

SPECIFICATION FOR I-WITTY LED LAMP

MODEL No : LC512NWH1-25H
DOC. No : I 22Dec03

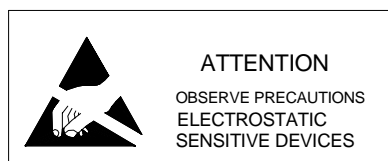
Description:

25 Degree 5mm LED Lamp in
Daylight Color with Water
Transparent Lens and No Stopper

Dice Material: InGaN

Confirmed
by Customer: _____

Date: _____



I-WITTY TECHNOLOGY LTD.

Applications:

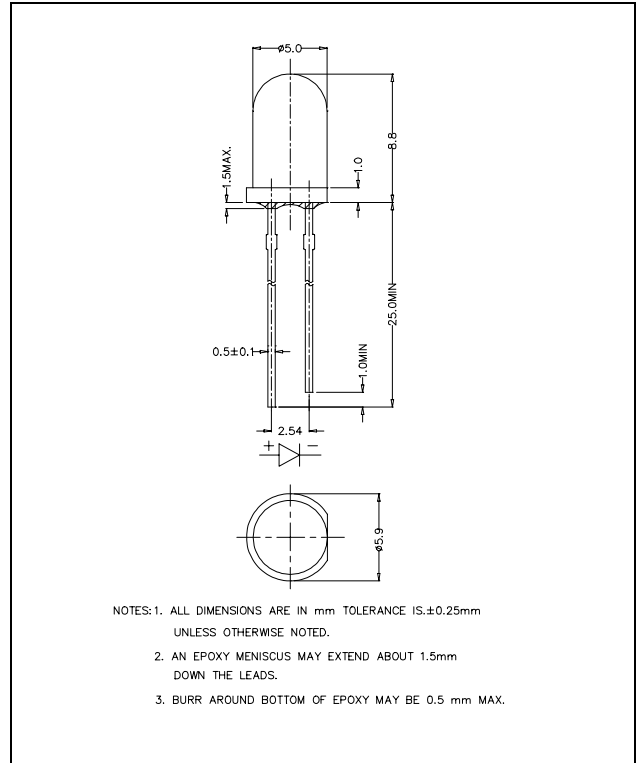
- Advertising Signs
- Indicators
- LCD Back Light
- Illuminations

Absolute Maximum Ratings at Ta = 25°C

Items	Symbol	Absolute maximum Rating	Unit
Forward Current	I _F	25	mA
Peak Forward Current*	I _{FP}	100	mA
Reverse Voltage	V _R	5	V
Power Dissipation	P _D	105	mW
Operation Temperature	T _{opr}	-20 ~ + 75	°C
Storage Temperature	T _{stg}	-30 ~ + 80	°C
Lead Soldering Temperature	T _{sol}	Max.260°C for 3 sec Max. (3mm from the base of the epoxy bulb)	

*pulse width <=0.1msec duty <=1/10

Dimension Drawing



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

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V _F	I _F = 20mA	---	3.6	4.2	V
Reverse Current	I _R	V _R = 5V	---	---	100	μA
Luminous Intensity	I _v	I _F = 20mA	550	1400	---	mcd
Chromaticity Coordinates	x	I _F = 20mA	---	0.31	---	---
	y	I _F = 20mA	---	0.32	---	---
50% Power Angle	2θ½	I _F = 20mA	---	25	---	deg

Ranks Combination (I_F = 20mA)

Rank	R	S	T	U
Luminous Intensity	550-770 mcd	770-1100 mcd	1100-1520 mcd	1520-2130 mcd

