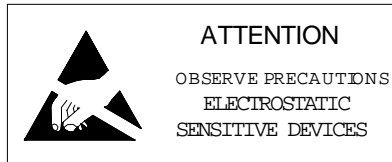




COTCO LUMINANT DEVICE (HUIZHOU) LTD

Part #: LC503MBG1-15Q

Product Description: Blue-Green 15° 5mm LED lamp with water transparent lens



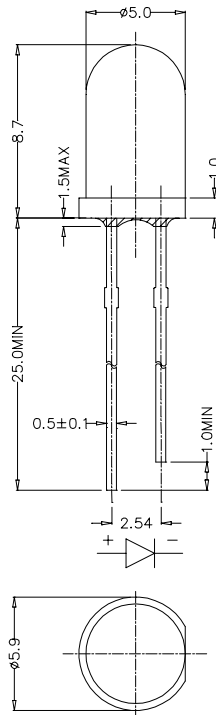
Resin: Epoxy

Lens Color: Water Transparent

Lead Frame: Ag Plating Iron Alloy

Dice: InGaN/SiC

DIMENSION DRAWING



- NOTES: 1. ALL DIMENSIONS ARE IN mm TOLERANCE IS.±0.25mm UNLESS OTHERWISE NOTED.
 2. AN EPOXY MENISCUS MAY EXTEND ABOUT 1.5mm DOWN THE LEADS.
 3. BURR AROUND BOTTOM OF EPOXY MAY BE 0.5 mm MAX.

COTCO-D-074 REV.0

Delivery Information Contact:

Marktech Optoelectronics*
 120 Broadway, Menands, NY 12204
 Phone: 800.984.5337 FAX: 518.432.7454
 Web Site: www.marktechopto.com

*Marktech is the exclusive North American Technical Sales and Marketing office for COTCO LED products

SPECIFICATION

Absolute Maximum Rating ($T_a = 25^\circ\text{C}$)

Items	Symbol	Absolute maximum Rating	Unit
Forward Current	I_F	25	mA
Peak Forward Current pulse width $\leq 0.1\text{msec}$ duty $\leq 1/10$	I_{FP}	100	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	120	mW
Operation Temperature	T_{opr}	-20 ~ +75	$^\circ\text{C}$
Storage Temperature	T_{stg}	-30 ~ +80	$^\circ\text{C}$
Lead Soldering Temperature	T_{sol}	260 $^\circ\text{C}$ for 3sec (3mm from the base of the epoxy bulb)	

Initial Electrical/Optical Characteristics ($T_a = 25^\circ\text{C}$)

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$	3.2	3.6	4.2	V
Reverse Current	I_R	$V_R = 5\text{V}$	---	---	100	μA
Wavelength	λ_D	$I_F = 20\text{mA}$	495	505	515	nm
Luminous Intensity	I_V	$I_F = 20\text{mA}$	1520	3000	---	mcd
50% Power Angle	$2\theta_{1/2}$	$I_F = 20\text{mA}$	---	15	---	deg

Ranks Combination

Intensity		Rank U	Rank V	Rank W	Rank X
Dominant Wavelength		1520-2130 mcd	2130-3000 mcd	3000-4180 mcd	4180-5860 mcd
X2	495-500 nm	☒	☒	☒	☒
X3	500-505 nm	☒	☒	☒	☒
X4	505-510 nm	☒	☒	☒	☒
X5	510-515 nm	☒	☒	☒	☒

*One normal delivery will include all ranks listed above.

The quantity ratio of the ranks is decided by COTCO.

