SPECIFICATION FOR COTCO LED LAMP

MODEL No : LO5SMQPG4-B0G-A
DOC. No : 03 07Sep04

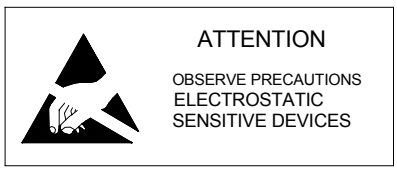
Description:

110 Degree Oval LED Lamp in Pure Green Color with Tinted Diffused Lens and Stopper

Dice Material: InGaN

Confirmed by Customer: _____

Date: _____



COTCO LUMINANT DEVICE (HUIZHOU) LTD.

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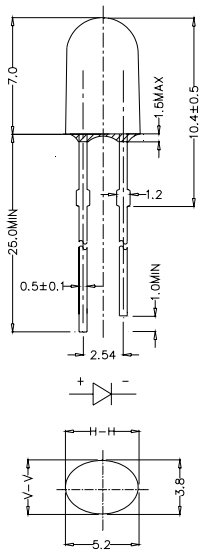
Applications:

- Full Color Display

Dimension Drawing



NOTES: 1. ALL DIMENSIONS ARE IN mm TOLERANCE IS.±0.25mm UNLESS OTHERWISE NOTED.
2. AN EPOXY MENISCUS MAY EXTEND ABOUT 1.5mm DOWN THE LEADS.
3. BURR AROUND BOTTOM OF EPOXY MAY BE 0.5 mm MAX.

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	105	mW
Operation Temperature	T_{opr}	-40 ~ +95	°C
Storage Temperature	T_{stg}	-40 ~ +100	°C
Lead Soldering Temperature	T_{sol}	Max.260°C for 3 sec Max. (3mm from the base of the epoxy bulb)	

*pulse width <=0.1msec duty <=1/10

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

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F = 20mA	---	3.6	4.2	V
Forward Voltage	V_F	I_F = 1.0μA	1.7	---	2.5	V
Reverse Current	I_R	V_R = 5V	---	---	100	μA
Dominant Wavelength	λ_D	I_F = 20mA	520	527	535	nm
Luminous Intensity	I_V	I_F = 20mA	1100	1550	---	mcd
50% Power Angle	$2\theta_{1/2}$H-H	I_F = 20mA	---	110	---	deg
	$2\theta_{1/2}$V-V	I_F = 20mA	---	50	---	deg

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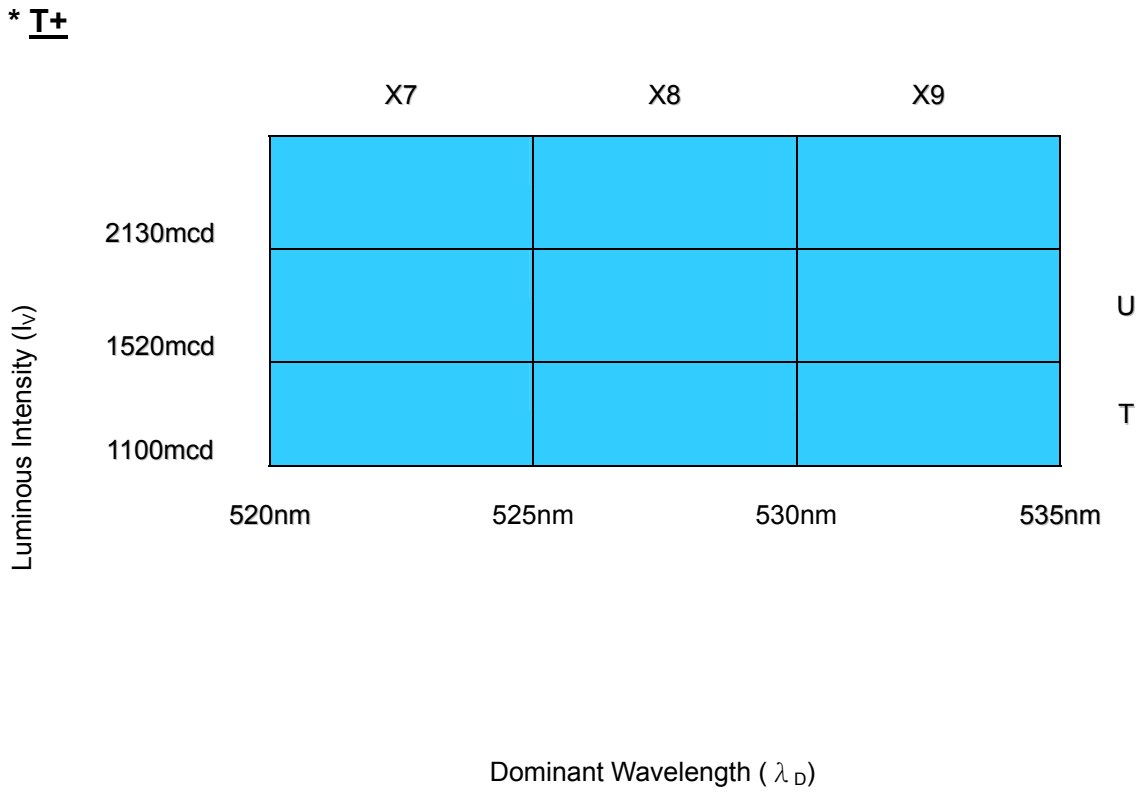
Standard bins for LO5SMQPG4-B0G-A (I_F = 20mA):

