

SPECIFICATION FOR COTCO LED LAMP

Document No: SPE/LC503TWN1-15G-A1
Model No : LC503TWN1-15G-A1
Rev. No: 01
Date: 2005-04-20

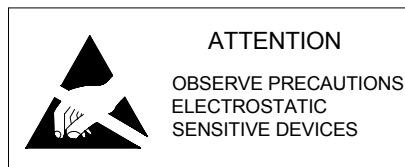
Description:

15 Degree 5mm Round LED Lamp in White
Color with Water Transparent Lens and
Stopper

Dice Material: InGaN

Confirmed
by Customer: _____

Date: _____



Applications:

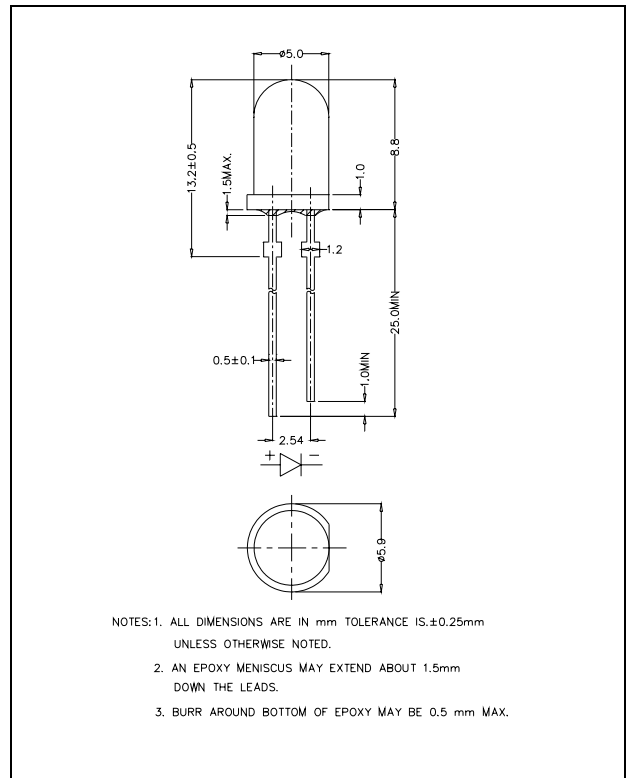
- Advertising Signs
- Indicators
- LCD Back Light
- Illuminations

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	100	mW
Operation Temperature	T_{opr}	-40 ~ +95	°C
Storage Temperature	T_{stg}	-40 ~ +100	°C
Lead Soldering Temperature	T_{sol}	Max.260°C for 3 sec Max. (3mm from the base of the epoxy bulb)	

*pulse width $\leq 0.1\text{msec}$ duty $\leq 1/10$

Dimension Drawing



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

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$	---	3.4	4.0	V
Forward Voltage	V_F	$I_F = 1.0\mu\text{A}$	1.7	---	2.5	V
Reverse Current	I_R	$V_R = 5\text{V}$	---	---	100	μA
Luminous Intensity	I_V	$I_F = 20\text{mA}$	8200	14000	---	mcd
Chromaticity Coordinates	x	$I_F = 20\text{mA}$	---	0.31	---	---
	y	$I_F = 20\text{mA}$	---	0.32	---	---
50% Power Angle	$2\theta_{1/2\text{H-H}}$	$I_F = 20\text{mA}$	---	15	---	deg

Standard bins for LC503TWN1-15G-A1 (I_F = 20mA):

Lamps are sorted to Luminous Intensity –I_v, V_F & Chromaticity Coordinates –(X,Y) bins shown.

Orders for LC503TWN1-15G-A1 may be filled with any or all bins contained as below.

All Luminous Intensity –I_v, V_F & Chromaticity Coordinates –(X,Y) values shown and specified are at I_F =20mA.

*** Z+**

		A1	A2	B1	B2	c				
Luminous Intensity (I _v)	23500mcd						Z2			
	16800mcd								Z1	
	12000mcd									
	8200mcd								Z	

Chromaticity Coordinates (X,Y)

* Z+ indicates Luminous Intensity is at Z bin or above.

