COTCO
A CREE COMPANY

COTCO LUMINANT DEVICE (HUIZHOU) LTD.

SPECIFICATION FOR COTCO LED LAMP

Document No: SPE/LM1-PPG1-11-N1
Model No : LM1- PPG1-11-N1
Rev. No : 02
Date: 2005-08-17

Description:

120 Degree 3.2×2.7 mm Power SMD in Pure Green Color with Water Transparent

Dice Material: InGaN
Confirmed
By Customer: _____

Date: _____

Class I
IEC 60825-1

RoHS

Pb
Free

ATTENTION

OBSERVE PRECAUTIONS
ELECTROSTATIC
SENSITIVE DEVICES

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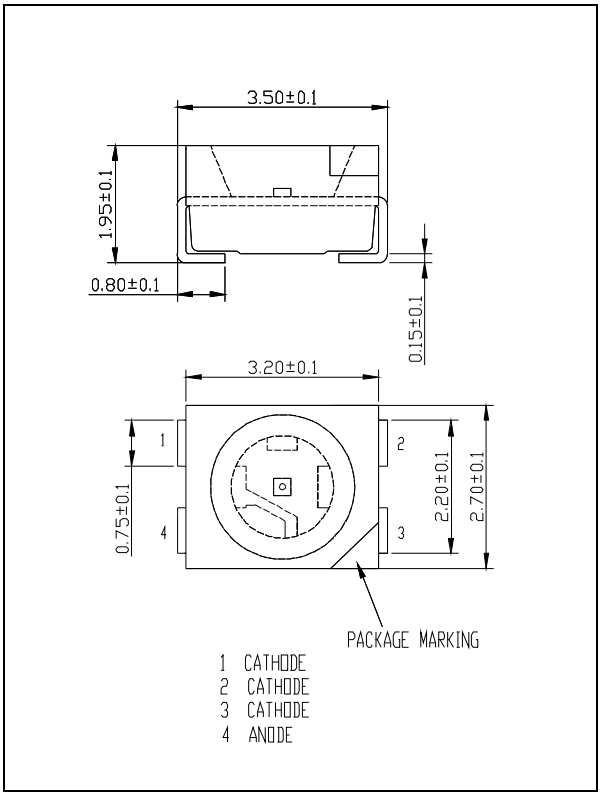
Rev. No.	02

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	30	mA
Peak Forward Current*	I_{FP}	100	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	130	mW
Operation Temperature	T_{opr}	-40 ~ + 100	°C
Storage Temperature	T_{stg}	-40 ~ + 100	°C
Junction temperature	Tj	+110	°C
Junction/ambient **	Rth JA	350	°C/W
Junction/solder point	Rth JS	200	°C/W

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

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

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F = 30mA	---	3.6	4.2	V
Reverse Current	I_R	V_R = 5V	---	---	10	μA
Luminous Intensity	I_V	I_F =30mA	450	700	---	mcd
Dominant Wavelength	λ_D	I_F =30mA	516	527	536	nm
50% Power Angle	2 $\theta_{½}$	I_F = 30mA	---	120	---	deg

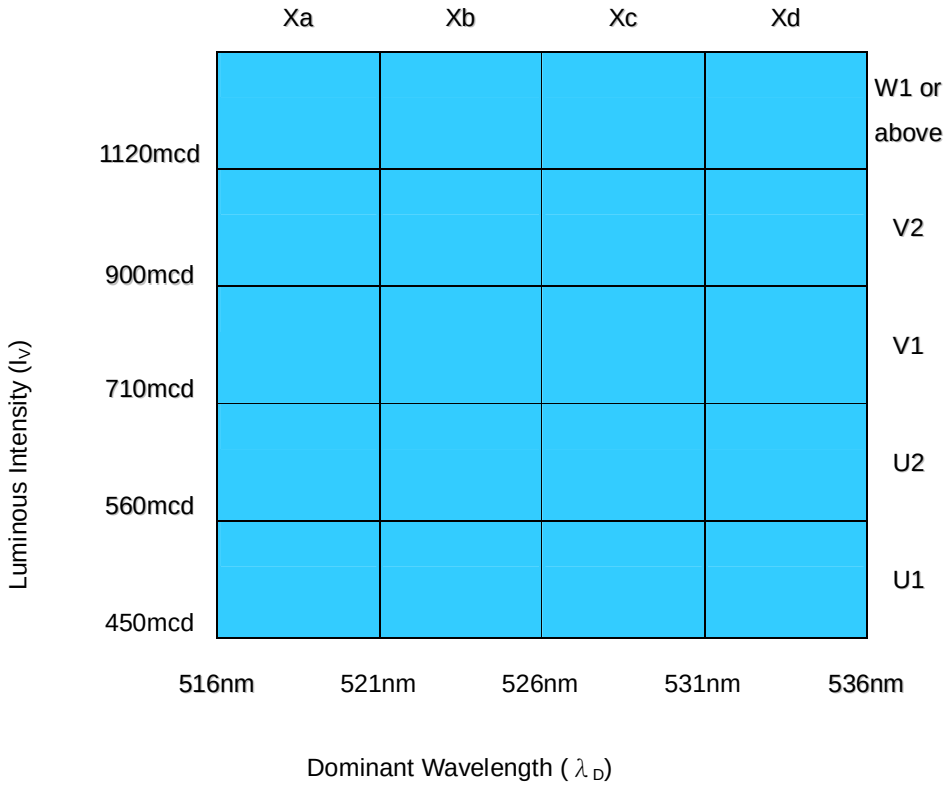
Standard bins for LM1-PPG1-11-N1 (I_F = 30mA):

