

SPECIFICATION FOR COTCO LED LAMP

Document No: SPE/LM1- PWN1-01-N1-MT
Model No : LM1- PWN1-01-N1-MT
Rev. No : 01
Date: 2006-01-11

Description:

120 Degree 3.2 x 2.7mm SMT-LED in
White Color with Water Transparent

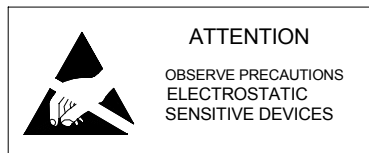
This specification is only for MT

Dice Material: InGaN

Confirmed

By Customer: _____

Date: _____



For part availability and ordering information please call Toll Free: 800.984.5337
Website: www.marktechopto.com | Email: info@marktechopto.com

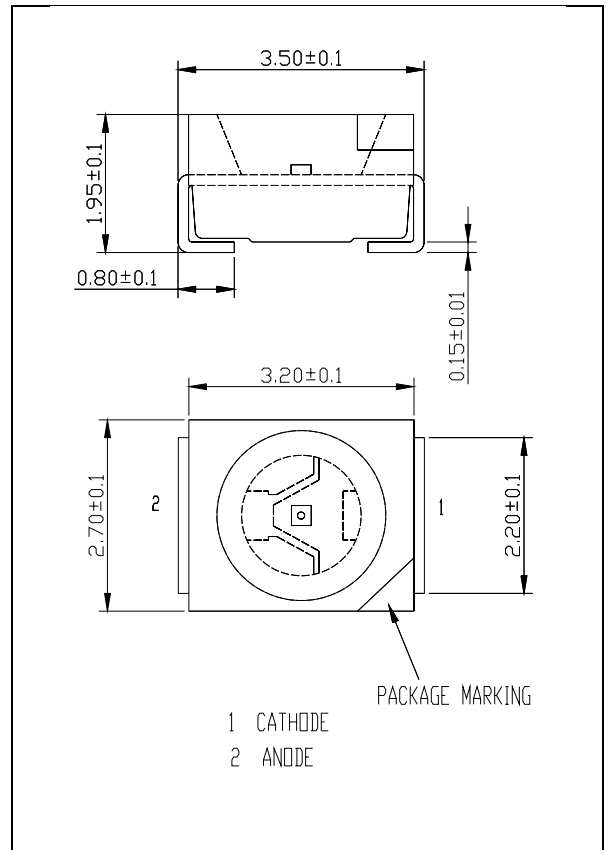
Applications:

- Indicators
- Illuminations
- LCD Back Lights
- Automobile's Applications

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 ~ + 100	°C
Storage Temperature	T_{stg}	-40 ~ + 100	°C
Junction temperature	T_j	+110	°C
Junction/ambient **	$R_{th JA}$	450	°C/W
Junction/solder point	$R_{th JS}$	300	°C/W

Dimension Drawing



*pulse width ≤ 0.1msec duty ≤ 1/10 ** Rth test condition: Mounted on PC Board FR 4 (pad size ≥ 16mm²)

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

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 20mA$	---	3.4	4.0	V
Reverse Current	I_R	$V_R = 5V$	---	---	10	μA
Luminous Intensity	I_v	$I_F = 20mA$	355	600	---	mcd
Chromaticity Coordinates	x	$I_F = 20mA$	---	0.31	---	---
	y	$I_F = 20mA$	---	0.32	---	---
50% Power Angle	$2\theta_{\frac{1}{2}}$	$I_F = 20mA$	---	120	---	deg

Standard bins for LM1-PWN1-01-N1-MT(IF = 20mA):

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

Orders for LM1-PWN1-01-N1-MT may be filled with any or all bins contained as below.