Rank		A1				A2				B1			
Chromaticity Coordinates	x	0.245	0.264	0.280	0.264	0.264	0.283	0.296	0.280	0.283	0.307	0.313	0.296
	y	0.229	0.267	0.248	0.220	0.267	0.305	0.276	0.248	0.305	0.337	0.297	0.276

Rank		B2				c			
Chromaticity Coordinates	x	0.307	0.330	0.330	0.313	0.330	0.361	0.356	0.330
	y	0.337	0.360	0.318	0.297	0.360	0.385	0.351	0.318

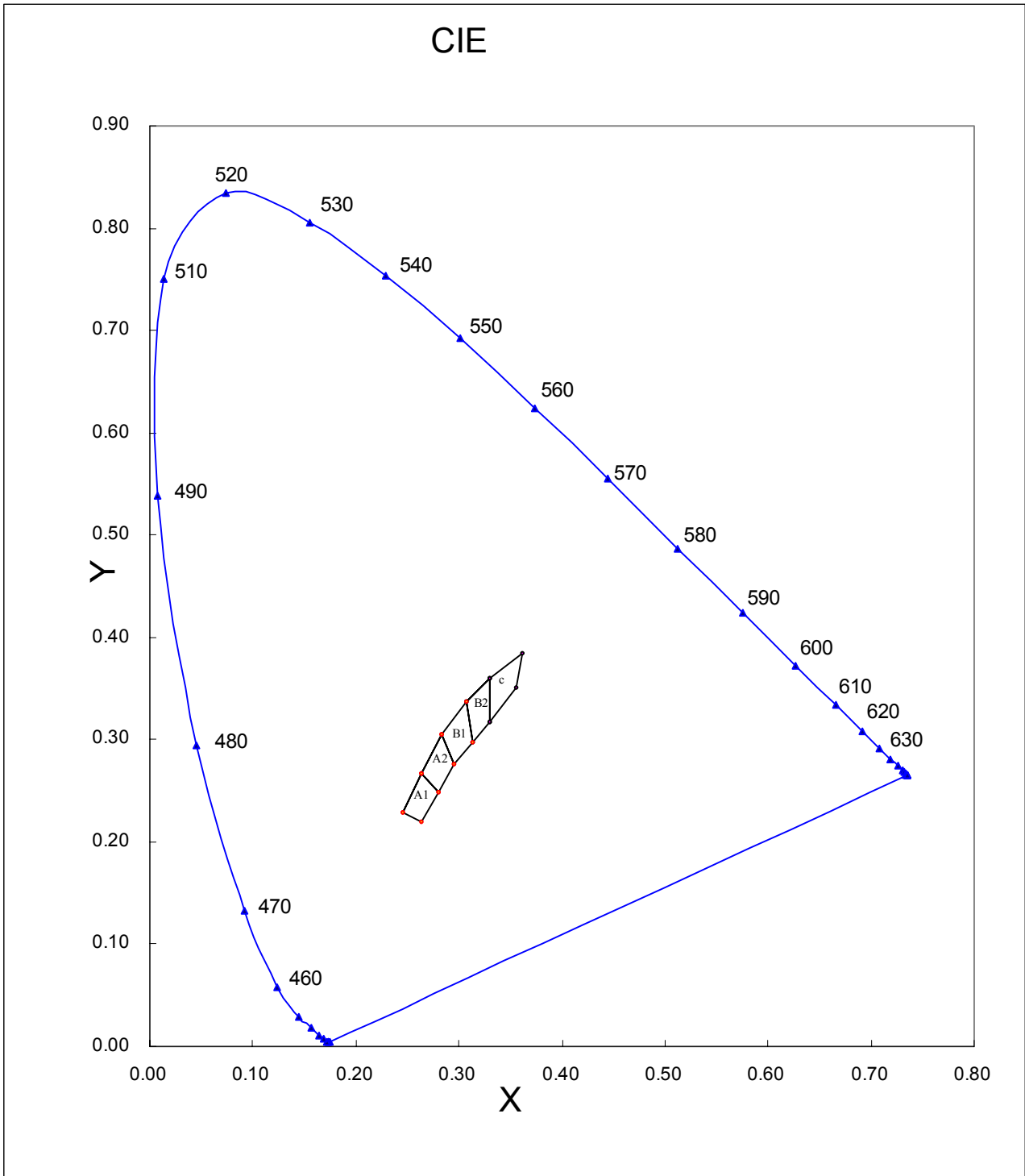
Forward Voltage (V_F)

