

**SPECIFICATION FOR COTCO LED LAMP**

Document No: SPE/LP379PBG1-C0G-03  
Model No : LP379PBG1-C0G-03  
Rev. No: 02  
Date: 2005-07-07

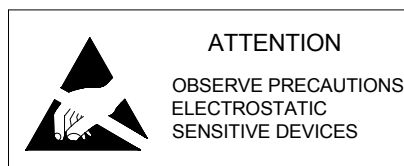
Description:

120 Degree 7.6 x 7.6mm LED Lamp in Bluish Green Color with Water Transparent Lens and Stopper

Dice Material: InGaN

Confirmed  
by Customer: \_\_\_\_\_

Date: \_\_\_\_\_



### Applications:

- Advertising Signs
- Indicators
- Message Board

### Absolute Maximum Ratings at Ta = 25°C

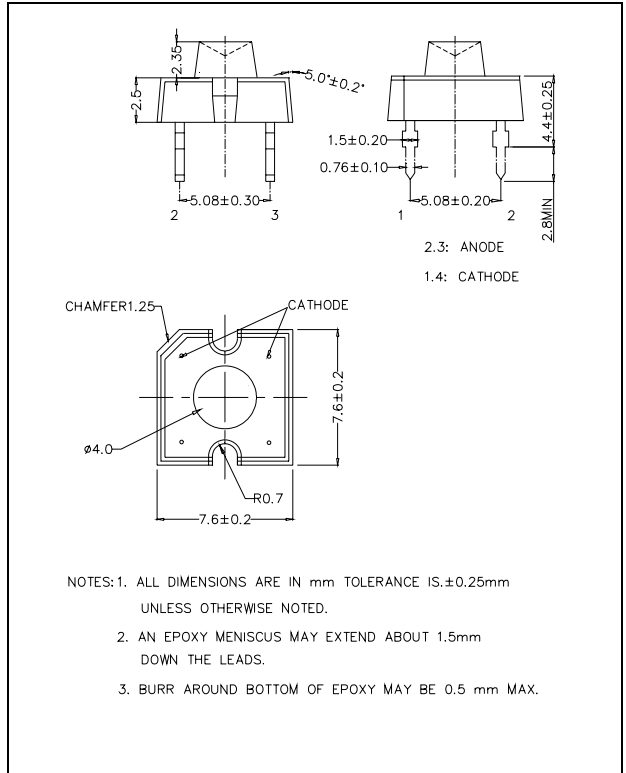
Items	Symbol	Absolute maximum Rating	Unit
Forward Current	$I_F$	30	mA
Peak Forward Current*	$I_{FP}$	100	mA
Reverse Voltage	$V_R$	5	V
Power Dissipation	$P_D$	132	mW
Operation Temperature	$T_{opr}$	-40 ~ +100	°C
Storage Temperature	$T_{stg}$	-40 ~ +100	°C
Lead Soldering Temperature	$T_{sol}$	Max.260°C for 3 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	$V_F$	$I_F = 30\text{mA}$	---	3.6	4.4	V
Reverse Current	$I_R$	$V_R = 5\text{V}$	---	---	100	$\mu\text{A}$
Dominant Wavelength	$\lambda_D$	$I_F = 30\text{mA}$	495	505	510	nm
Luminous Flux	$\Phi_V$	$I_F = 30\text{mA}$	1000	2000	---	mlm
50% Power Angle	$2\theta_{1/2}$	$I_F = 30\text{mA}$	---	120	---	deg

### Dimension Drawing



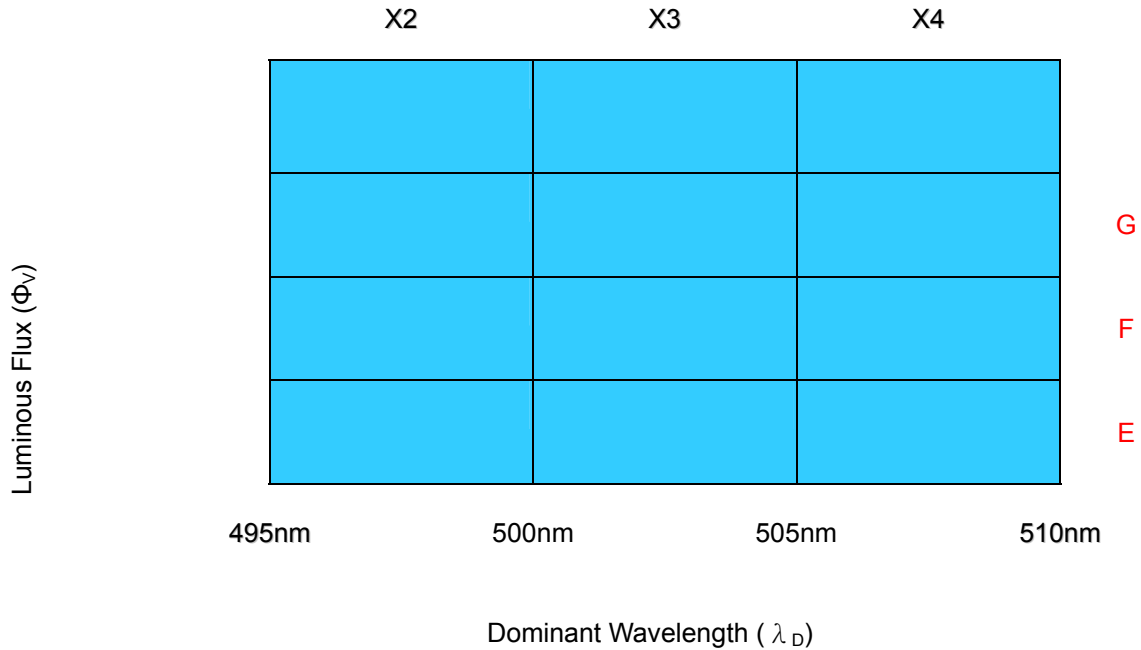
**Standard bins for LP379PBG1-C0G-03 ( $I_F = 30\text{mA}$ ):**