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

Orders for LM1-PPG1-11-N1 may be filled with any or all bins contained as below.

All Luminous Intensity –I_V & Dominant Wavelength – λ_D values shown and specified are at If=30mA.

***U1+**



*U1+ indicates Luminous Intensity is at U1 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

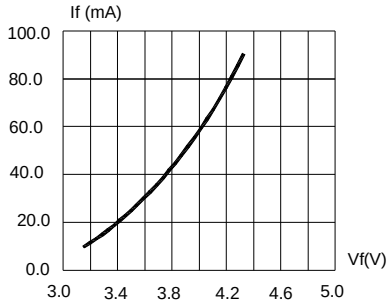


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

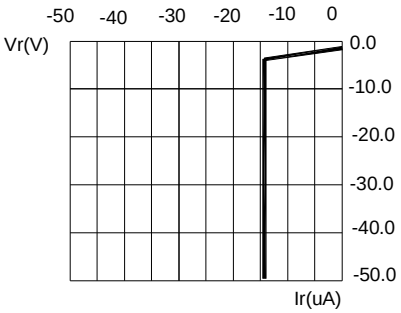


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

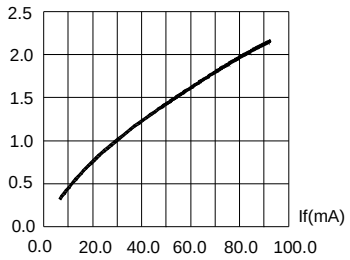


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

Half Power△WL=38nm
Domi WL= 527nm

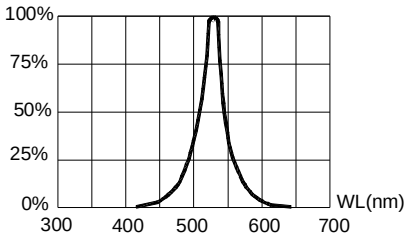


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

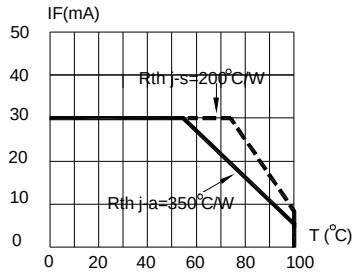


FIG.5 MAXIMUM FORWARD DC CURRENT VS TEMPERATURE. DERATING BASED ON Tjmax=110℃

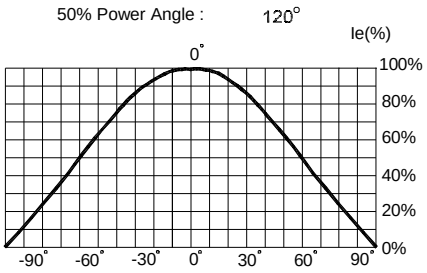


FIG.6 FAR FIELD PATTERN

Items	Signatures	Date
Prepared by	Meiliping	2005-08-17
Checked by	XieJH	2005-08-17
Approved by	DavidLiu	2005-08-17
FCN#	FCN20050260	

Revision History		
Rev.No	Date	Change Description
02	2005-08-17	Release.