Rank	V6	V7	V8	V9	V10	V11	V12
Voltage	2.6-2.8V	2.8-3.0V	3.0-3.2V	3.2-3.4V	3.4-3.6V	3.6-3.8V	3.8-4.0V

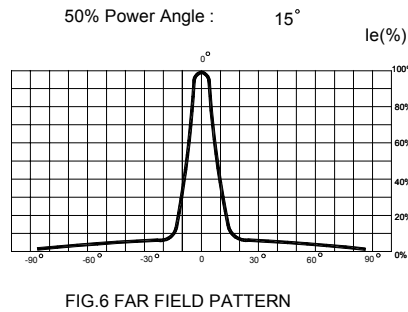
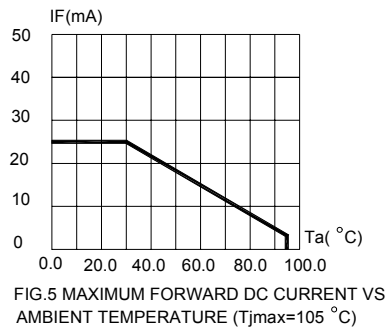
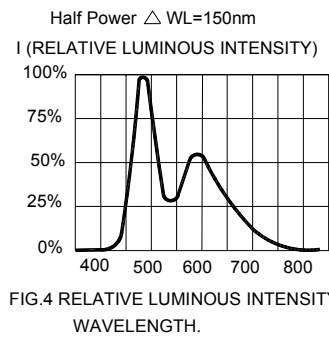
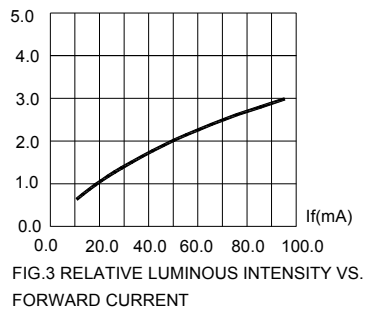
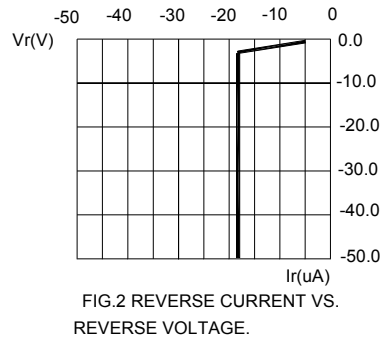
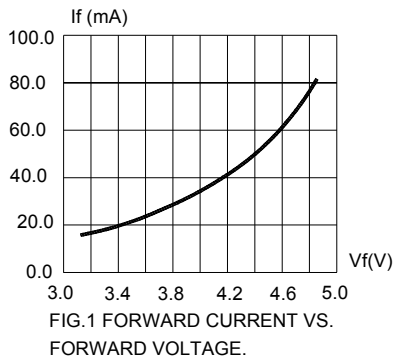
Important Notes:

- 1) All ranks will be included per delivery; rank ratio will be based on the Dices distribution.
- 2) Pb content <1000PPM.
- 3) Tolerance of measurement of luminous intensity is ±15%.
- 4) Tolerance of measurement of the Color Coordinates is ± 0.015.
- 5) Tolerance of measurement of Vf is ±0.05 V.
- 6) Packaging methods are available for selection, please refer to PACKAGING STANDARD.
- 7) Please refer to LED LAMP RELIABILITY TEST STANDARD for reliability test conditions.
- 8) Please refer to APPLICATION NOTES for Application.

CIE Chromaticity Diagram



Graphs



Items	Signatures	Date
Prepared by	LiuZM	2005-04-20
Checked by	HuangJD	2005-04-20
Approved by	David	2005-04-20
ECN#	ECN-H20050131	

Revision History		
Rev. No	Date	Change Description

Data is subject to change without prior notice; please refer to COTCO Website for the latest version.

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