

SPECIFICATION FOR COTCO LED LAMP

MODEL No : LC512THR1-25Q
DOC. No : B 31Jul02

Description:

25 Degree 5mm LED Lamp in High
Red Color with Water Transparent Lens
and No Stopper

Dice Material: AlGaInP

Confirmed
by Customer: _____

Date: _____

COTCO LUMINANT DEVICE (HUIZHOU) LTD.

Model No.	LC512THR1-25Q
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Applications:

- Advertising Signs
- Indicators
- Traffic
- Automotive Lighting

Absolute Maximum Ratings at Ta = 25°C

Items	Symbol	Absolute maximum Rating	Unit
Forward Current	I_F	50	mA
Peak Forward Current*	I_{FP}	200	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	150	mW
Operation Temperature	T_{opr}	-40 ~ +95	°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)	

*pulse width $\leq 0.1\text{msec}$ duty $\leq 1/10$

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

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$	1.7	2.1	2.6	V
Reverse Current	I_R	$V_R = 5\text{V}$	---	---	100	μA
Dominant Wavelength	λ_D	$I_F = 20\text{mA}$	620	628	635	nm
Luminous Intensity	I_V	$I_F = 20\text{mA}$	1520	3300	---	mcd
50% Power Angle	$2\theta_{1/2}$	$I_F = 20\text{mA}$	---	25	---	deg

Ranks Combination ($I_F = 20\text{mA}$)

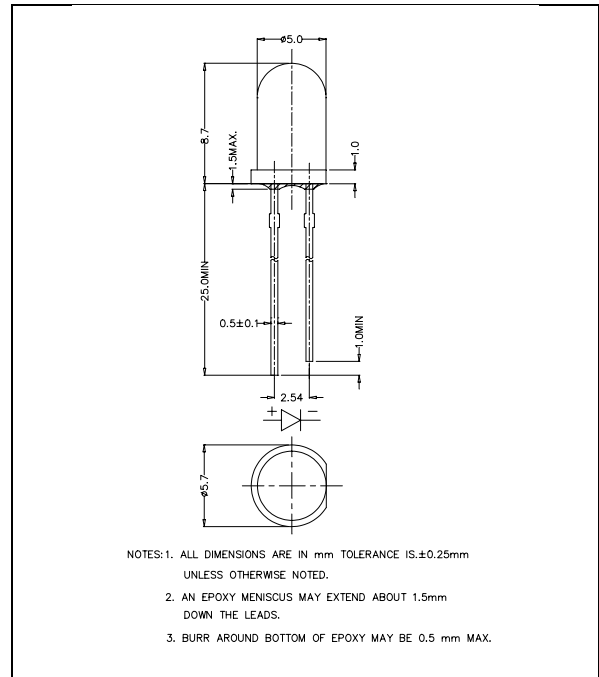
Rank	U	V	W	X
Luminous Intensity	1520-2130 mcd	2130-3000 mcd	3000-4180 mcd	4180-5860 mcd

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

Important Notes:

- 1) All ranks will be included per delivery, rank ratio will be determined by Cotco.
- 2) Tolerance of measurement of luminous intensity is $\pm 15\%$.
- 3) Tolerance of measurement of dominant wavelength is $\pm 1\text{nm}$.
- 4) Tolerance of measurement of V_f is $\pm 0.05\text{V}$.
- 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.

Dimension Drawing



Graphs

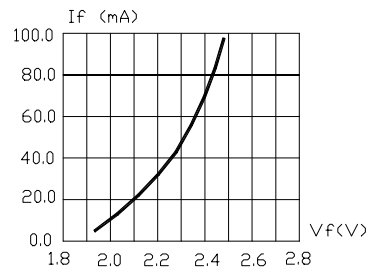


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

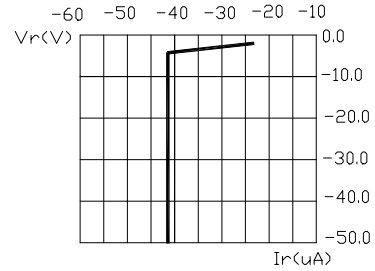


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

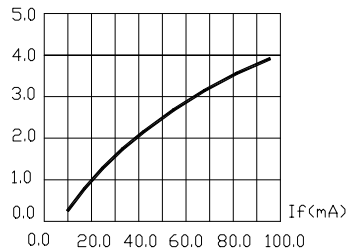


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

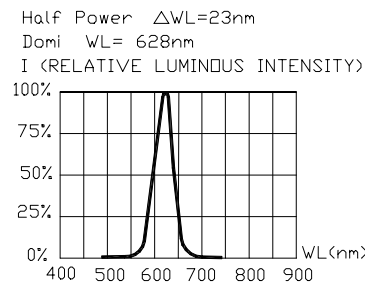


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

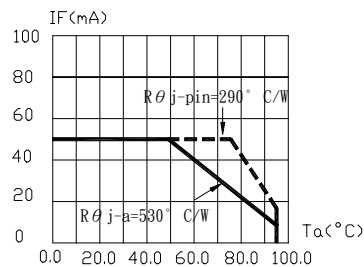


FIG.5 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE ($T_{jmax}=105^{\circ}C$)

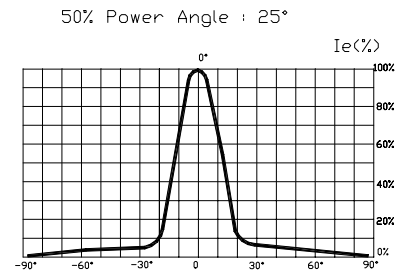


FIG.6 FAR FIELD PATTERN

1. Cathode PAD Area (0.18 × 0.18inch²)
2. Height above nominal seating plane in inches(0.3inch)

Items	Signatures	Date	Revision History	
			DOC. No.	CHANGE DESCRIPTION
Prepared by	LiuZM	2002/7/31	B 31Jul02	CHANG FORMAT
Checked by	ZouGR	2002/7/31		
Approved by	David	2002/7/31		
ECN#	ECN-H20020761			

Data is subject to change without prior notice.

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Obsoletes Doc: A 01Jun02(preliminary).