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

*** T2+**

		A1	A2	B1	B2	c	
Luminous Intensity (lv)	900mcd						V1
	710mcd						U2
	560mcd						U1
	450mcd						T2
	355mcd						

Chromaticity Coordinates (X,Y)

* T2+ indicates Luminous Intensity is at T2 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 (VF)

Rank	Vh	Vd	Ve	Vf
Voltage	2.6-3.0V	3.0-3.4V	3.4-3.8V	3.8-4.2V

#The quantity not enough for full reel

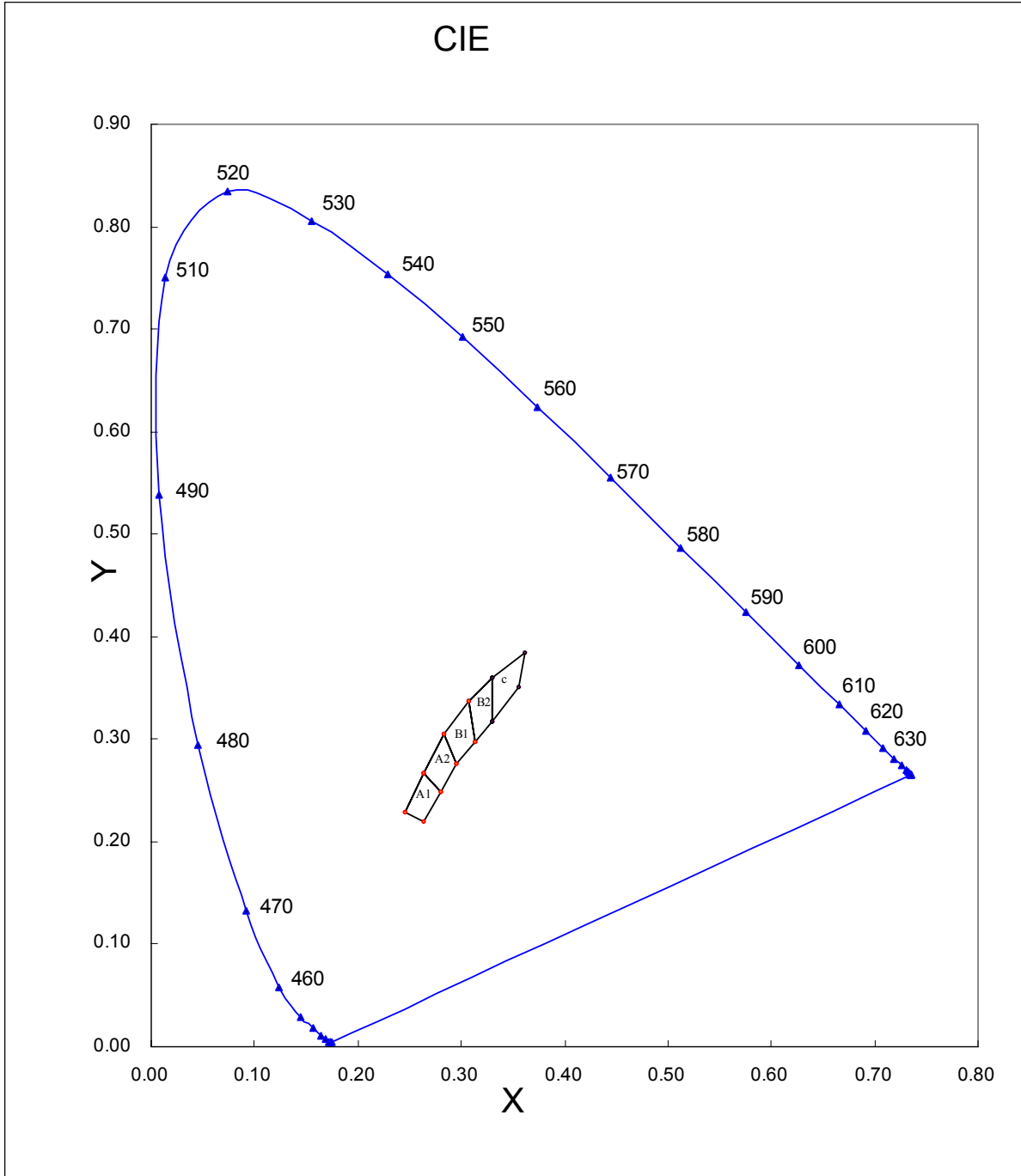
VF(V)	2.6-3.4	3.4-4.2
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*Majority VF bins are highlighted in Yellow.

