

SPECIFICATION FOR COTCO LED LAMP

Document No: SPE/LM1-UHR1-11-N1-MT
Model No : LM1-UHR1-11-N1-MT
Rev. No : 00
Date: 2007-10-08

Description:

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

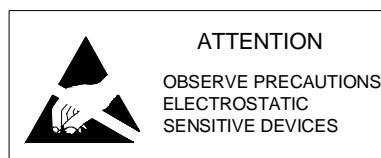
This specification is only for MT

Dice Material: AlGaInP

Confirmed

By Customer: _____

Date: _____



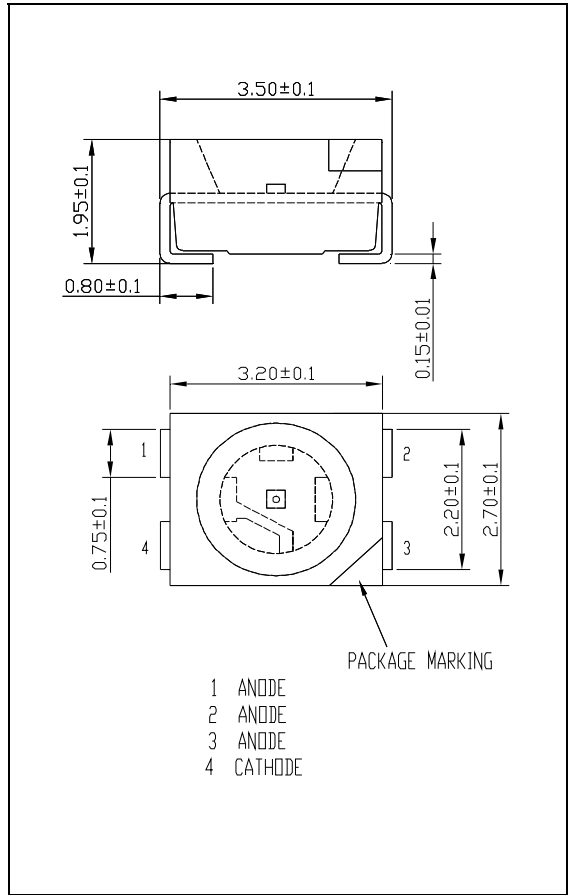
Applications:

- Indicators
- Illuminations
- LCD Back Lights
- Automobile's Applications
- High red Color Displays

Absolute Maximum Ratings at Ta = 25°C

Items	Symbol	Absolute maximum Rating	Unit
Forward Current	I _F	70	mA
Peak Forward Current*	I _{FP}	200	mA
Reverse Voltage	V _R	5	V
Power Dissipation	P _D	210	mW
Operation Temperature	T _{opr}	-40 ~ + 100	°C
Storage Temperature	T _{stg}	-40 ~ + 100	°C
Junction temperature	T _j	+110	°C
Junction/ambient **	Rth JA	300	°C/W
Junction/solder point	Rth JS	150	°C/W
Electrostatic Discharge Classification (MIL-STD-883E)	ESD	Class II	

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 = 50mA	---	2.4	3.0	V
Reverse Current	I _R	V _R = 5V	---	---	10	μA
Luminous Flux	Φ _V	I _F = 50mA	---	4200	---	mlm
Luminous Intensity	I _V	I _F = 50mA	900	1600	---	mcd
Dominant Wavelength	λ _D	I _F = 50mA	618	624	630	nm
50% Power Angle	2 θ _{1/2}	I _F = 50mA	---	120	---	deg

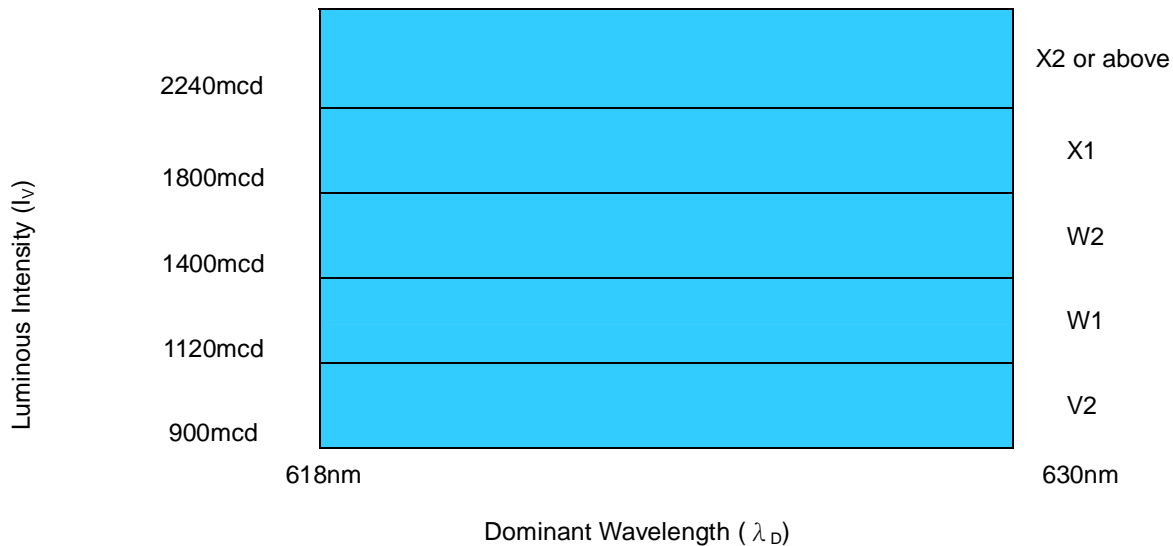
Standard bins for LM1-UHR1-11-N1-MT (I_F = 50mA):

