SPECIFICATION FOR COTCO LED LAMP

MODEL No : LP377TRO1-A0G
DOC. No : 09 13Oct04

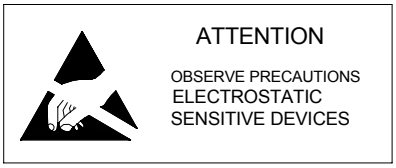
Description:

100 Degree 7.6 x 7.6mm LED Lamp in High Reddish Orange Color with Water Transparent Lens and Stopper

Dice Material: AlGaInP

Confirmed by Customer: _____

Date: _____



COTCO LUMINANT DEVICE (HUIZHOU) LTD.

Model No.	LP377TRO1-A0G
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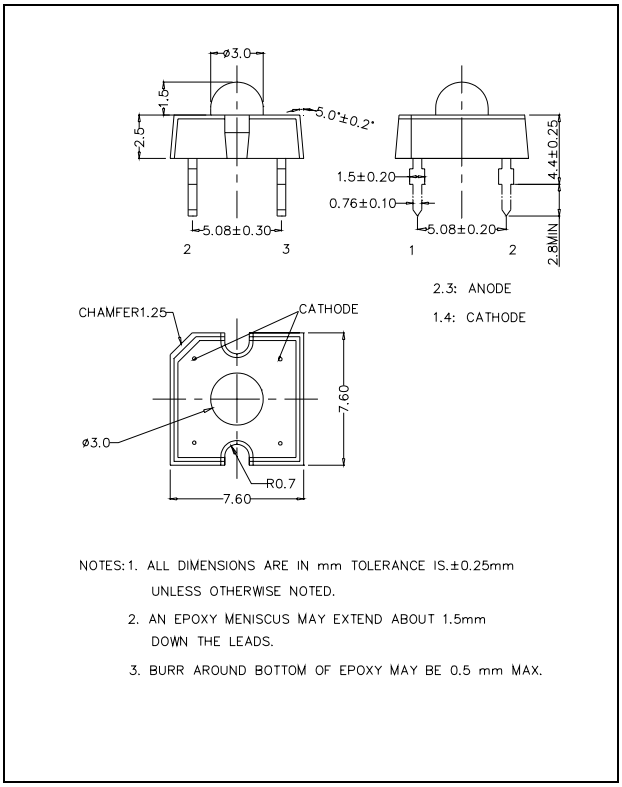
Applications:

- 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	612	618	628	nm
Luminous Flux	Φ_V	I_F = 70mA	3000	4500	---	mlm
50% Power Angle	$2\theta_{1/2}$	I_F = 70mA	---	100	---	deg

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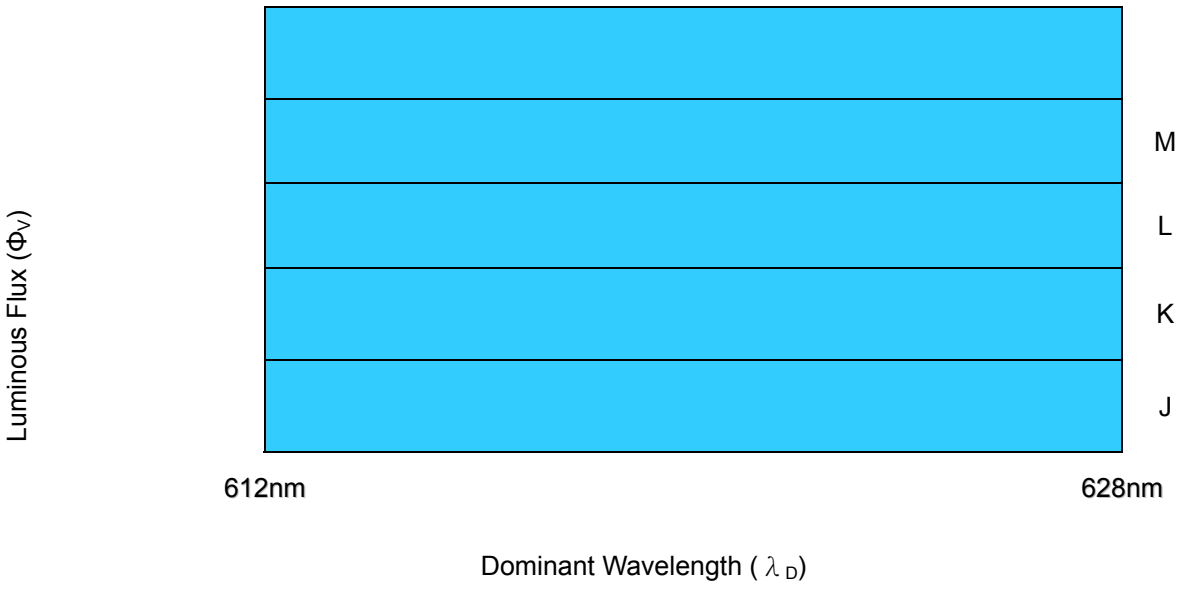
Standard bins for LP377TRO1-A0G (I_F = 70mA):

