

**Model: L-TSWH-C01**  
 120 Degree 4.0x 4.0mm Side SMD in Daylight Color with Water Transparent

**Dice Material:**  
 AlGaInP

**Applications:**

- Optical indicators
- Coupling into light guides
- Back lights(LCD, switches, keys, displays, illuminated advertising,general lighting)
- Interior automotive lighting.(e.g.dashboard backlighting, etc. )
- Automobile's Applications
- Marker lights (e.g. steps, exit ways, etc)
- Signal and symbol luminaire

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

Items	Symbol	Absolute maximum Rating	Unit
Forward Current	I <sub>F</sub>	25	mA
Peak Forward Current*	I <sub>FP</sub>	100	mA
Reverse Voltage	V <sub>R</sub>	5	V
Power Dissipation	P <sub>D</sub>	105	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>	+110	°C
Junction/ambient **	R <sub>thJA</sub>	350	°C /W
Junction/solder point	R <sub>thJS</sub>	250	°C /W

\*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> = 20mA	---	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> = 20mA	280	450	---	mcd
Chromaticity Coordinates	x	I <sub>F</sub> = 20mA	---	0.31	---	---
	y	I <sub>F</sub> = 20mA	---	0.32	---	---
50% Power Angle	2 θ <sub>½</sub>	I <sub>F</sub> = 20mA	---	120	---	deg

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

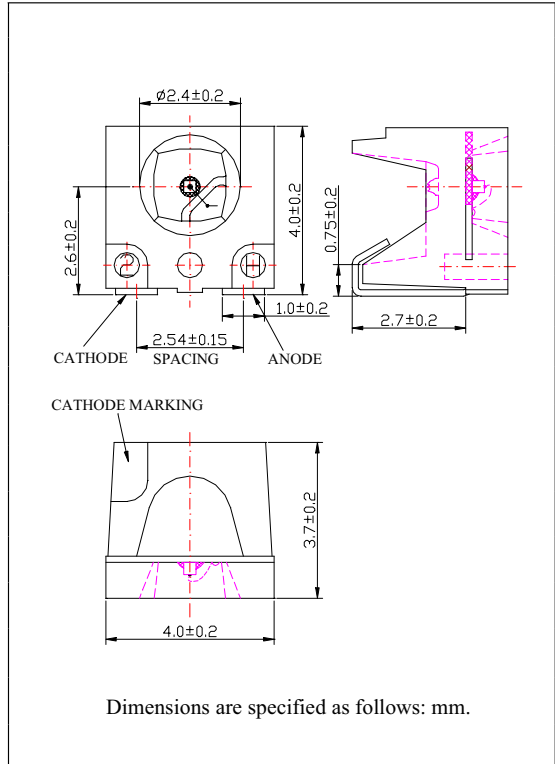
Rank	T1	T2	U1	U2
Luminous Intensity	280-355mcd	355-450mcd	450-560 mcd	560-710 mcd

Rank	a				b1				b2				c				
Chromaticity Coordinates	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

