

**Model: L-TWH3-C01**  
 120 Degree 3.2 x 2.8mm SMT-LED in White Colour with Water Transparent

**Dice Material:**  
 InGaN

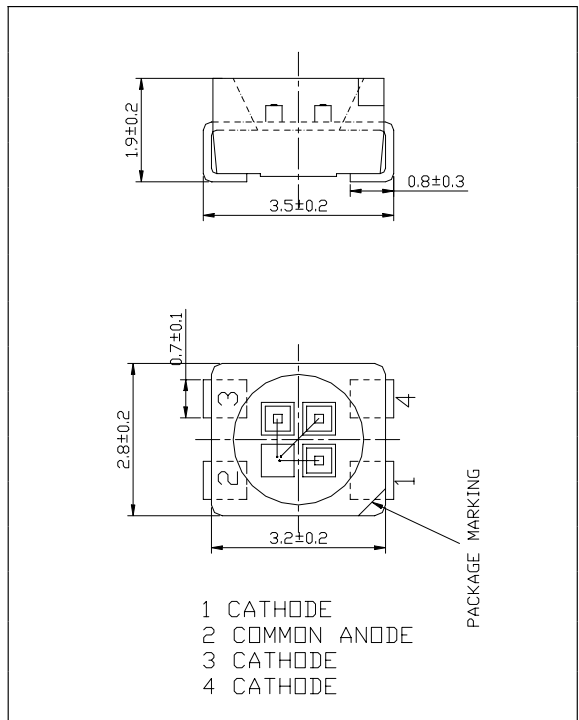
**Applications:**

- Indicators
- Illuminations
- LCD Back Lights
- Automobile's Applications

**Absolute Maximum Ratings at Ta = 25°C**

Items	Symbol	Absolute maximum Rating	Unit
Forward Current	I <sub>F</sub>	25×3	mA
Peak Forward Current*	I <sub>FP</sub>	100×3	mA
Reverse Voltage	V <sub>R</sub>	5	V
Power Dissipation	P <sub>D</sub>	120×3	mW
Operation Temperature	T <sub>opr</sub>	-40 ~ + 100	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ + 100	°C
Junction temperature	T <sub>j</sub>	+125	°C
Junction/ambient **	R <sub>thJA</sub>	450×3	°C/W
Junction/solder point	R <sub>thJS</sub>	330×3	°C/W

**Dimension Drawing**



\*pulse width ≤ 0.1msec duty ≤ 1/10 \*\* Rth test condition: Mounted on PC Board FR 4(pad size ≥ 16mm<sup>2</sup>)

**Typical Electrical & Optical Characteristics ( Ta = 25°C)**

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20×3mA	3.2	3.6	4.2	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 5V	---	---	10	μA
Luminous Intensity	I <sub>v</sub>	I <sub>F</sub> = 20×3mA	900	1300	---	mcd
Chromaticity Coordinates	x	I <sub>F</sub> = 20×3mA	---	0.31	---	---
	y	I <sub>F</sub> = 20×3mA	---	0.32	---	---
50% Power Angle	2θ <sub>½</sub>	I <sub>F</sub> = 20×3mA	---	120	---	deg

**Ranks Combination (I<sub>F</sub> = 20mA)**

Rank	V2	W1	W2
Luminous Intensity	900-1120mcd	1120-1400mcd	1400-1800mcd

Rank	Chromaticity Coordinates	a				b1				b2				c					
		x	y	z	u	v	w	x	y	z	u	v	w	x	y	z	u	v	w
	x	0.28	0.264	0.283	0.296	0.287	0.283	0.33	0.33	0.296	0.287	0.33	0.33	0.33	0.33	0.361	0.356		
	y	0.248	0.267	0.305	0.276	0.295	0.305	0.36	0.339	0.276	0.295	0.339	0.318	0.318	0.36	0.385	0.351		