Lamps are sorted to Luminous Flux  $-\Phi_V$ ,  $V_F$  & Dominant Wavelength  $-\lambda_D$  bins shown.

Orders for LP379PBG1-C0G-03 may be filled with any or all bins contained as below.

All Luminous Flux  $-\Phi_V$ ,  $V_F$  & Dominant Wavelength  $-\lambda_D$  values shown and specified are at  $I_F = 30\text{mA}$ .

\* **E+**



Rank	E	F	G
Luminous Flux	1000-1800 mlm	1500-2400 mlm	2000-3000 mlm

\* E+ indicates Luminous Flux is at E bin or above.

**Forward Voltage ( $V_F$ )**

Rank	V7	V8	V9	V10	V11	V12	V13	V14
Voltage	2.8-3.0V	3.0-3.2V	3.2-3.4V	3.4-3.6V	3.6-3.8V	3.8-4.0V	4.0-4.2V	4.2-4.4V

**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  $\pm 1\text{nm}$ .
- 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.
- 7) Please refer to APPLICATION NOTES for Application.

## Graphs

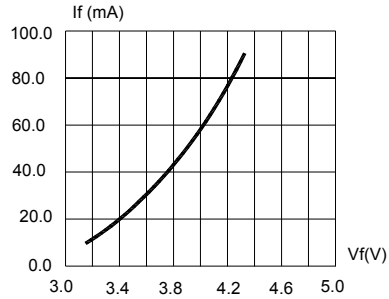


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

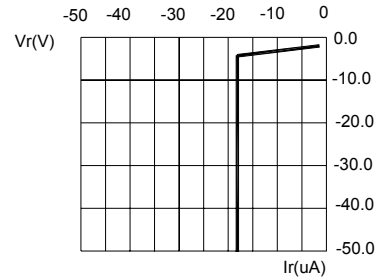


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

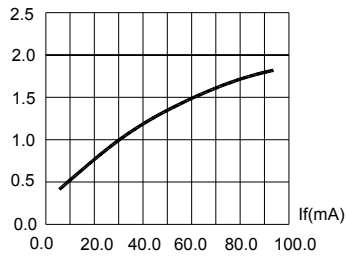


FIG.3 RELATIVE LUMINOUS FLUX VS. FORWARD CURRENT

Half Power  $\Delta$  WL=38nm  
Domi WL= 505nm

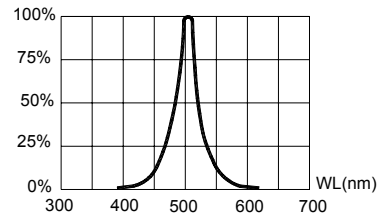


FIG.4 RELATIVE LUMINOUS FLUX VS. WAVELENGTH.

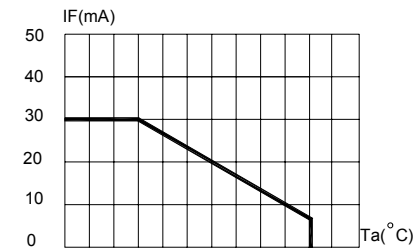


FIG.5 MAXIMUM FORWARD DC CURRENT VS AMBIENT TEMPERATURE ( $T_{jmax}=120^{\circ}C$ )

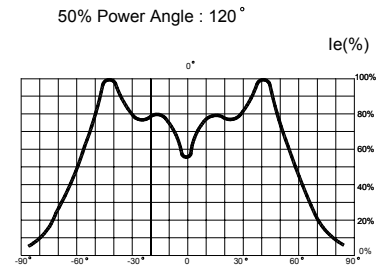


FIG.6 FAR FIELD PATTERN

Items	Signatures	Date
Prepared by	LiuZM	2005-07-07
Checked by	Aldosin	2005-07-07
Approved by	David	2005-07-07
FCN#	FCN20050221	

Revision History		
Rev. No	Date	Change Description
02	2005-07-07	Release. $\Phi_v$ from F,G,H(typ)2200 to E,F,G(typ)2000mlm.

Data is subject to change without prior notice; please refer to COTCO Website for the latest version.

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