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

Orders for LM1-UHR1-11-N1-MT 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 I_f=50mA.

* **V2+**



* V2+ indicates Luminous Intensity is at V2 bin or above.

Forward Voltage (V_F)

Rank	V3	V4	V5	V6	V7
Voltage	2.0-2.2V	2.2-2.4V	2.4-2.6V	2.6-2.8V	2.8-3.0V

Important Notes:

- 1) All ranks will be included per delivery, rank ratio will be based on Dices distribution.
- 2) No tolerance in the measurement of Luminous Intensity is ±10%.
- 3) Tolerance of measurement of dominant wavelength is ±1nm.
- 4) Tolerance of measurement of V_f 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

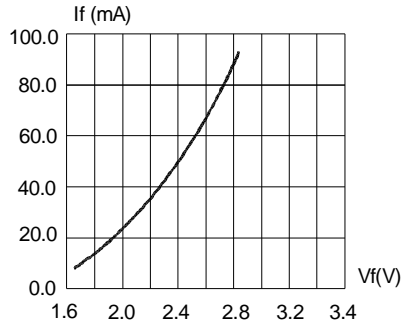


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

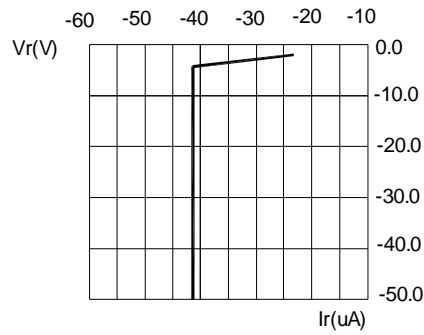


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

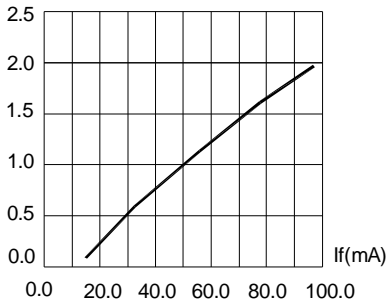


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

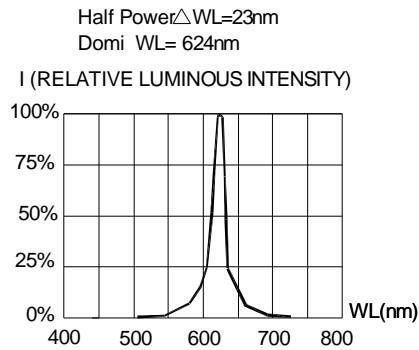


FIG.4 RELATIVE LUMINOUS INTENSITY. WAVELENGTH.

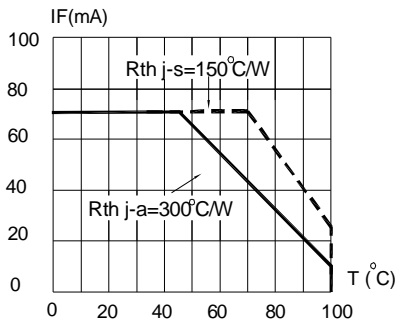


FIG.5 MAXIMUM FORWARD DC CURRENT VS TEMPERATURE. DERATING BASED ON $T_{jmax}=110^{\circ}C$

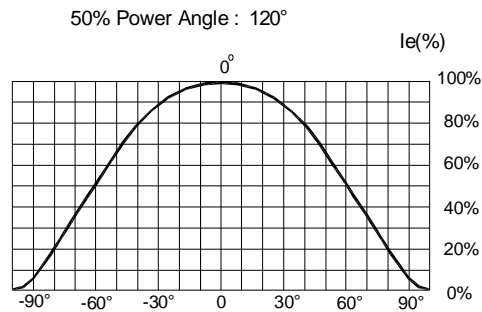


FIG.5 FAR FIELD PATTERN

Items	Signatures	Date
Prepared by	LiuYin	2007-10-08
Checked by	WangXuan	2007-10-08
Approved by	DavidLiu	2007-10-08
FCN#	FCN20070	

Revision History		
Rev. No	Date	Change Description

Data is subject to change without prior notice.

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