SPECIFICATION FOR COTCO LED LAMP

Document No: SPE/LP6-EWN1-03-N3-MT
Model No : LP6-EWN1-03-N3-MT
Rev. No : 02
Date: 2007-10-19

Description:

120 Degree 6.0 x 5.0mm SMT-LED in White Color with Water Transparent

*This specification is only for MT
Dice Material: InGaN

Confirmed
By Customer: _____

Date: _____

Class II
IEC 60825-1

RoHS

Pb Free

ATTENTION

OBSERVE PRECAUTIONS
ELECTROSTATIC
SENSITIVE DEVICES

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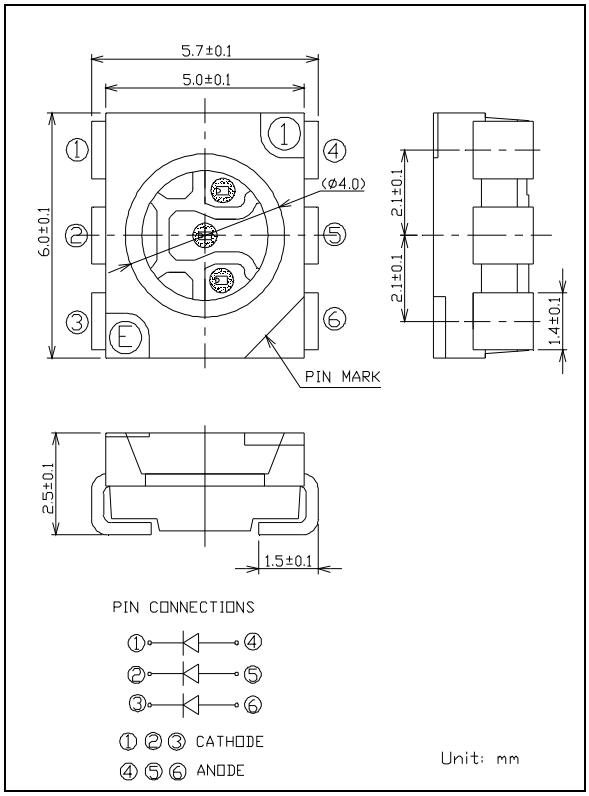
Applications:

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

Dimension Drawing



Absolute Maximum Ratings at Ta = 25°C

Items	Symbol	Absolute maximum Rating	Unit
Forward Current	I_F	3 X 50	mA
Peak Forward Current*	I_{FP}	3 X 100	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	3 X 240	mW
Operation Temperature	T_{opr}	-40 ~ + 100	°C
Storage Temperature	T_{stg}	-40 ~ + 100	°C
Junction temperature	Tj	+110	°C
Junction/ambient **	Rth $_{JA}$	3 x 300	°C /W
Junction/solder point	Rth $_{JS}$	3 x 160	°C /W

*pulse width<=0.1msec duty <=1/10 ** Rth test condition: Mounted on PC Board FR 4(pad size>=40mm^2)

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

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F = 50mA	---	3.8	4.8	V
Reverse Current	I_R	V_R = 5V	---	---	10	μA
Luminous Flux	Φ_V	I_F =3 x 50mA	---	27000	---	mlm
Luminous Intensity	I_V	I_F = 3 x 50mA	5600	10000	---	mcd
Chromaticity Coordinates	x	I_F = 3 x 50mA	---	0.31	---	---
	y	I_F = 3 X 50mA	---	0.32	---	---
50% Power Angle	2 $\theta_{1/2}$	I_F = 3 X 50mA	---	120	---	deg

