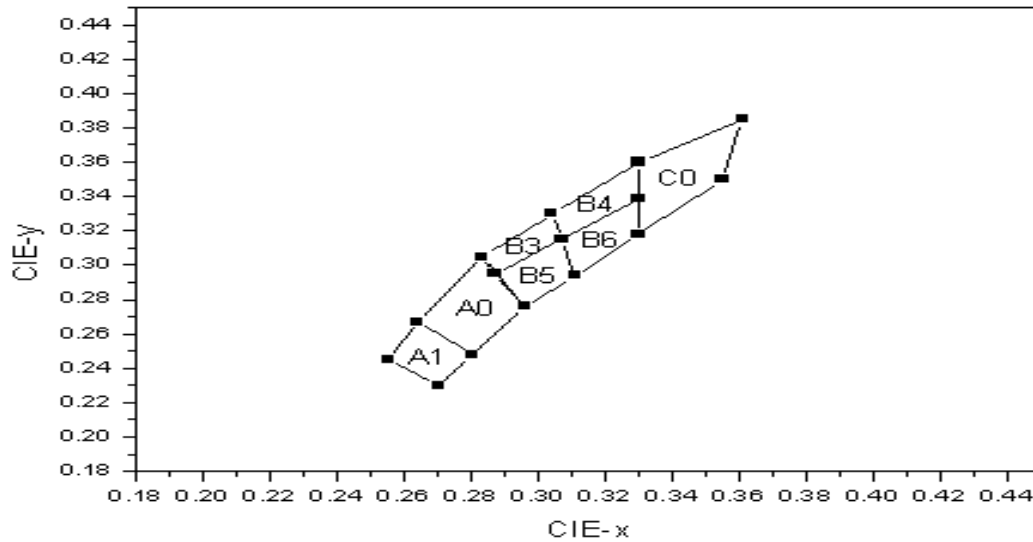
Measurement Uncertainty of Luminous Intensity: ±15%

### **Forward Voltage Combination (V at 20mA)**

<b>V<sub>F</sub> Ranks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Min.</b>	2.8	3.0	3.2	3.4	3.6	3.8
<b>Max.</b>	3.0	3.2	3.4	3.6	3.8	4.0

