SPECIFICATION FOR COTCO LED LAMP

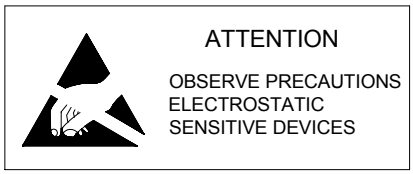
Document No: SPE/LP377THR1-70G-01-MT
Model No : LP377THR1-70G-01-MT
Rev. No: 02
Date: 2005-09-15

Description:

70 Degree 7.6 x 7.6mm LED Lamp in High Red Color with Water Transparent Lens and Stopper
*This specification is only for MT
Dice Material: AlGaInP

Confirmed by Customer: _____

Date: _____



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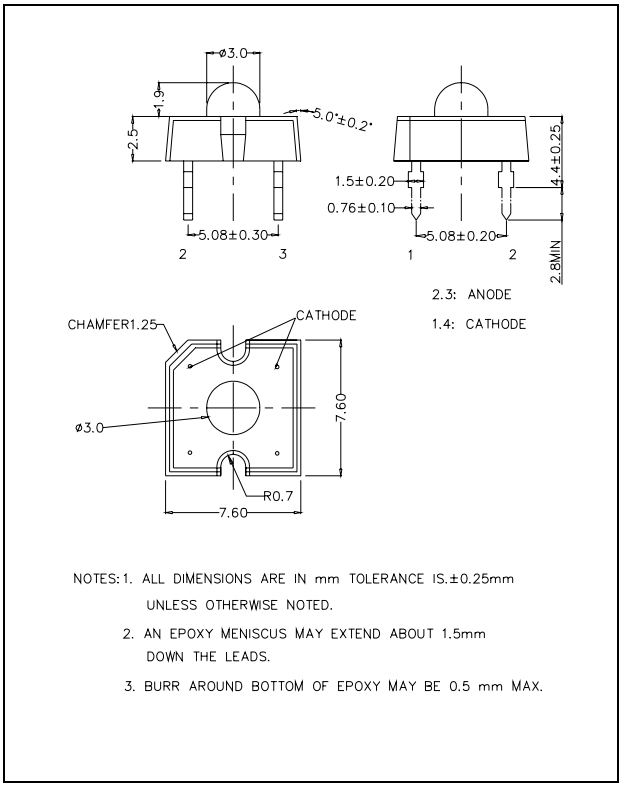
Applications:

- Advertising Signs
- Indicators
- Automotive Lighting

Dimension Drawing



Absolute Maximum Ratings at Ta = 25°C

Items	Symbol	Absolute maximum Rating	Unit
Forward Current*2	I_F	70	mA
Peak Forward Current*1	I_{FP}	200	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	220	mW
Operation Temperature	T_{opr}	-40 ~ +100	°C
Storage Temperature	T_{stg}	-40 ~ +100	°C
Lead Soldering Temperature	T_{sol}	Max.260°C for 5 sec Max. (3mm from the base of the epoxy bulb)	

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

*2 Heat sink is recommended to be adequated if the device is operated at ambient temperatures higher than 25 deg C. For long term performance the drive currents between 10mA and 50mA 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_F	I_F = 70mA	---	2.6	3.2	V
Reverse Current	I_R	V_R = 5V	---	---	100	μA
Dominant Wavelength	λ_D	I_F = 70mA	620	628	637	nm
Luminous Flux	Φ_V	I_F = 70mA	3000	4500	---	mlm
50% Power Angle	2θ½	I_F = 70mA	---	70	---	deg

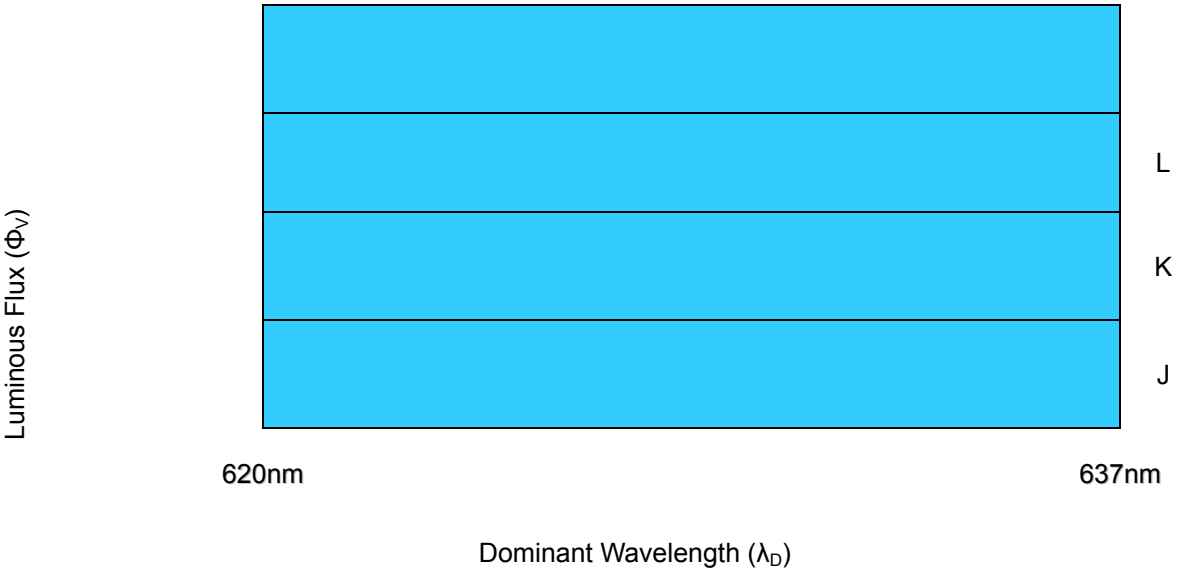
Standard bins for LP377THR1-70G-01-MT (I_F = 70mA):

Lamps are sorted to Luminous Flux –Φ_V , V_F & Dominant Wavelength –λ_D bins shown.