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

Orders for LP377TRO1-A0G 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	M
Luminous Flux	3000-4200 mlm	3500-4800 mlm	4000-6100 mlm	5000-7300 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 determined by Cotco.

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.

Graphs

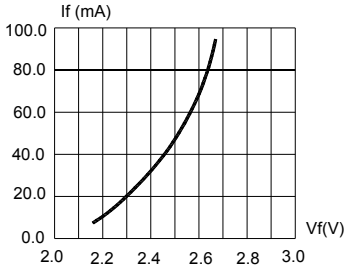


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

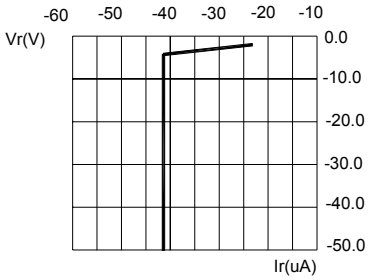


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

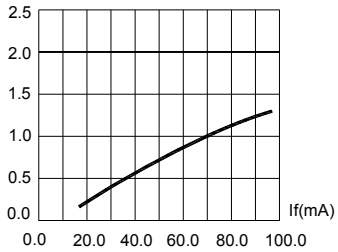


FIG.3 RELATIVE LUMINOUS FLUX VS. FORWARD CURRENT.

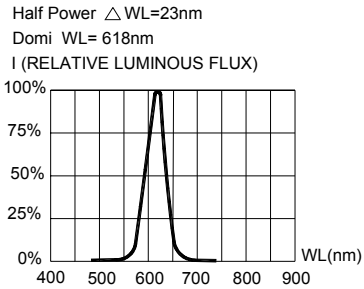


FIG.4 RELATIVE LUMINOUS FLUX VS. WAVELENGTH.

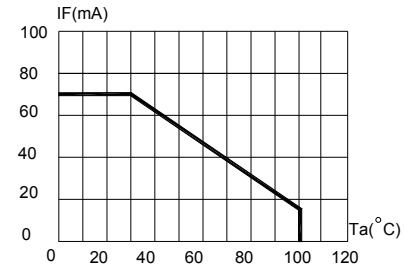


FIG.5 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE (Tjmax=120°C)

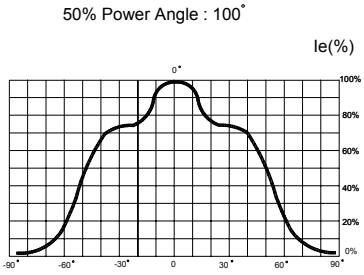


FIG.6 FAR FIELD PATTERN

Items	Signatures	Date	Revision History	
Prepared by	LiuZM	2004/10/13	DOC. No.	CHANGE DESCRIPTION
Checked by	AldosinLi	2004/10/13	G 11Nov03	P_D from 150 to 220; Change FIG.5
Approved by	David	2004/10/13	08 23Sep04	Add ESD and Notes; Change FIG.1&3&5; Change Φ_V & λ_D Rank form.
ECN#	ECN-H20040276		09 13Oct04	λ_D(max) from 625nm to 628nm.

Data is subject to change without prior notice.

Obsoletes Doc: 08 23Sep04.