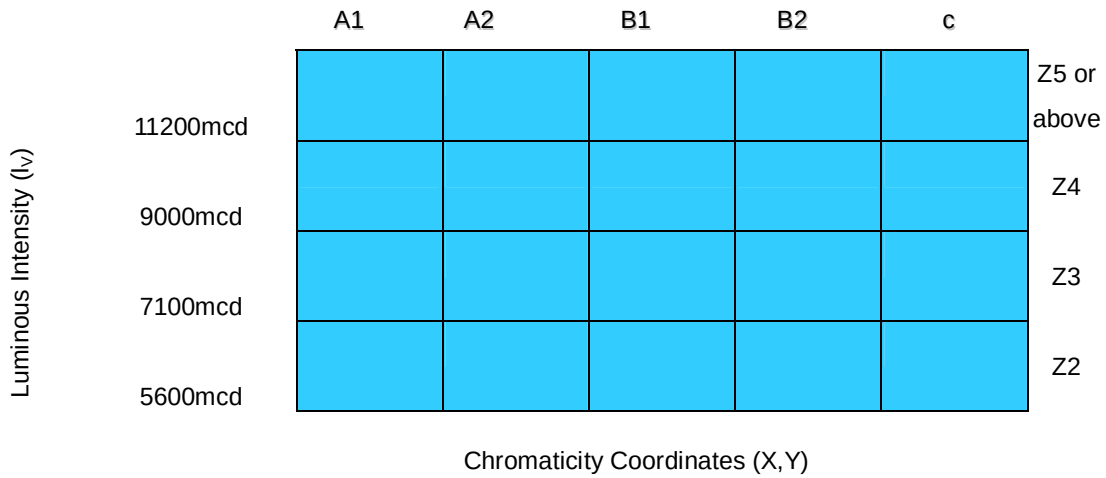
Standard bins for LP6-EWN1-03-N3-MT(IF =3x 50mA):

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

Orders for LP6-EWN1-03-N3-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 =3x50mA.

*** Z2+**



*Z2+ indicates Luminous Intensity is at Z2 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

Single Dice Forward Voltage (V_F) IF=50mA

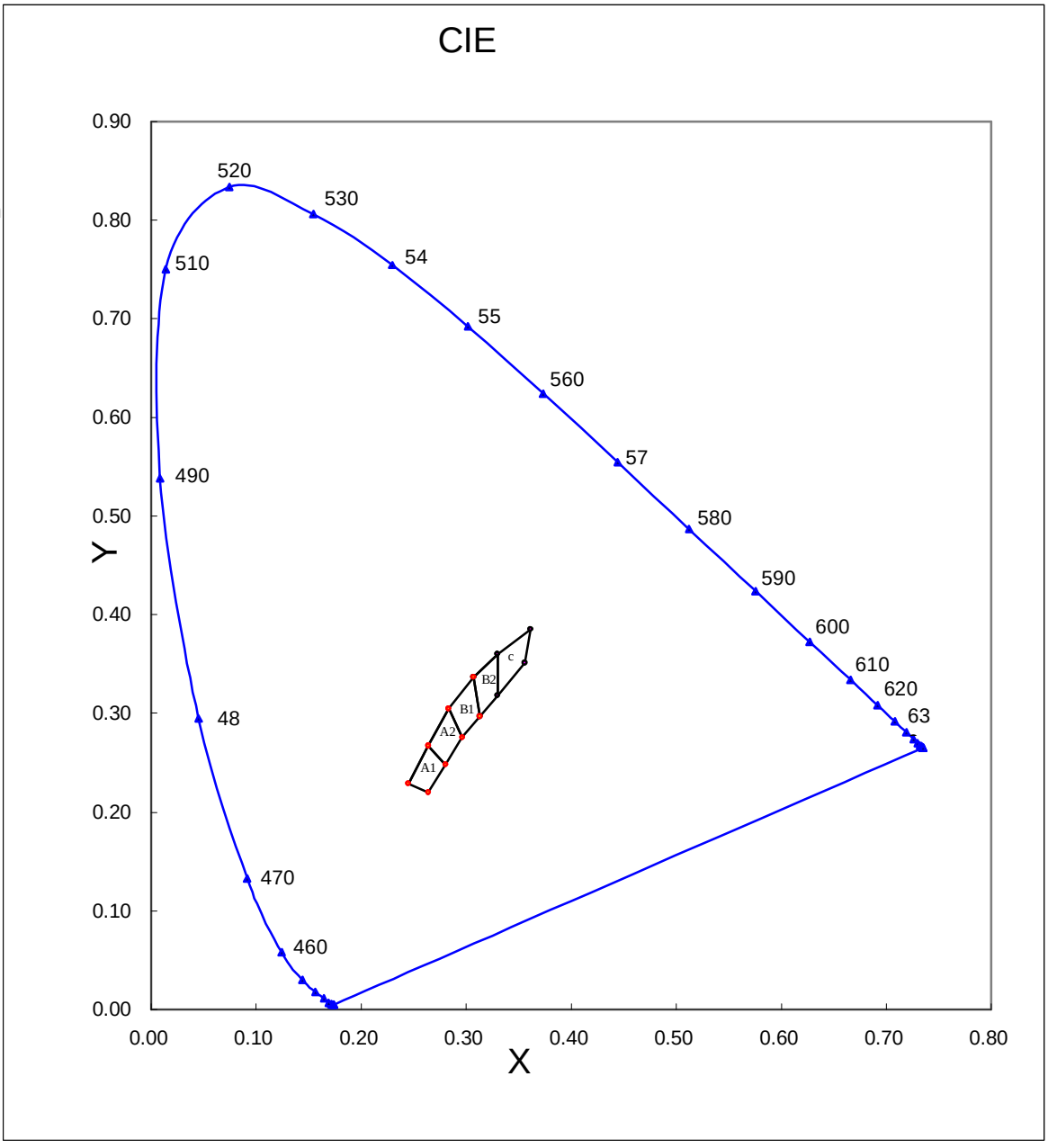
Rank	Vd	Ve	Vf	Vg	Vj
Voltage	3.0-3.4V	3.4-3.8V	3.8-4.2V	4.2-4.6V	4.6-5.0V

