

**SPECIFICATION FOR COTCO LED LAMP**

Document No: SPE/LO566UHR4-70H-A3-MT  
Model No : LO566UHR4-70H-A3-MT  
Rev. No: 00  
Date: 2007-10-11

Description:

70 Degree 5mm Oval LED Lamp in High Red Color  
with Tinted Diffused Lens and No Stopper

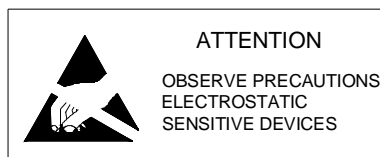
\*This specification is only for MT

Dice Material: AlGaInP

Confirmed

By Customer: \_\_\_\_\_

Date: \_\_\_\_\_



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### Applications:

- Full Color Display

### Absolute Maximum Ratings at Ta = 25°C

Items	Symbol	Absolute maximum Rating	Unit
Forward Current <sup>*2</sup>	I <sub>F</sub>	50	mA
Peak Forward Current <sup>*1</sup>	I <sub>FP</sub>	200	mA
Reverse Voltage	V <sub>R</sub>	5	V
Power Dissipation	P <sub>D</sub>	130	mW
Operation Temperature	T <sub>opr</sub>	-40 ~ +95	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100	°C
Lead Soldering Temperature	T <sub>sol</sub>	Max.260°C for 3 sec Max. (3mm from the base of the epoxy bulb)	
Electrostatic Discharge Classification (MIL-STD-883E)	ESD	Class II	

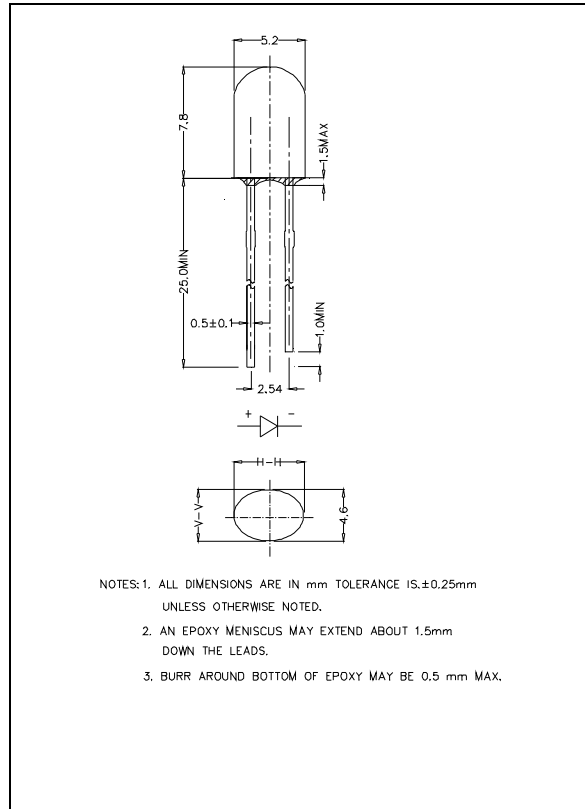
\*1 pulse width <=0.1msec duty <=1/10

\*2 For long term performance the drive currents between 10mA and 30mA are recommended. Please contact COTCO sales representative for more information on recommended drive conditions.

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

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20mA	---	2.1	2.6	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 5V	---	---	100	μA
Dominant Wavelength	λ <sub>D</sub>	I <sub>F</sub> = 20mA	618	624	630	nm
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> = 20mA	1100	2100	---	mcd
50% Power Angle	2θ <sub>1/2</sub> H-H	I <sub>F</sub> = 20mA	---	70	---	deg
	2θ <sub>1/2</sub> V-V	I <sub>F</sub> = 20mA	---	40	---	deg