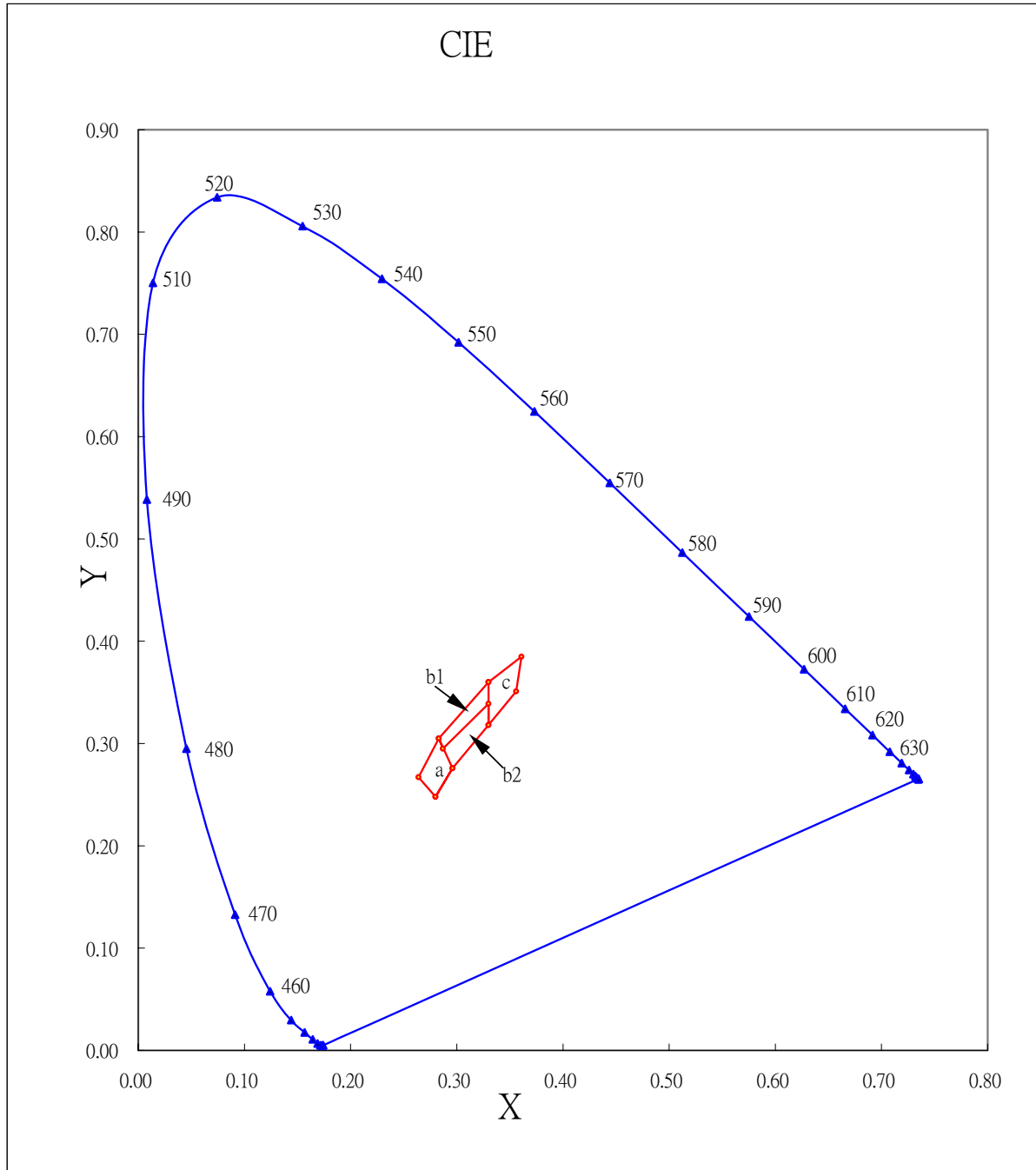
**Important Notes:**

- 1) Tolerance of measurement of luminous intensity is ±10%
- 2) Tolerance of measurement of the Color Coordinates is ± 0.02.
- 3) Tolerance of measurement of Vf is ±0.05 V.



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### CIE Chromaticity Diagram



### Graphs

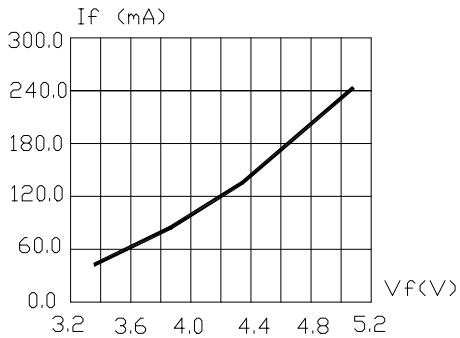


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

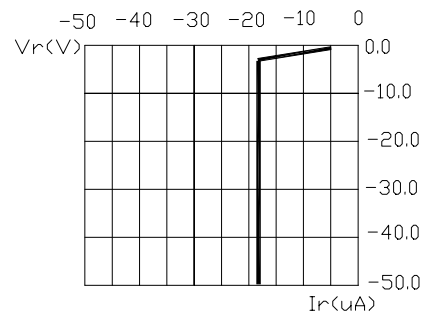


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

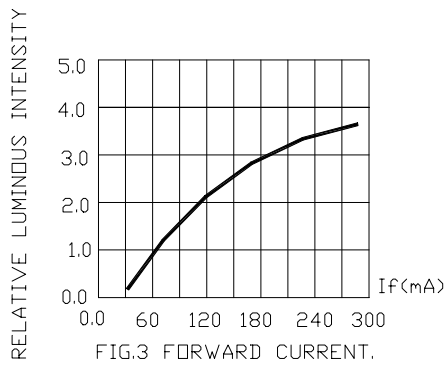


FIG.3 FORWARD CURRENT.

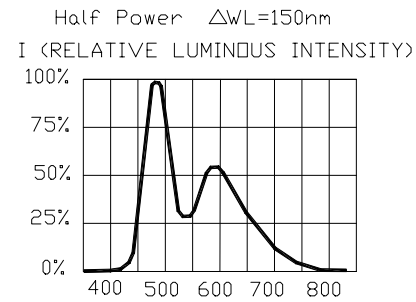


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

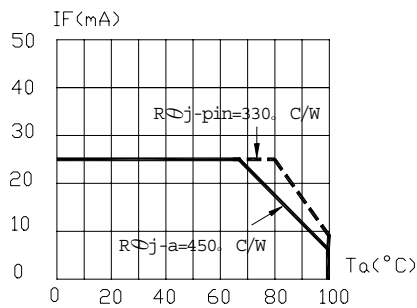


FIG.5 MAXIMUM FORWARD DC CURRENT VS TEMPERATURE. DERATING BASED ON  $T_{jmax}=125^{\circ}C$

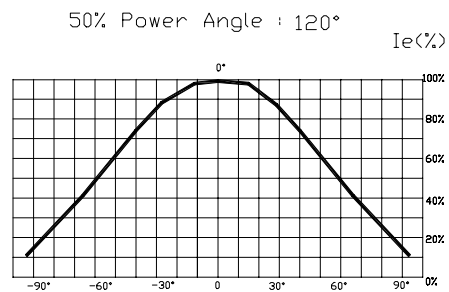


FIG.6 SPATIAL DISTRIBUTION.