



**COTCO LUMINANT DEVICE (HUIZHOU) LTD.**

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## **SPECIFICATION FOR COTCO LED LAMP**

Document No: SPE/LC503TBG1-30H-A  
Model No : LC503TBG1-30H-A  
Rev. No: 02  
Date: 2005-05-18

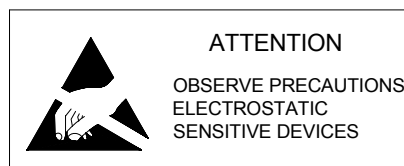
Description:

30 Degree 5mm LED Lamp in Bluish Green Color  
with Water Transparent Lens and No Stopper

Dice Material: InGaN

Confirmed  
by Customer: \_\_\_\_\_

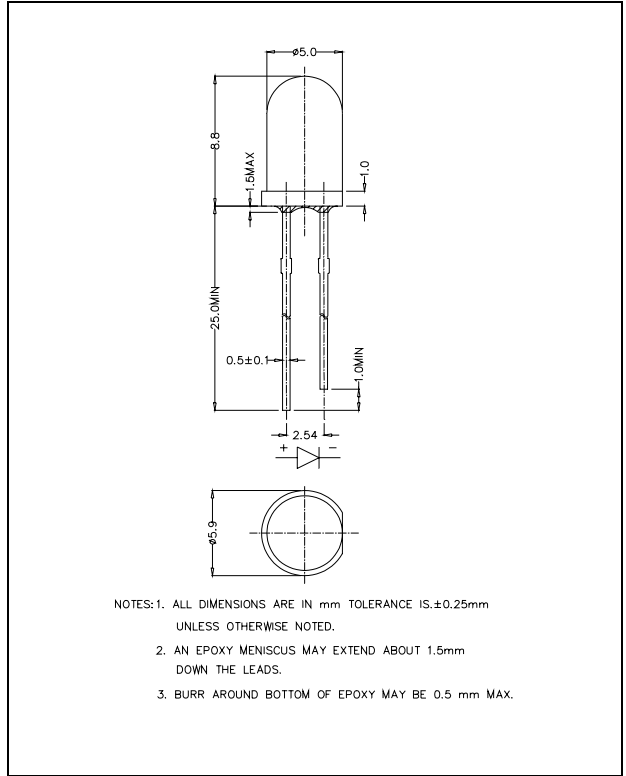
Date: \_\_\_\_\_



**Applications:**

- Advertising Signs
- Indicators
- Traffic

**Dimension Drawing**



**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>	100	mW
Operation Temperature	T <sub>opr</sub>	-40 ~ +95	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100	°C
Lead Soldering Temperature	T <sub>sol</sub>	Max.260°C for 3 sec Max. (3mm from the base of the epoxy bulb)	

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

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

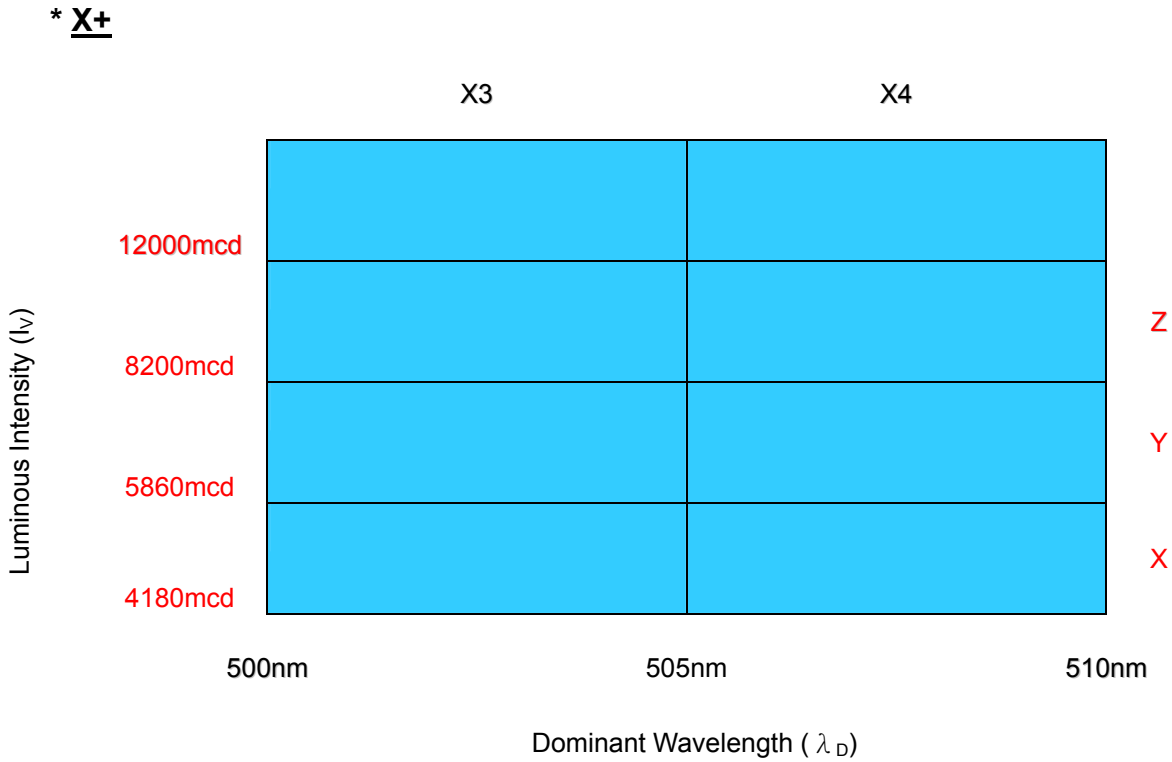
Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20mA	---	3.4	4.0	V
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 1.0μA	1.7	---	2.5	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 5V	---	---	100	μA
Dominant Wavelength	λ <sub>D</sub>	I <sub>F</sub> = 20mA	500	505	510	nm
Luminous Intensity	I <sub>v</sub>	I <sub>F</sub> = 20mA	4180	7000	---	mcd
50% Power Angle	2θ <sub>½H-H</sub>	I <sub>F</sub> = 20mA	---	27	---	deg