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

Orders for LO5SMQPG4-B0G-A 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 =20mA.



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

Important Notes:

1) All ranks will be included per delivery, rank ratio will be determined by Cotco.

2) Pb content <1000PPM.

3) Tolerance of measurement of luminous intensity is ±15%.

4) Tolerance of measurement of dominant wavelength is ±1nm.

5) Tolerance of measurement of Vf is ±0.05 V.

6) Packaging methods are available for selection, Please refer to PACKAGING STANDARD.

7) Please refer to LED LAMP RELIABILITY TEST STANDARD for reliability test conditions.

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Graphs

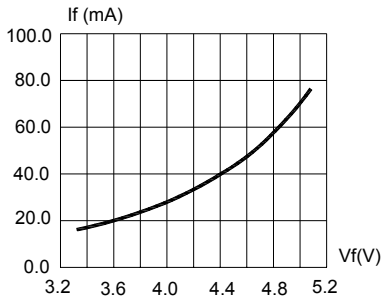

FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

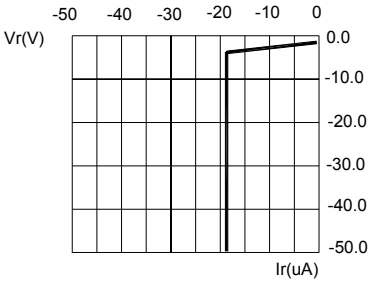

FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

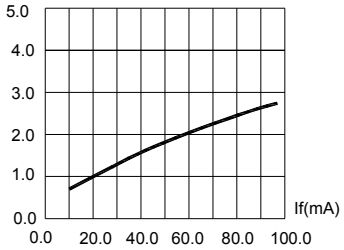

FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

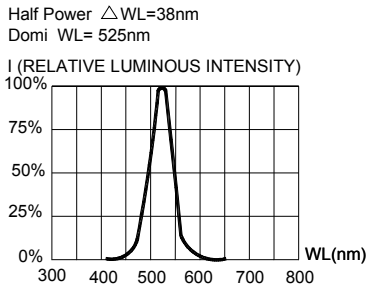

FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

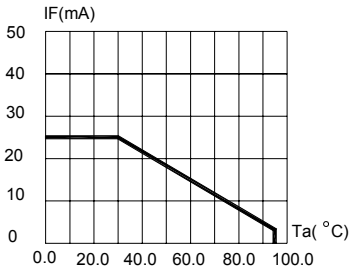

FIG.5 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE (Tjmax=105° C)

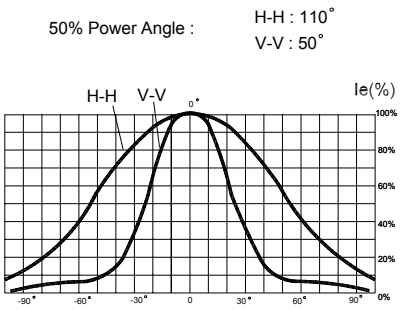

FIG.6 FAR FIELD PATTERN

Items	Signatures	Date	Revision History	
Prepared by	LiuZM	2004/09/07	DOC. No.	CHANGE DESCRIPTION
Checked by	MaJF	2004/09/07	B 08Mar04	IV(typ) from 1370mcd to 1550mcd.
Approved by	David	2004/09/07	03 07Sep04	Change T_{opr} & T_{stg}; Change FIG.1&3&5; Change IV&λ_D Rank form.
ECN#	ECN-H20040218			

Obsoletes Doc: B 08Mar04.