

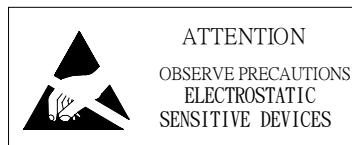
SPECIFICATION FOR COTCO LED LAMP

MODEL No : LD-700ABL1-E0
DOC No : 01 04OCT04

Description:

7 x 7mm, QFN Type,
High Power Blue LED For Illumination,
Water Clear Compound Encapsulated.

Dice Material: InGaN



COTCO LUMINANT DEVICE (HUIZHOU) LTD.

Features

- High luminous flux output for illumination
- Exposed pad design for excellent heat transfer
- Designed for high current operation
- Reflow soldering applicable

Absolute Maximum Ratings at Ta = 25°C (on metal core PCB)*

Items	Symbol	Absolute maximum Rating	Unit
Forward Current	I_F	300	mA
Peak Forward Current**	I_{FP}	500	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	1	W
Operation Temperature	T_{opr}	-20 ~ +85	°C
Storage Temperature	T_{stg}	-20 ~ +85	°C
Junction temperature	T_j	+125	°C
Junction-to-Board***	θ_{jc}	15	°C/W

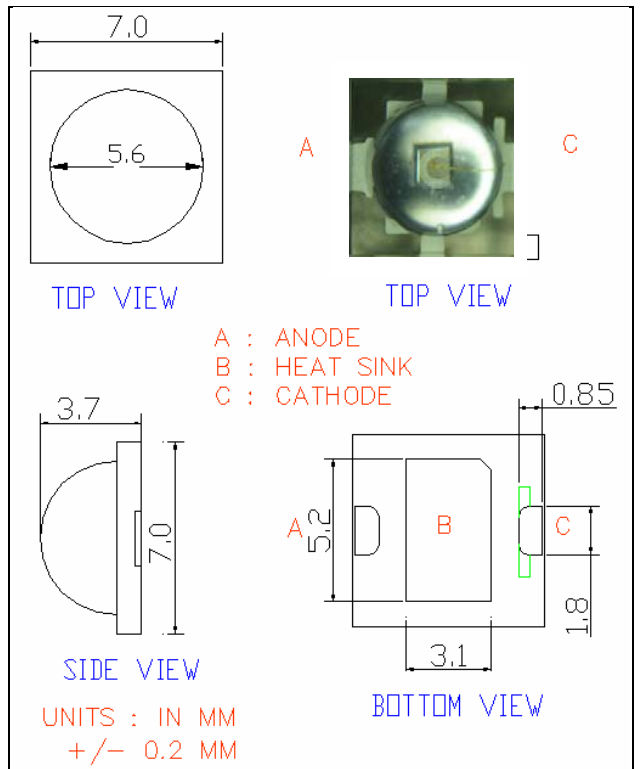
Metal core PCB defines as good heat transmission substrate (thickness of 2.0mm Al-based PCB in 20x20mm, $\theta_{jc} < 15C/W$ could do)

** Where pulse width ≤ 0.1 msec, duty cycle $\leq 1/10$ *** Rth test condition: mounted on 2.0mm Al-based PCB in size of 20x20mm

Typical Electrical & Optical Characteristics at Ta = 25°C (on metal core PCB)*

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 300mA$		3.6	4.0	V
Reverse Current	I_R	$V_R = 5V$	-	-	10	μA
Luminous Flux	lumen	$I_F = 300mA$	5	8	-	lm
Dominant Wavelength	λ_D	$I_F = 300mA$	465	470	475	nm
50% Power Angle	$2\theta_{\frac{1}{2}}$	$I_F = 300mA$	-	140	-	deg

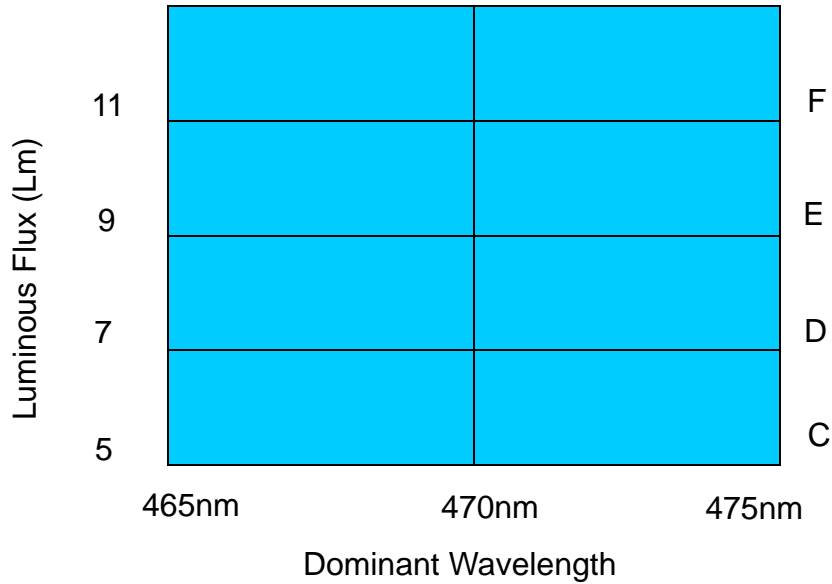
Package Outline



Ranks Combination ($I_F = 300\text{mA}$)

