

SPECIFICATION FOR COTCO LED LAMP

MODEL No : LC503TPG1-30G-A-MT
DOC. No : 01 11Nov04

Description:

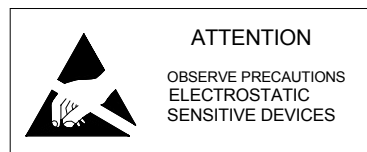
30 Degree 5mm LED Lamp in Pure Green Color
with Water Transparent Lens and Stopper

*This specification is only for MT

Dice Material: InGaN

Confirmed
by Customer: _____

Date: _____



COTCO LUMINANT DEVICE (HUIZHOU) LTD.

Applications:

- Advertising Signs
- Indicators
- LCD Back Light
- Moving Message Sign

Absolute Maximum Ratings at Ta = 25°C

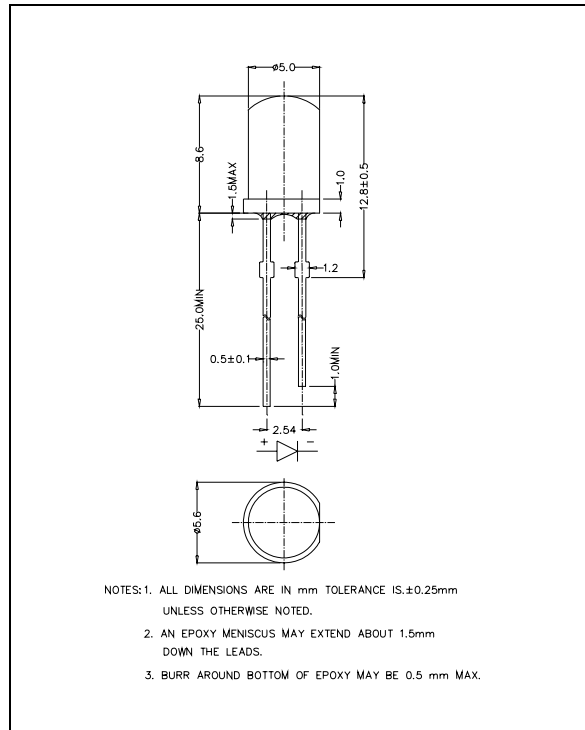
Items	Symbol	Absolute maximum Rating	Unit
Forward Current	I_F	25	mA
Peak Forward Current*	I_{FP}	100	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	100	mW
Operation Temperature	T_{opr}	-40 ~ +95	°C
Storage Temperature	T_{stg}	-40 ~ +100	°C
Lead Soldering Temperature	T_{sol}	Max.260°C for 3 sec Max. (3mm from the base of the epoxy bulb)	

*pulse width ≤ 0.1 msec duty $\leq 1/10$

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

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 20$ mA	---	3.4	4.0	V
Reverse Current	I_R	$V_R = 5$ V	1.7	---	2.5	μ A
Reverse Current	I_R	$V_R = 5$ V	---	---	100	μ A
Dominant Wavelength	λ_D	$I_F = 20$ mA	520	527	535	nm
Luminous Intensity	I_V	$I_F = 20$ mA	4180	7500	---	mcd
50% Power Angle	$2\theta_{\frac{1}{2}H-H}$	$I_F = 20$ mA	---	30	---	deg