### Dimension Drawing



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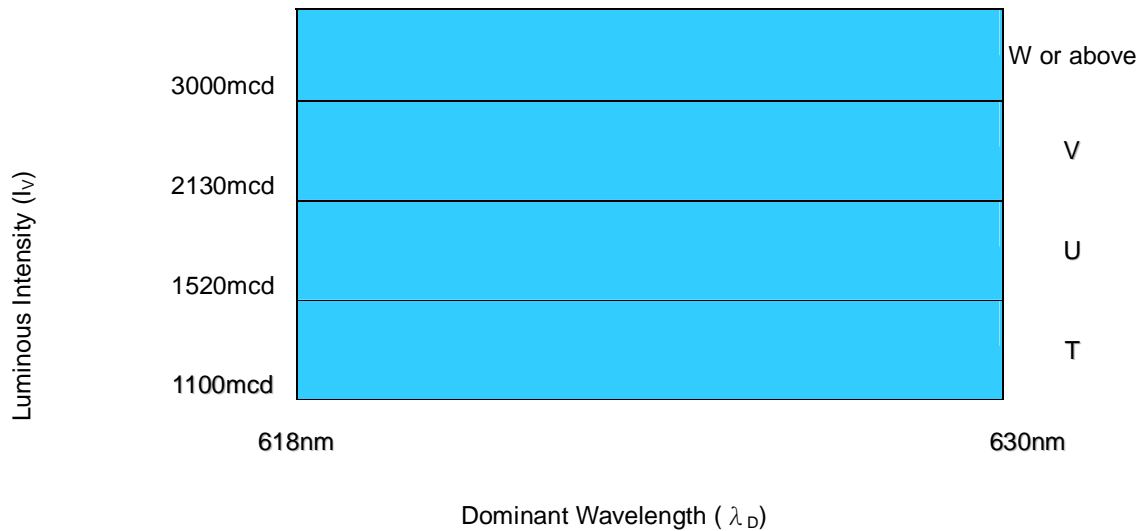
Standard bins for LO566UHR4-70H-A3-MT ( $I_F = 20\text{mA}$ ):

Lamps are sorted to Luminous Intensity  $-I_V$  & Dominant Wavelength  $-\lambda_D$  bins shown.

Orders for LO566UHR4-70H-A3-MT may be filled with any or all bins contained as below.

All Luminous Intensity  $-I_V$  & Dominant Wavelength  $-\lambda_D$  values shown and specified are at  $I_F = 20\text{mA}$ .

\* **T+**



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

### Forward Voltage ( $V_F$ )

Rank	V1	V2	V3	V4	V5
Voltage	1.6-1.8 V	1.8-2.0 V	2.0-2.2 V	2.2-2.4 V	2.4-2.6 V

### Important Notes:

- 1) All ranks will be included per delivery; rank ratio will be based on the Dices distribution.
- 2) Pb content <1000PPM.
- 3) Tolerance of measurement of luminous intensity is  $\pm 15\%$ .
- 4) Tolerance of measurement of dominant wavelength is  $\pm 1\text{nm}$ .
- 5) Tolerance of measurement of  $V_f$  is  $\pm 0.05\text{ V}$ .
- 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.
- 8) Please refer to APPLICATION NOTES for Application.

### Graphs

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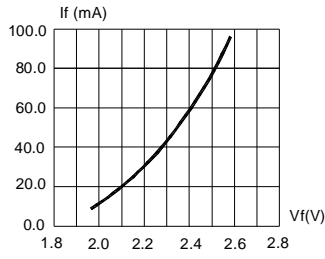


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

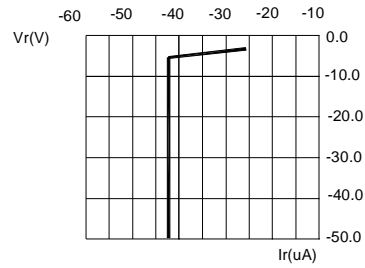


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

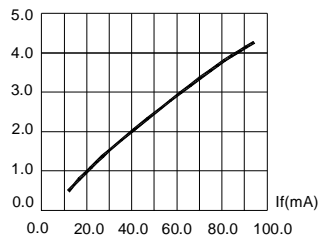


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

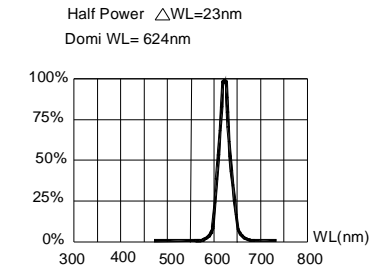


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

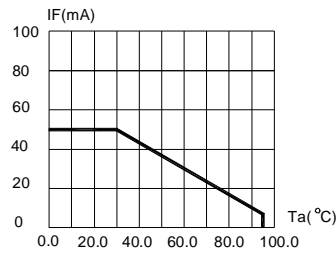


FIG.5 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE ( $T_{jmax}=105^{\circ}C$ )

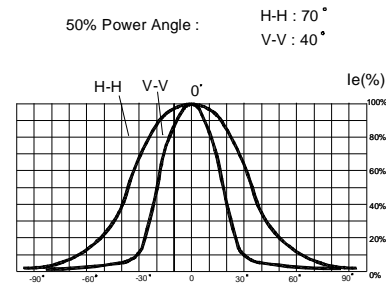


FIG.6 FAR FIELD PATTERN

1. Cathode PAD Area (0.18 X 0.18inch<sup>2</sup>)
2. Height above nominal seating plane in inches(0.3inch)

Items	Signatures	Date
Prepared by	LiuYin	2007-10-11
Checked by	MaJF	2007-10-11
Approved by	David	2007-10-11
FCN#	FCN20070	

Revision History		
Rev. No	Date	Change Description

Data is subject to change without prior notice.

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