



工程文件  製訂 /  變更 通知單  
 Engineer document formulated or modified Notice

文件編號: (Device Number)	CDLE-033-1527
ECN#	

文件名稱: (Model No.)	333-2SUBC/C470/S400-A5	版次 REV.	原 1 版變更為--版 raw edition change	日期 date	2005年9月21日	頁數 page	共6頁 total 6
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文件制訂/變更內容描敘:(篇幅不足,請以另紙附上):  
 document workout / revise content

製訂項目 Workout Item:

- 新產品  
New product
- 衍生機種  
Serial device
- 新制訂規格  
New specification

變更項目 Revise Item:

- 材料變更 change material
- 製程變更 change process
- 設備、治具 fixture、tool
- 規格變更 change specification

處理方式 Disposition:

- 舊材料處理方式  
Old material
- WIP WIP
- 舊庫存 old storage

文件製訂/變更理由:(請詳細說明): File formulating/modifying reasons:(Please detailed explain)

規格依據(Specification basis):

此規格依據客戶需求制作(Specification basis formulate on the customer sheweichile

工程編號(Engineer Number) 業務編號(Sales umber):

品保審核 chqa check	台北研一部 rd1 confirm	台北品保 qp confirm	維護審核 R/M check	資材部 chpc	業務部 cm check	人資部 Chpn	制一部 chpd1	制二部 chpd2	制三部 chpd3	復 印 c o p y	生技 chie	資材 chpc	工程一 chrd1	工程二 chrd2	制一 chpd1	制二 chpd2	制三 chpd3	制六 chpd6	
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擬案人 Designer	部門主管 Department Charger	工程一 chrd1 check	工程二 chrd2 check	生技 chie	制六部 chie							品保 chqa	維護 R/M	業務 CM	人資 chpn				台北 TP
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EVERLIGHT ELECTRONICS CO.,LTD.

# DATA SHEET

1.1000PCS/ PART NO. : 333-2SUBC/C470/S400-A5

DATE : 2005/9/21

DEPARTMENT : CHR&D1

REVISION : 1

<b>RECEIVED</b>			
<input checked="" type="checkbox"/> MASS PRODUCTION			
<input type="checkbox"/> PRELIMINARY			
<input type="checkbox"/> CUSTOMER DESIGN			
DEVICE NUMBER :		CDLE-033-1527	
PAGE :		6	
CUSTOMER	DESIGNER	CHECKER	APPROVER

REV.	DESCRIPTION	RELEASE DATE

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# Technical Data Sheet

## 5.0mm Round Type LED Lamps

333-2SUBC/C470/S400-A5

### ■ Features :

- Choice of various viewing angles
- Available on tape and reel.
- Reliable and robust
- Pb free
- The product itself will remain within RoHS compliant version.



### ■ Descriptions :

- The series is specially designed for applications requiring higher brightness
- The led lamps are available with different colors, intensities.

### ■ Applications :

- TV set
- Monitor
- Telephone
- Computer

PART NO.	Material	Emitted Color	Lens Color
333-2SUBC/C470/S400-A5	GaN	Super Blue	Water Clear

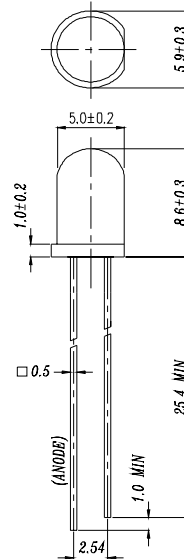


# Technical Data Sheet

## 5.0mm Round Type LED Lamps

333-2SUBC/C470/S400-A5

### Package Dimensions



- Notes:
1. All dimensions are in millimetres
  2. The height of flange must be less than 1.5mm(0.059").
  3. Without special declared,the tolerance is  $\pm 0.25$ mm.

### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Forward Current	$I_F$	30	mA
Operating Temperature	$T_{opr}$	-40 to +85	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 to +100	$^\circ\text{C}$
Soldering Temperature	$T_{sol}$	$260 \pm 5$	$^\circ\text{C}$
Electrostatic Discharge	ESD	150	V
Power Dissipation	$P_d$	120	mW
Reverse Voltage	$V_R$	5	V

Note: \*1:Soldering time  $\leq$  5 seconds.



Technical Data Sheet  
5.0mm Round Type LED Lamps

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Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20 mA	3.4	/	4.0	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 5 V	/	/	50	μA
Luminous Intensity	I <sub>v</sub>	I <sub>F</sub> = 20 mA	1000	2000	/	mcd
Viewing Angle	2θ 1/2	I <sub>F</sub> = 20 mA	/	20	/	deg
Peak Wavelength	λ <sub>p</sub>	I <sub>F</sub> = 20 mA	/	468	/	nm
Dominant Wavelength	λ <sub>d</sub>	I <sub>F</sub> = 20 mA	/	470	/	nm
Spectrum Radiation Bandwidth	Δλ	I <sub>F</sub> = 20 mA	/	35	/	nm