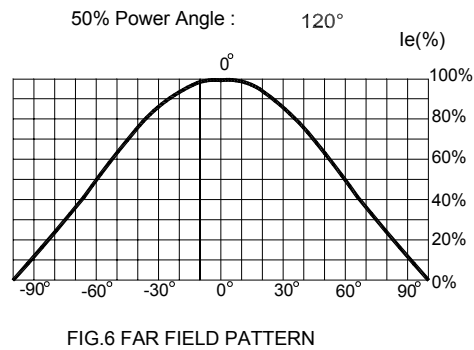
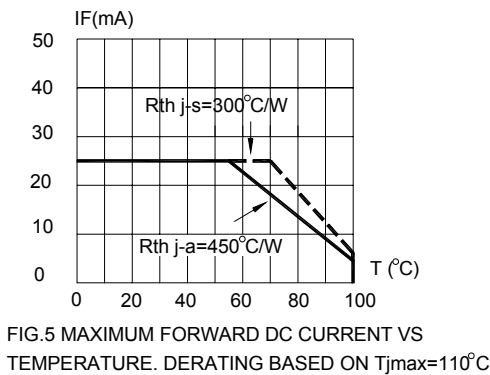
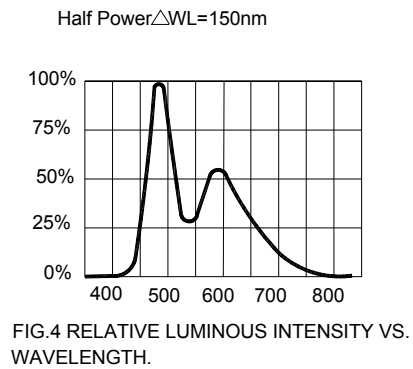
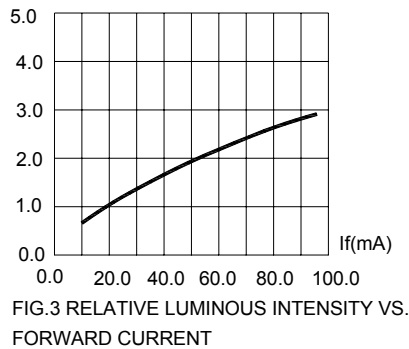
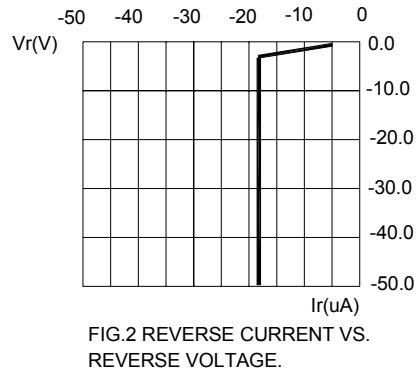
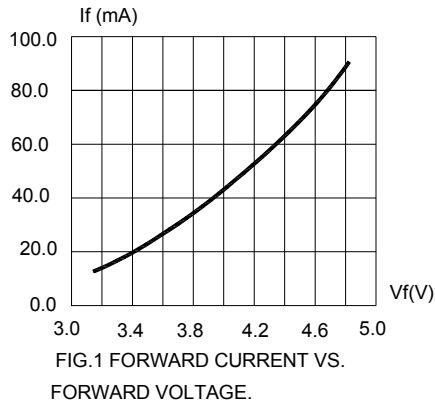
Important Notes:

- 1) All ranks will be included per delivery, rank ratio will be based on Dices distribution.
 - 2) Tolerance of measurement of luminous intensity is $\pm 10\%$
 - 3) Tolerance of measurement of the Color Coordinates is ± 0.015 .
 - 4) Tolerance of measurement of Vf is ± 0.05 V.
 - 5) Packaging methods are available for selection, please refer to PACKAGING STANDARD.
- #The notice is only apply quantity not enough for full reel.
- 6) Please refer to LED LAMP RELIABILITY TEST STANDARD for reliability test conditions.
 - 7) Please refer to APPLICATION NOTES for Application.

CIE Chromaticity Diagram



Graphs



Items	Signatures	Date	Revision History		
Prepared by	Meiliping	2006-01-11	Rev.No	Date	Change Description
Checked by	XieJH	2006-01-11			
Approved by	DavidLiu	2006-01-11			
FCN#	FCN2006				

Data is subject to change without prior notice.

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