COTCO
A CREE COMPANY

COTCO LUMINANT DEVICE (HUIZHOU) LTD.

SPECIFICATION FOR COTCO LED LAMP

Document No: SPE/LM6-PBL1-3B-N1
Model No : LM6-PBL1-3B-N1
Rev. No : 01
Date: 2007-04-06

Description:

120 Degree 3.3 x 3.5mm SMT-LED in Blue Color with Water Transparent And Black Coated Surface

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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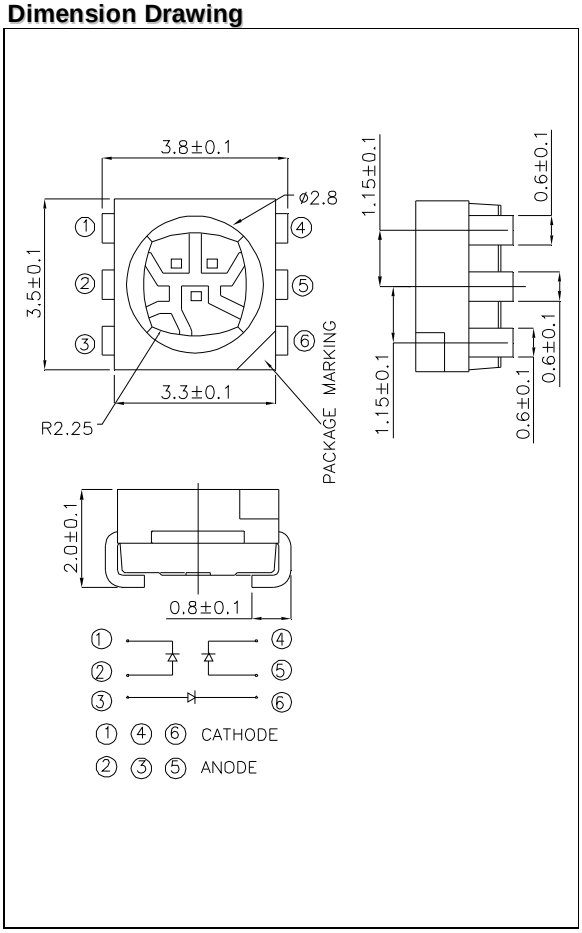
Applications:

- Indoor and outdoor displays
- Backlighting
- Coupling into light guides
- RGB Full Color Displays

Dimension Drawing



Absolute Maximum Ratings at Ta = 25°C

Items	Symbol	Absolute maximum Rating	Unit
Forward Current*1	I_F	3X40	mA
Peak Forward Current*2	I_{FP}	3X100	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	3X160	mW
Operation Temperature	T_{opr}	-40~+100	°C
Storage Temperature	Tstg	-40~+100	°C
Junction Temperature	Tj	+110	°C
Junction/ambient 1 chips on*3	$R_{th\,JA}$	450	°C/W
Junction/ambient 3 chips on*3	$R_{th\,JA}$	680	°C/W
Junction/solder point 1 chips on	$R_{th\,JS}$	300	°C/W
Junction/solder point 3 chips on	$R_{th\,JS}$	480	°C/W

*pulse width <=0.1msec duty <=1/10*3 Rth test condition: Mounted on PC Board FR 4(pad size>=16mm^2)

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Dominant wavelength	λ_{dom}	I_F=3X20mA	460	470	480	nm
Viewing angle at 50%	2 $\theta_{1/2}$	I_F=3X20mA	---	120	---	Deg.
Forward voltage	V_F	I_F=3X20mA	--	3.4	4.0	V
Luminous Intensity	Iv	I_F=3 X 20mA	355	600	--	mcd
Reverse current	I_R	V_R=5V	---	---	10	μA