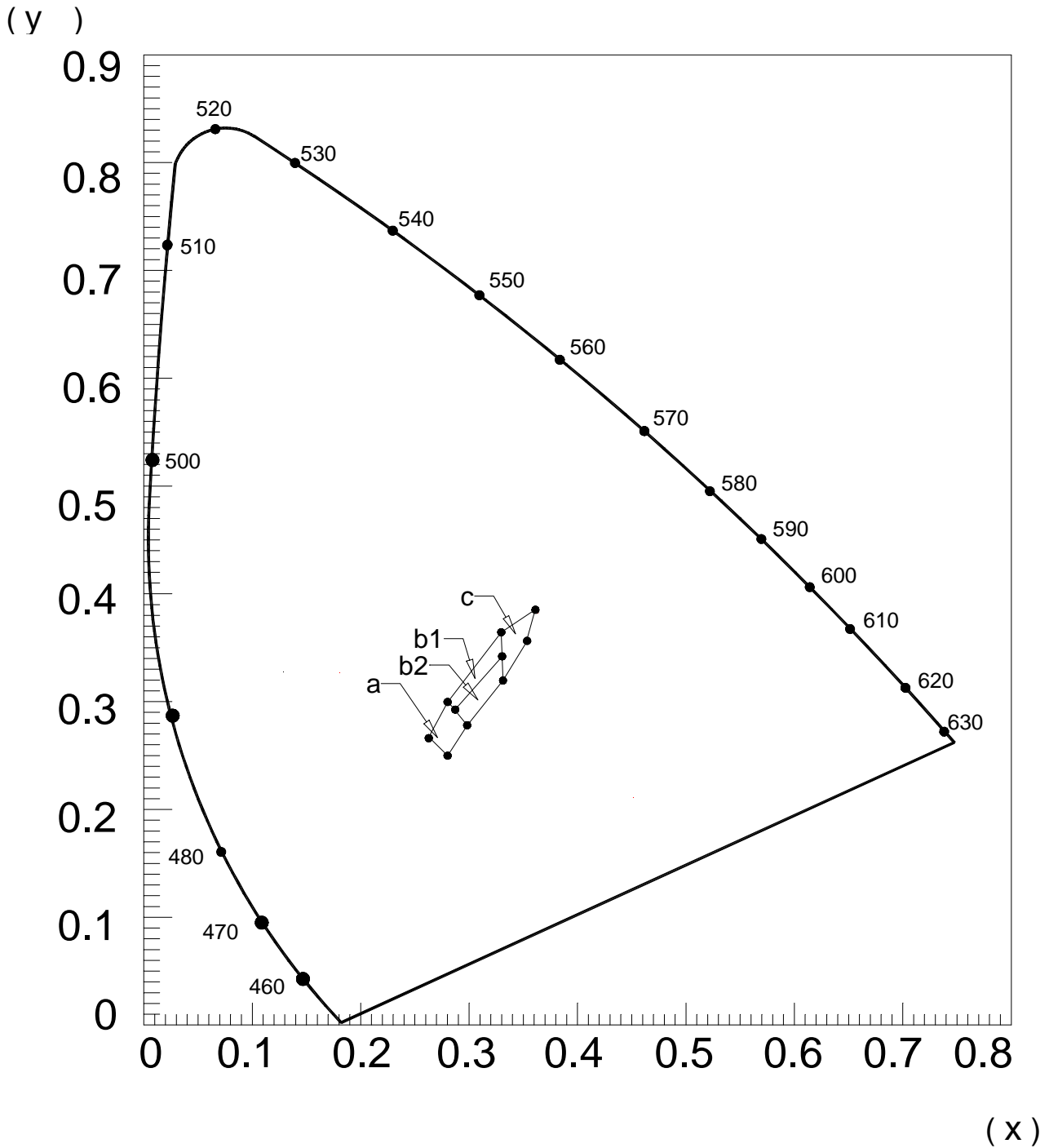
Rank		a				b1				b2				c			
Chromaticity Coordinates	X	0.280	0.264	0.283	0.296	0.287	0.283	0.330	0.330	0.296	0.287	0.330	0.330	0.330	0.330	0.361	0.356
	y	0.248	0.267	0.305	0.276	0.295	0.305	0.360	0.339	0.276	0.295	0.339	0.318	0.318	0.360	0.385	0.351