*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 ±10%
3) Tolerance of measurement of the Color Coordinates is± 0.01.
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.
7) Please refer to APPLICATION NOTES for Application.
8) Do not handle the device by the SMD surface. care must be taken to avoid damage to the SMD surface or the interior of the device that can be damaged by excessive force to the SMD surface.

CIE Chromaticity Diagram



Graphs

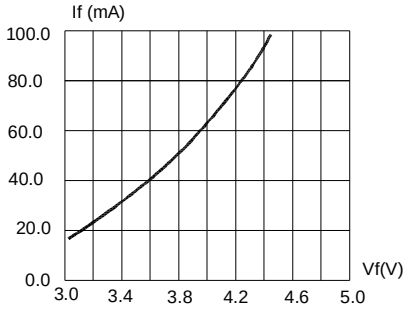


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

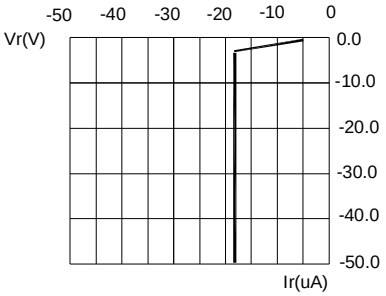


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

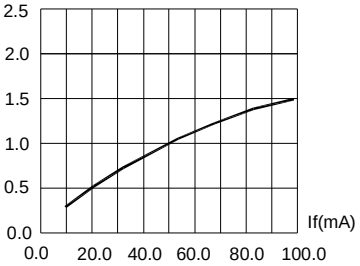


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

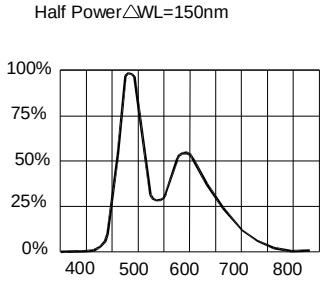


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

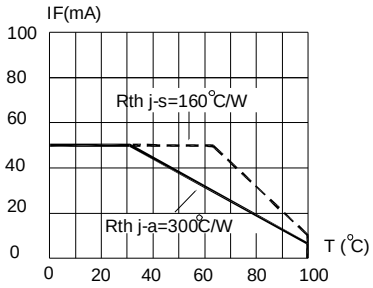


FIG.5 MAXIMUM FORWARD DC CURRENT VS TEMPERATURE. DERATING BASED ON Tjmax=110℃

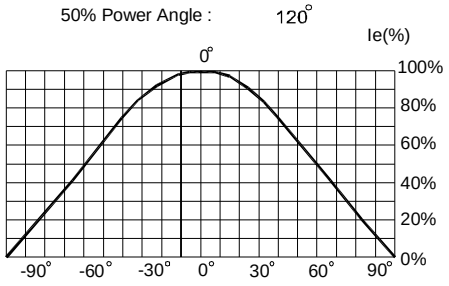


FIG.6 FAR FIELD PATTERN

Items	Signatures	Date
Prepared by	WangFJ	2007-10-19
Checked by	WangXuan	2007-10-19
Approved by	DavidLiu	2007-10-19
FCN#	FCN20070271	

Revision History		
Rev.No	Date	Change Description
02	2007-10-19	Change VF Bin to single dice VF bin and IF=3X50mA to 50mA .