Dimension Drawing



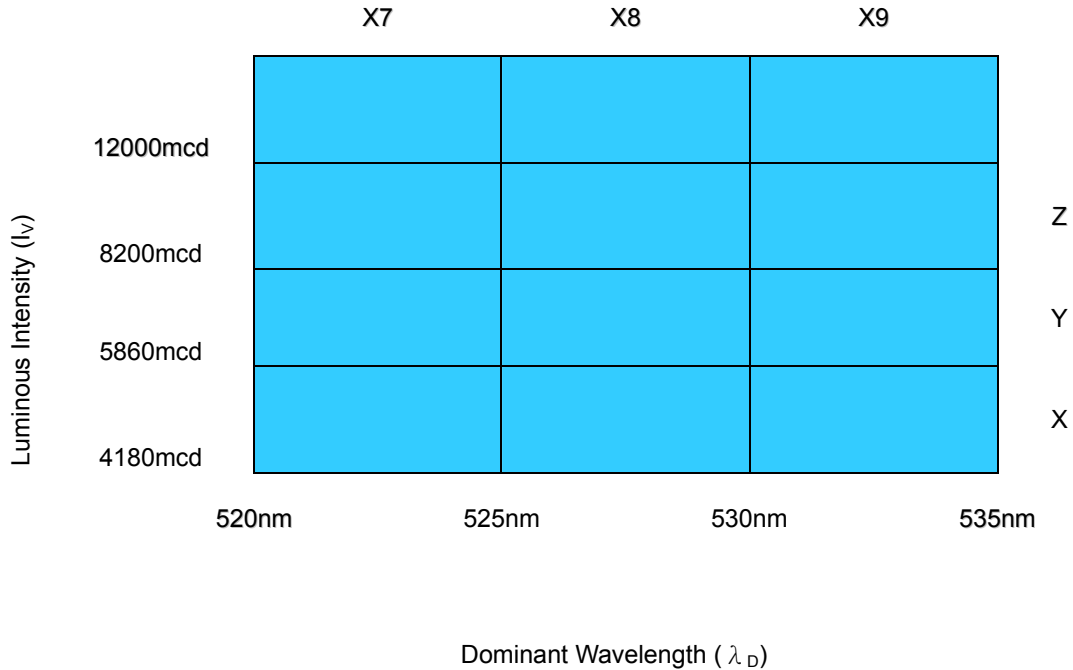
Standard bins for LC503TPG1-30G-A-MT ($I_F = 20\text{mA}$):

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

Orders for LC503TPG1-30G-A-MT may be filled with any or all bins contained as below.

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

* **X+**



* 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 determined by Cotco.
- 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.

Graphs

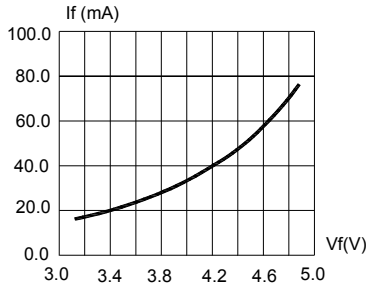


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

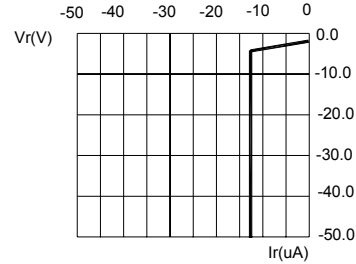


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

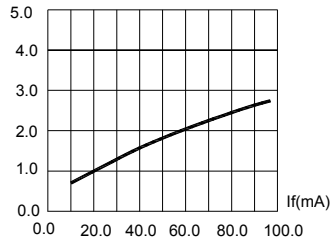


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

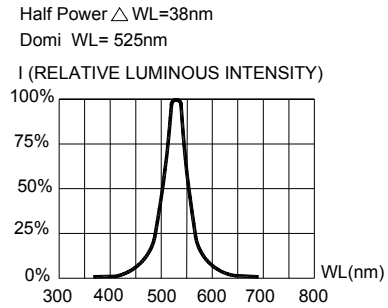


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

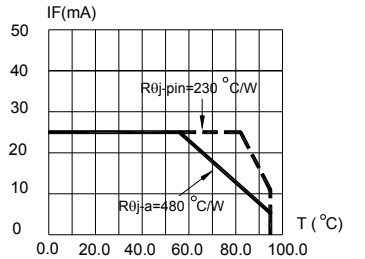


FIG.5 MAXIMUM FORWARD DC CURRENT VS. AMBIENT TEMPERATURE ($T_{jmax}=105^{\circ}\text{C}$)

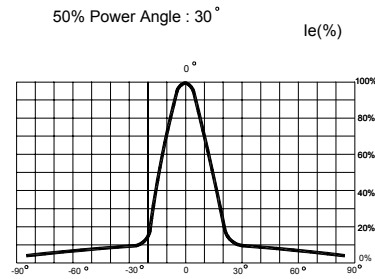


FIG.6 FAR FIELD PATTERN

1. Cathode PAD Area (0.18 X 0.18inch²)
2. Height above nominal seating plane in inches(0.3inch)

Items	Signatures	Date	Revision History	
Prepared by	LiuZM	2004/11/11	DOC. No.	CHANGE DESCRIPTION
Checked by	Aldosin	2004/11/11		
Approved by	David	2004/11/11		
ECN#	ECN-H20040298			

Data is subject to change without prior notice.

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Obsoletes Doc: ---