Rank	V9	V10	V11	V12	V13
Voltage	3.2-3.4 V	3.4-3.6 V	3.6-3.8 V	3.8-4.0 V	4.0-4.2 V

Important Notes:

- 1) All ranks will be included per delivery, rank ratio will be determined by I-WITTY.
- 2) Tolerance of measurement of luminous intensity is ±15%.
- 3) Tolerance of measurement of the Color Coordinates is ± 0.02.
- 4) Tolerance of measurement of Vf is ±0.05 V.
- 5) Packaging methods are available for selection, please refer to PACKAGING STANDARD.
- 6) Please refer to LED LAMP RELIABILITY TEST STANDARD for reliability test conditions.

CIE Chromaticity Diagram



Graphs

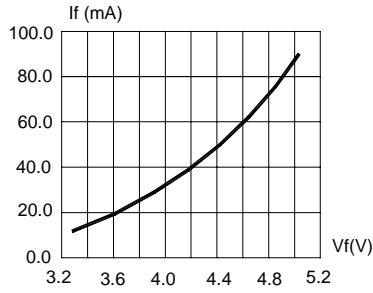


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

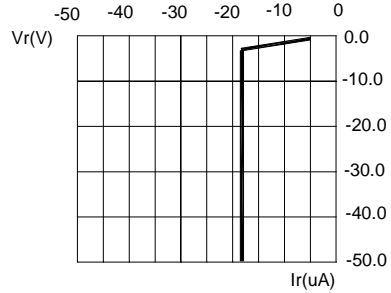


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

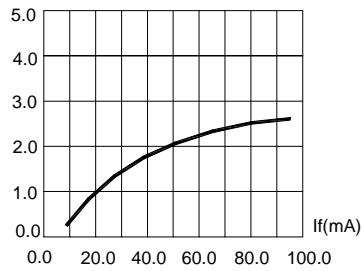


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

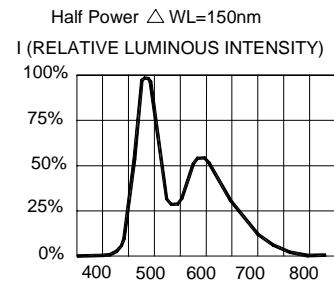


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

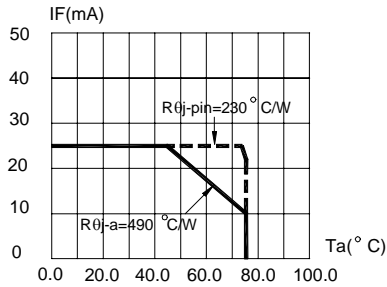


FIG.5 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE ($T_{jmax}=95\text{ }^{\circ}\text{C}$)

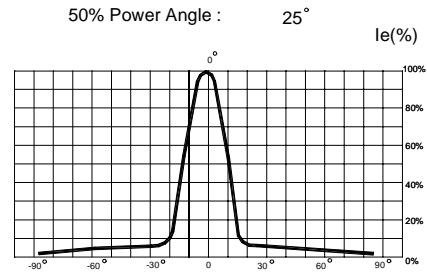


FIG.6 FAR FIELD PATTERN

1. Cathode PAD Area ($0.18 \times 0.18\text{inch}^2$)
2. Height above nominal seating plane in inches(0.3inch)

Items	Signatures	Date	Revision History	
Prepared by	LiuZM	2003/12/22	DOC. No.	CHANGE DESCRIPTION
Checked by	ZouGR	2003/12/22	G 18Jan03	CHANGE DESCRIPTION FROM "WHITE" TO"DAYLIGHT"
Approved by	David	2003/12/22	H 16Jul03	Cancel Vf(min).Change Dimension Drawing.
ECN#	ECN-H20030440		I 22Dec03	Change P_D and FIG.5.

Data is subject to change without prior notice.

Obsoletes Doc: H 16Jul03.