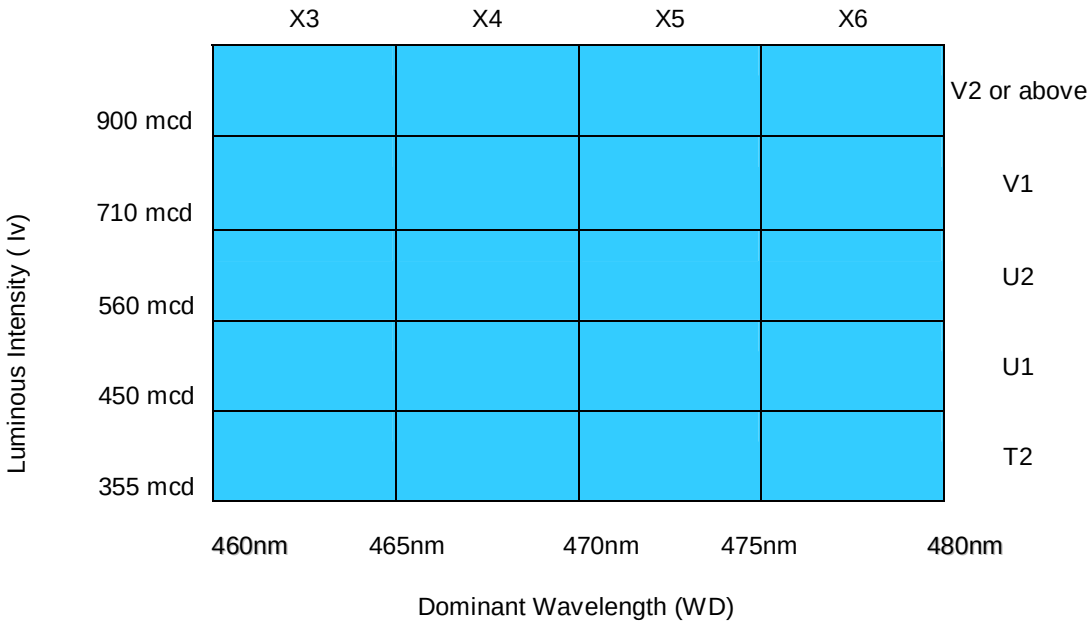
Standard bins for LM6-PBL1-3B-N1(IF =3X 20mA):

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

Orders for LM6-PBL1-3B-N1 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 =3X20mA.

*** T2+**



* T2+ indicates Luminous Intensity is at T2 bin or above.

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 dominant wavelength is ±1nm.

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.

Graphs

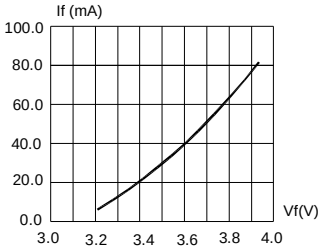


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

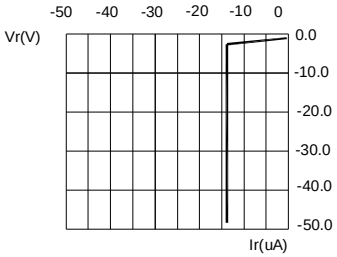


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

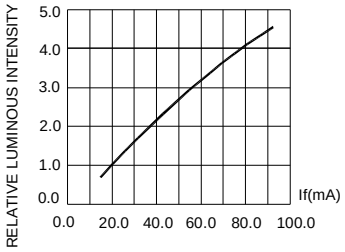


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

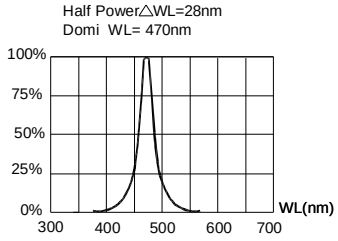


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

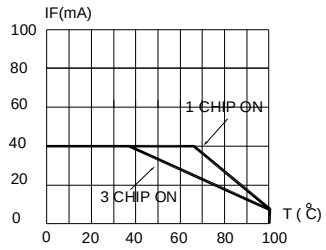


FIG.5 MAXIMUM FORWARD DC CURRENT VS SOLDER POINT TEMPERATURE

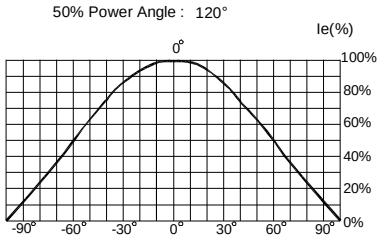


FIG.6 FAR FIELD PATTERN.

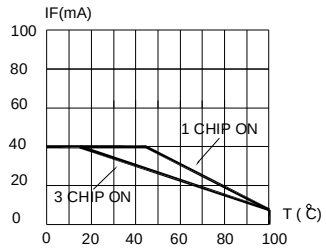


FIG.7 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE

Items	Signatures	Date
Prepared by	WangFJ	2007-04-06
Checked by	XieJH	2007-04-06
Approved by	DavidLiu	2007-04-06
FCN#	FCN20070101	

Revision History		
Rev.No	Date	Change Description

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