Upper and lower tolerance limit of the Luminous flux $\pm 15\%$ Upper and lower tolerance limit of the Dominant Wavelength $\pm 1.0\text{nm}$

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GRAPHS

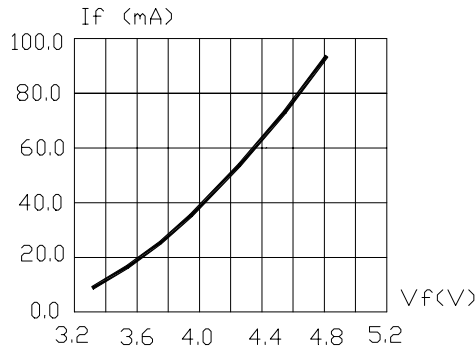


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

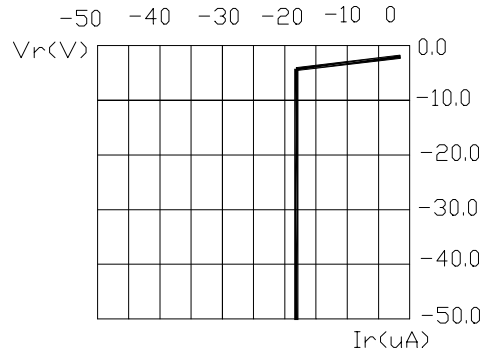


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

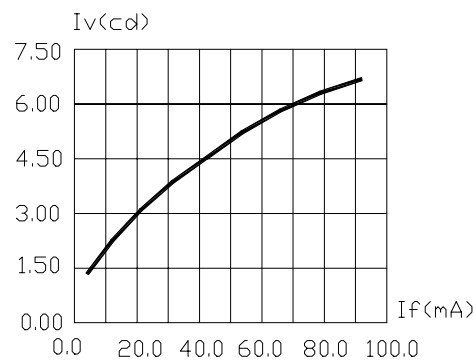


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

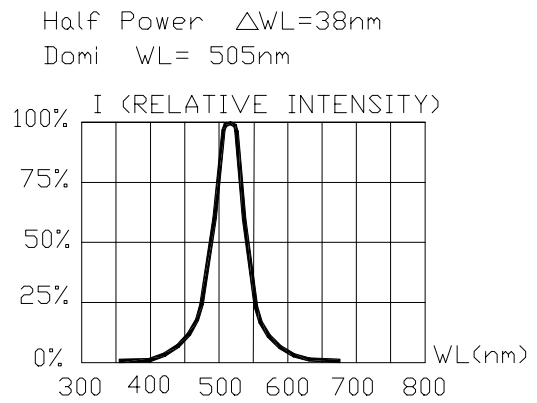


FIG.4 RELATIVE INTENSITY VS. WAVE LENGTH.

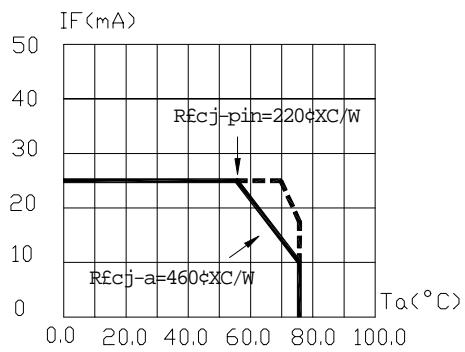


FIG.5 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE. DERATING BASED ON $T_{jmax}=95^{\circ}C$

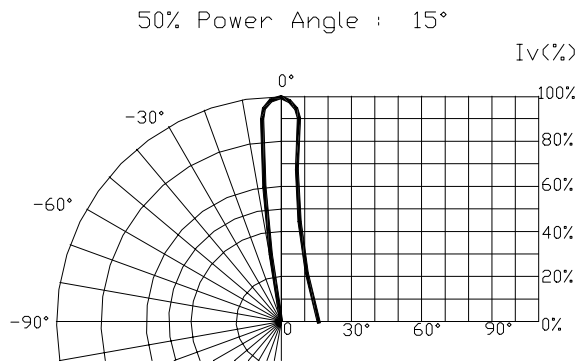


FIG.6 SPATIAL DISTRIBUTION.

- 1.Cathode PAD Area ($0.18 \times 0.18inch^2$)
- 2.Height above nominal seating plane in inches(0.3inch)

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