Orders for LP377THR1-70G-01-MT may be filled with any or all bins contained as below.

All Luminous Flux –Φ_V , V_F & Dominant Wavelength –λ_D values shown and specified are at If=70mA.

*** J+**



Rank	J	K	L
Luminous Flux	3000-4200 mlm	3500-4800 mlm	4000-6100 mlm

* J+ indicates Luminous Flux is at J bin or above.

Forward Voltage (V_F)

Rank	V4	V5	V6	V7	V8
Voltage	2.2-2.4V	2.4-2.6V	2.6-2.8V	2.8-3.0V	3.0-3.2 V

Important Notes:

1) All ranks will be included per delivery, rank ratio will be based on the Dices distribution.

2) No tolerance in the measurement of luminous flux.

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 Notes.

Graphs

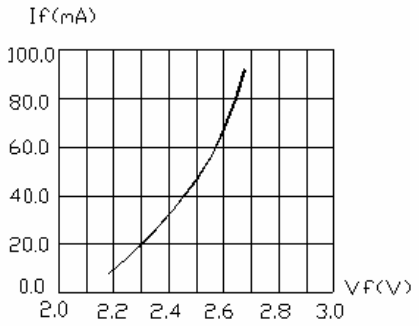


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE

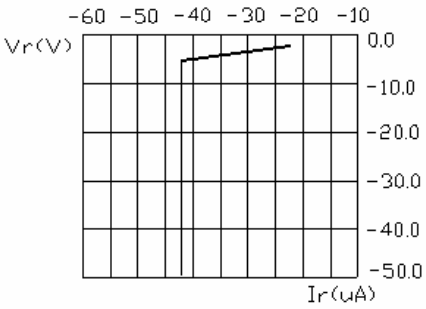


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE

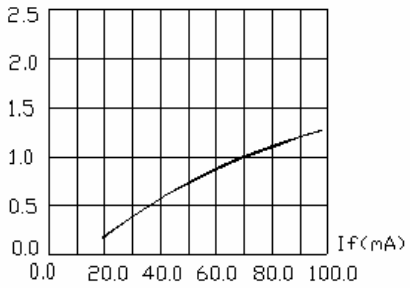


FIG.3 RELATIVE LUMINOUS FLUX VS. FORWARD CURRENT

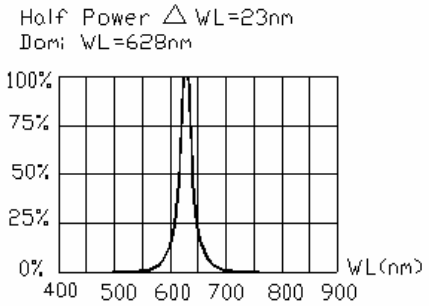


FIG.4 RELATIVE LUMINOUS FLUX VS. WAVELENGTH

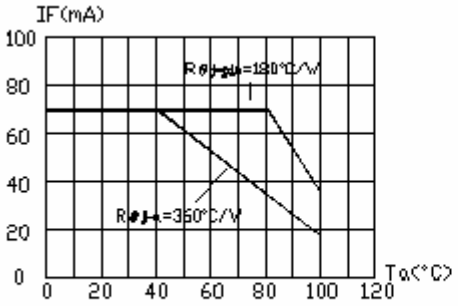


FIG.5 MAXIMUM FORWARD CURRENT VS. AMBIENT TEMPERATURE(Tjmax=120°C)

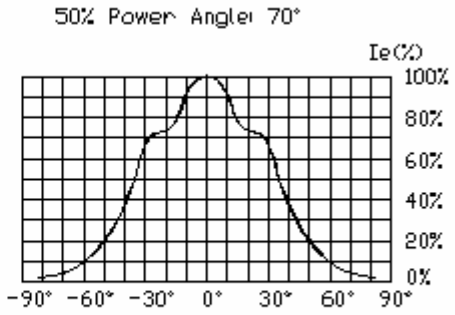


FIG.6 FAR FIELD PATTERN

1. Cathode PAD Area (0.18 **X** 0.18 **X** 2inch^2)
2. Height above nominal seating plane in inches(0.3inch)

Items	Signatures	Date
Prepared by	LiuZM	2005-09-15
Checked by	Aldosin	2005-09-15
Approved by	David	2005-09-15
FCN#	FCN20050297	

Revision History		
Rev. No	Date	Change Description
02	2005-09-15	Correct FIG.6 from 120deg to 70deg.

Data is subject to change without prior notice.