Measurement Uncertainty of Forward Voltage : ±0.05V

**CIE Chromaticity Diagram ( $I_F=20\text{mA}$  ,  $T_a=25^\circ\text{C}$ )**



**Color Ranks ( $I_F=20\text{mA}$  ,  $T_a=25^\circ\text{C}$ )**

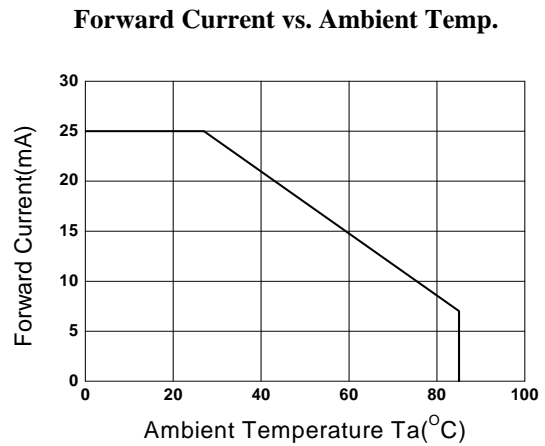
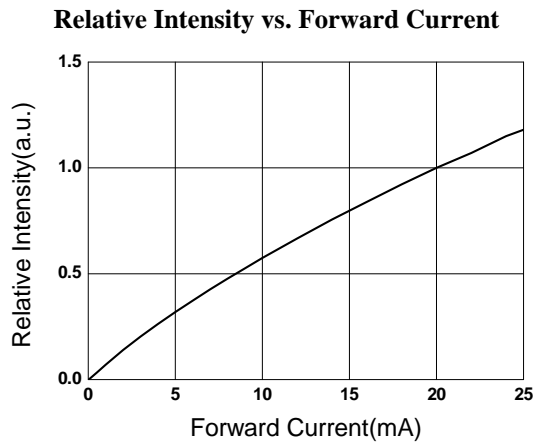
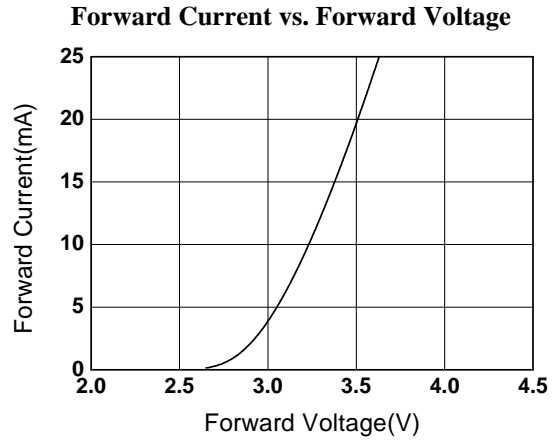
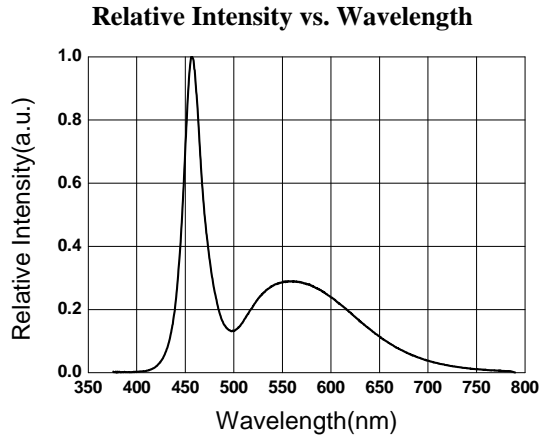
Color Ranks		CIE			
A1	X	0.255	0.264	0.28	0.27
	Y	0.245	0.267	0.248	0.23
A0	X	0.264	0.283	0.296	0.28
	Y	0.267	0.305	0.276	0.248
B3	X	0.283	0.304	0.307	0.287
	Y	0.305	0.33	0.315	0.295
B4	X	0.304	0.33	0.33	0.307
	Y	0.33	0.36	0.339	0.315
B5	X	0.287	0.307	0.311	0.296
	Y	0.295	0.315	0.294	0.276
B6	X	0.307	0.33	0.33	0.311
	Y	0.315	0.339	0.318	0.294
C0	X	0.33	0.361	0.355	0.33
	Y	0.36	0.385	0.35	0.318

Measurement uncertainty of the color coordinates :  $\pm 0.01$

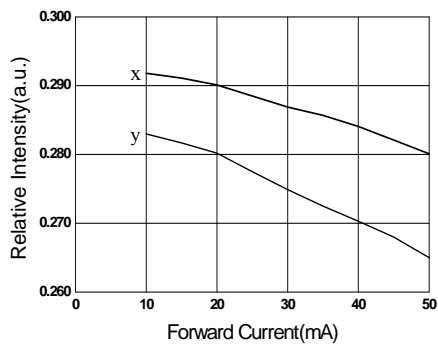


## 3384-15UTC/S400-X9

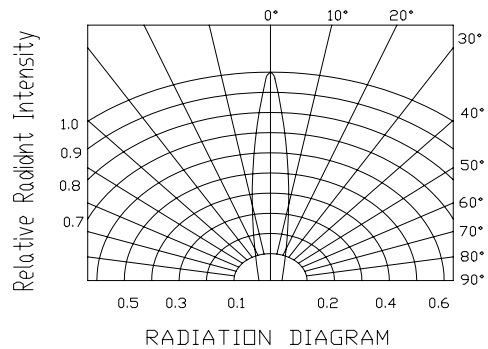
### Typical Electro-Optical Characteristics Curves



**Chromaticity Coordinate vs. Forward Current**



**Relative Intensity vs. Angle Dispacemen**





## 3384-15UTC/S400-X9

### Label Form Specification

The diagram shows a rectangular label form with the following elements:

- Top left: A circle containing the letters "Pb".
- Top center: A rectangular box containing the word "EVERLIGHT".
- Top right: A circle containing the letter "X".
- Bottom center: A rectangular box containing the text "RoHS".
- Left side: Fields for "CPN:", "P/N:", "QTY:", and "LOT NO:", each followed by a barcode.
- Right side: Fields for "CAT:", "HUE:", and "REF:".
- Bottom left: A field for "REFERENCE:" followed by a barcode.

CPN: Customer's Production Number  
P/N : Production Number  
QTY: Packing Quantity  
CAT: IV&VF Rank  
HUE: Color Rank  
REF: Reference  
LOT No: Lot Number

### 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.
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