Lamps are sorted to Luminous flux - lm & Wavelength - λ_D and rank as below:

*C+



* C+ indicates Luminous flux is at C bin or above.

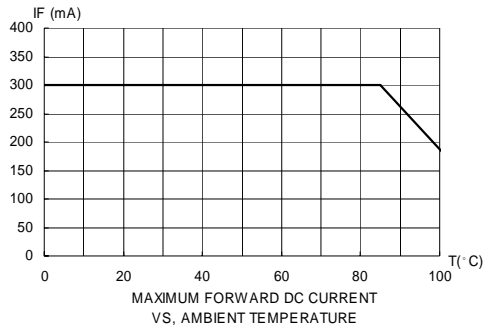
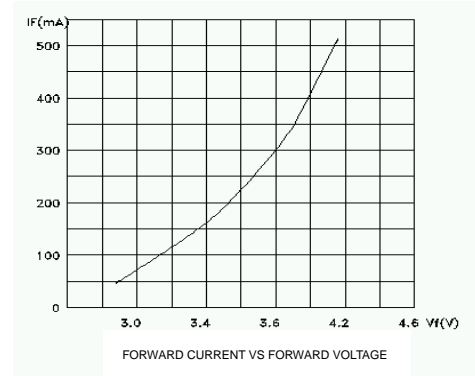
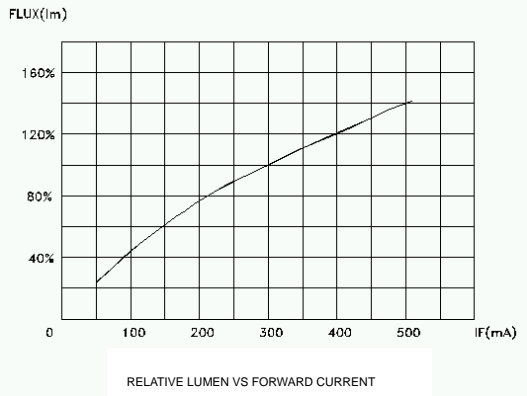
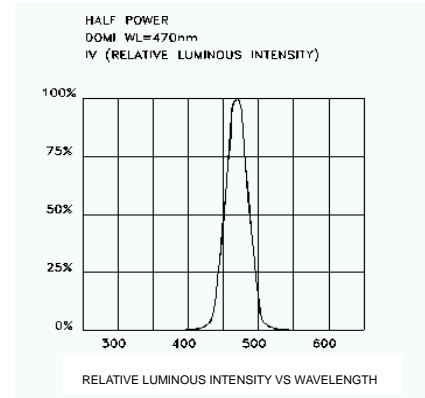
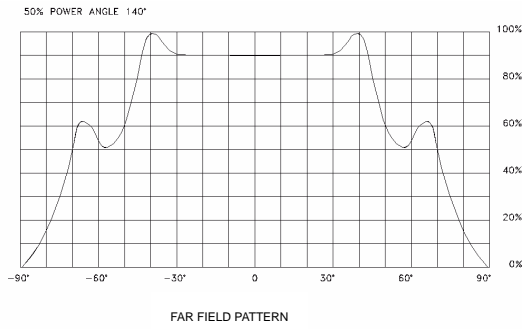
Important Notes:

- 1) All ranks will be included per delivery, rank ratio will be determined by Cotco.
- 2) The measurement tolerance of luminous flux is $\pm 10\%$ V.
- 3) The measurement tolerance of dominant wavelength is $\pm 1\text{nm}$.
- 4) The measurement tolerance of V_f is ± 0.1 V.
- 5) Please refer to LED LAMP RELIABILITY TEST STANDARD for reliability test conditions.



Graphs

Model No.	LD-7001BL1-E0
Doc. No.	01 04OCT04



Items	Signatures	Date	Revision History	
Prepared by	Anthony Cheung	04Oct04	DOC. No.	CHANGE DESCRIPTION
Checked by	Anthony Cheung	04Oct04		
Approved by	Thomson	04Oct04		
ECN#	ECN-H20040272			

Data is subject to change without prior notice.

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Obsoletes Doc: ---