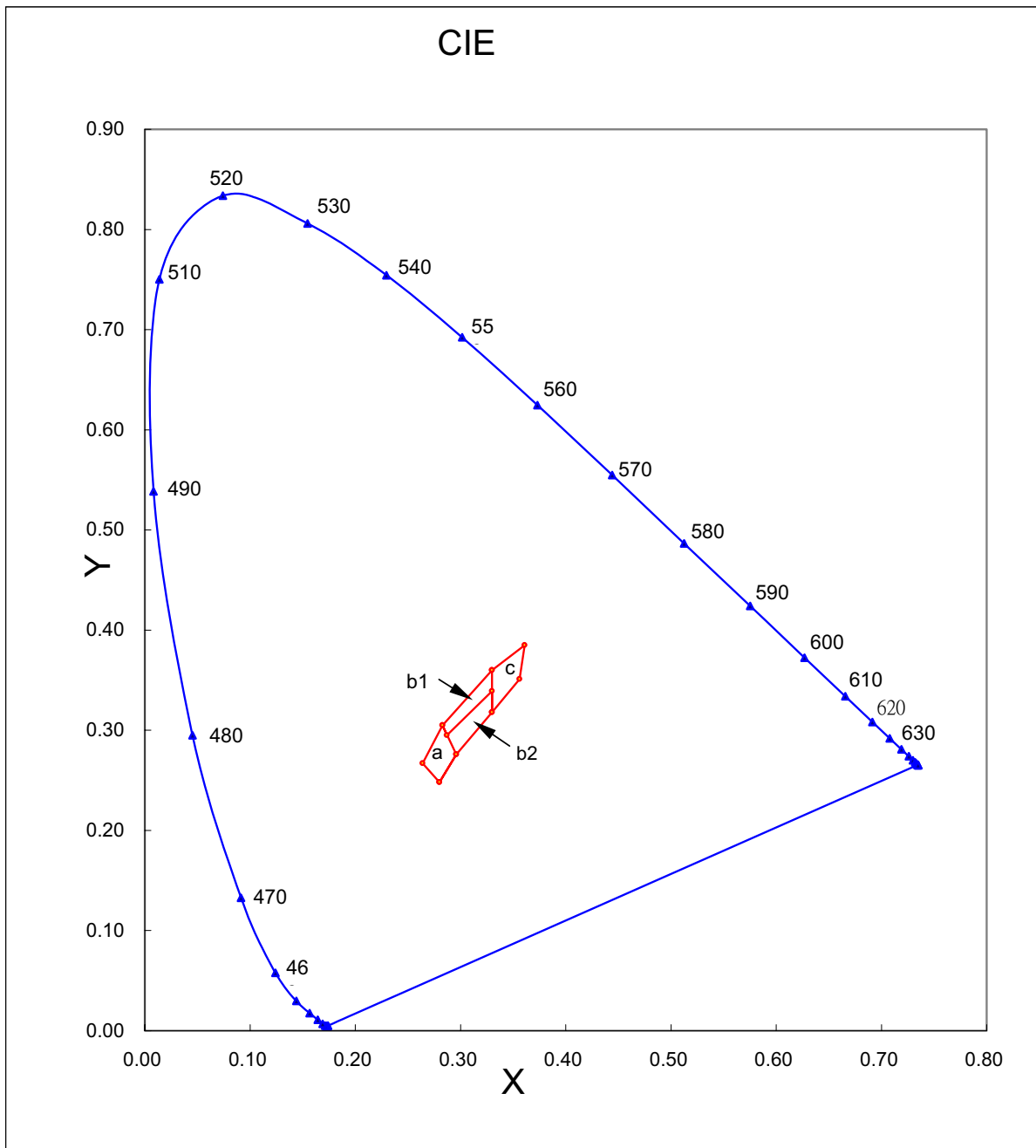
**Important Notes:**

- 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.

**Dimension Drawing**



## CIE Chromaticity Diagram





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### Graphs

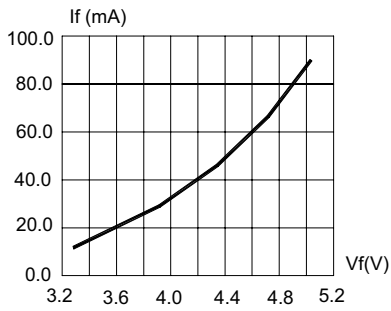


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

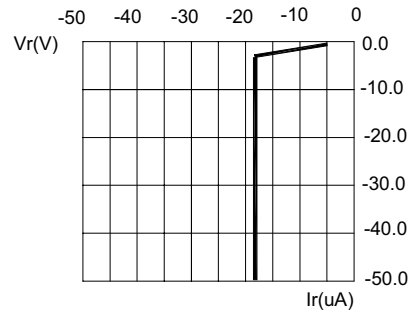


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

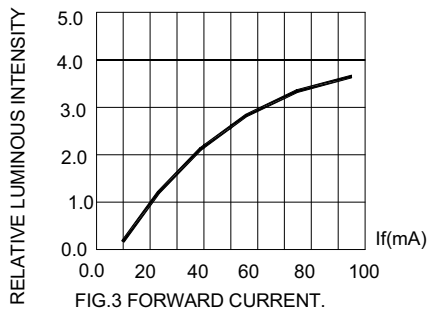


FIG.3 FORWARD CURRENT.

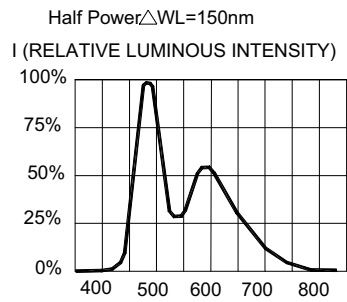


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

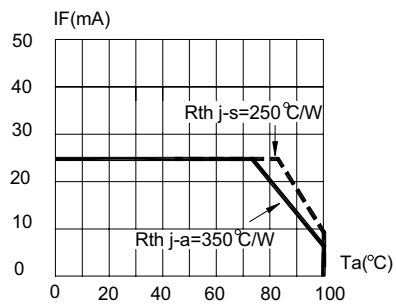


FIG.5 MAXIMUM FORWARD DC CURRENT VS TEMPERATURE. DERATING BASED ON  $T_{jmax}=110^{\circ}C$

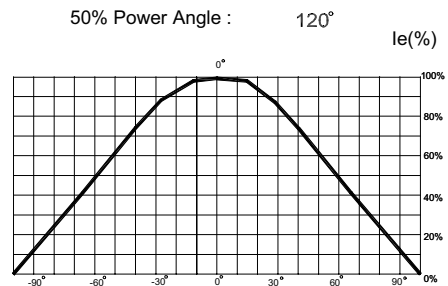


FIG.6 SPATIAL DISTRIBUTION.