**Standard bins for LC503TBG1-30H-A ( $I_F = 20\text{mA}$ ):**

Lamps are sorted to Luminous Intensity – $I_V$ ,  $V_F$  & Dominant Wavelength – $\lambda_D$  bins shown.

Orders for LC503TBG1-30H-A may be filled with any or all bins contained as below.

All Luminous Intensity – $I_V$ ,  $V_F$  & Dominant Wavelength – $\lambda_D$  values shown and specified are at  $I_F = 20\text{mA}$ .



\* X+ indicates Luminous Intensity is at X bin or above.

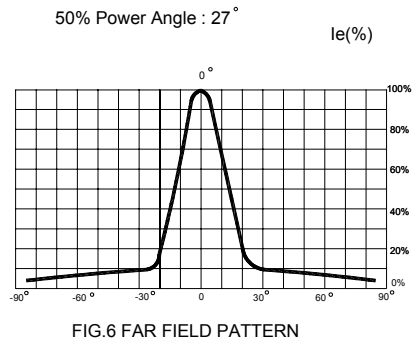
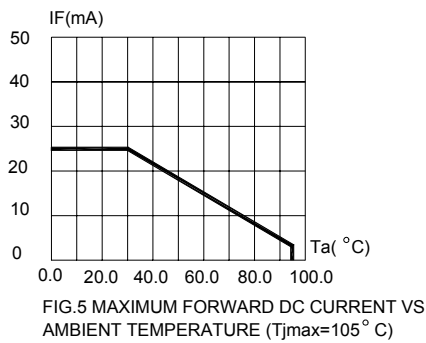
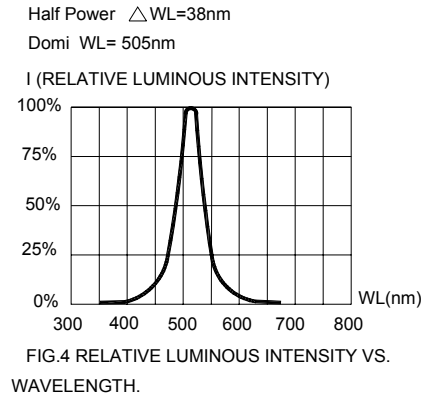
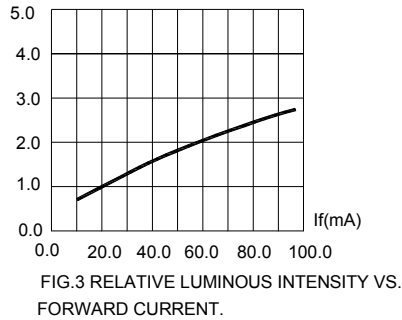
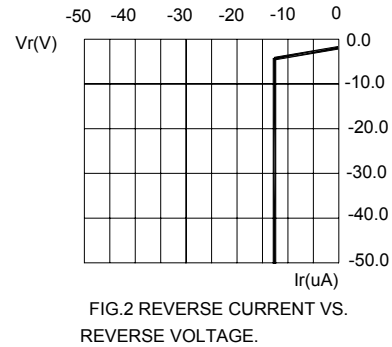
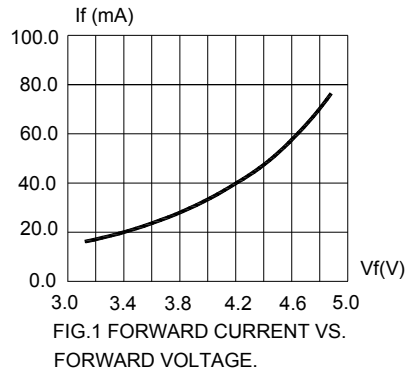
**Forward Voltage ( $V_F$ )**

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  $\pm 15\%$ .
- 4) Tolerance of measurement of dominant wavelength is  $\pm 1\text{nm}$ .
- 5) Tolerance of measurement of  $V_f$  is  $\pm 0.05\text{V}$ .
- 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.

### Graphs



Items	Signatures	Date
Prepared by	LiuZM	2005-05-18
Checked by	Aldosin	2005-05-18
Approved by	David	2005-05-18
FCN#	FCN20050163	

Revision History		
Rev. No	Date	Change Description
02	2005-05-18	Release. Change IV from Y,Z,Z1(typ)10000 to X,Y,Z(typ)7000mcd; $2\theta_{1/2}$ from 30deg to 27deg.

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

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