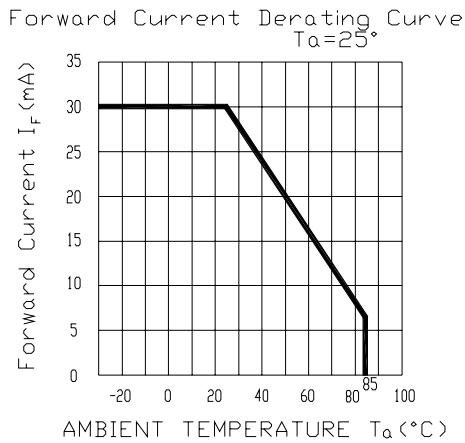
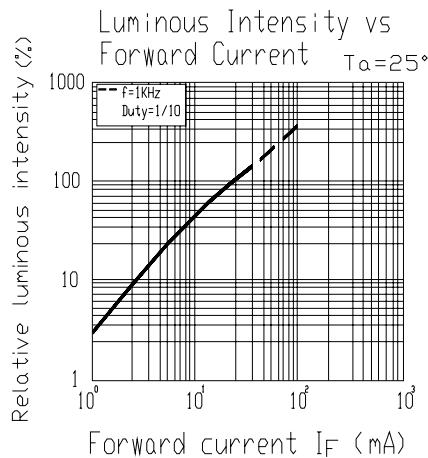
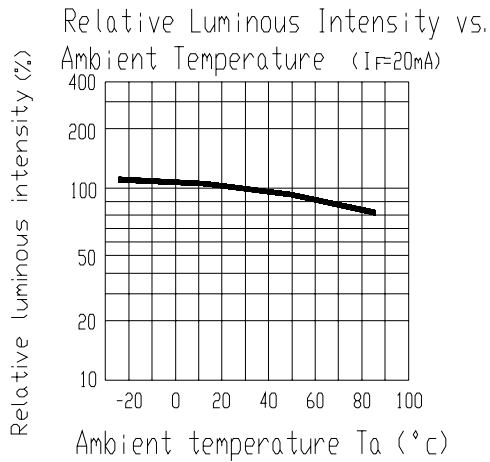
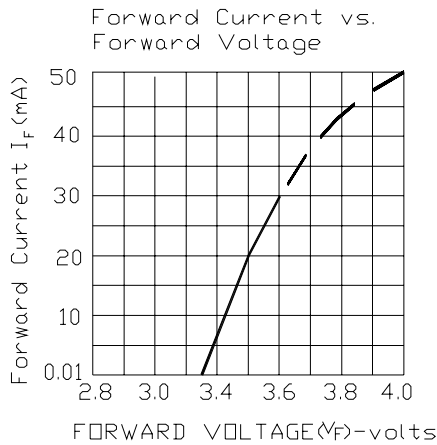
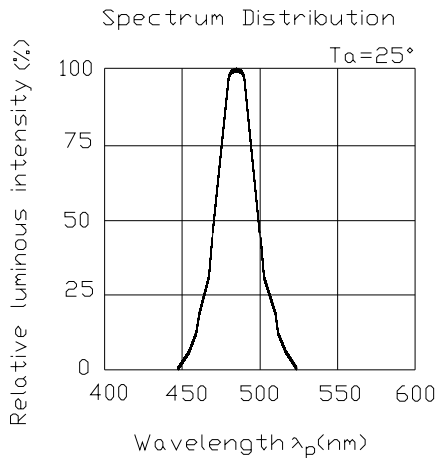
# Technical Data Sheet

## 5.0mm Round Type LED Lamps

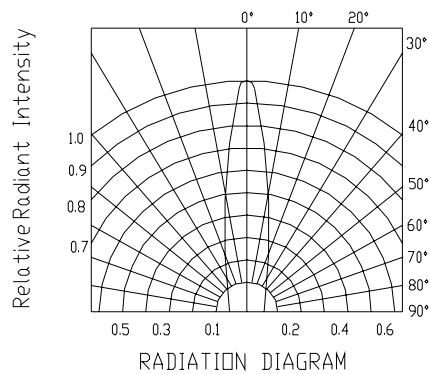
333-2SUBC/C470/S400-A5

### Typical Electro-Optical Characteristic Curves:

SUB



Radiation Diagram  $T_a=25^\circ\text{C}$





Technical Data Sheet  
5.0mm Round Type LED Lamps

333-2SUBC/C470/S400-A5

■ Reliability test items and conditions:

The reliability of products shall be satisfied with items listed below.

Confidence level : 97%

LTPD : 3%

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Failure Judgment Criteria	Ac/Re
1	Solder Heat	TEMP : 260°C ± 5 °C	10 SEC	76 PCS	$I_v \leq I_{vt} * 0.5$ or $V_f \geq U$ or $V_f \leq L$	0/1
2	Temperature Cycle	H : +100°C 15min ∫ 5 min L : -40°C 15min	300 CYCLES	76 PCS		0/1
3	Thermal Shock	H : +100°C 5min ∫ 10 sec L : -10°C 5min	300 CYCLES	76 PCS		0/1
4	High Temperature Storage	TEMP : 100°C	1000 HRS	76 PCS		0/1
5	Low Temperature Storage	TEMP : -40°C	1000 HRS	76 PCS		0/1
6	DC Operating Life	TEMP : 25°C I <sub>F</sub> = 20mA	1000 HRS	76 PCS		0/1
7	High Temperature / High Humidity	85°C / 85% RH	1000 HRS	76 PCS		0/1

Note : I<sub>vt</sub> : To test I<sub>v</sub> value of the chip before the reliability test  
I<sub>v</sub> : The test value of the chip that has completed the reliability test  
U : Upper Specification Limit  
L : Lower Specification Limit



Technical Data Sheet  
5.0mm Round Type LED Lamps

333-2SUBC/C470/S400-A5

Packing Quantity Specification

1.500PCS/1Bag · 5Bags/1Box

2.10Boxes/1Carton

Label Form Specification



CPN:

P/N:



333-2SUBC/C470/S400-A5

QTY:

CAT:



HUE:

REF:

LOT NO: EL



CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Dominant Wavelength

REF: Reference

LOT No: Lot Number

MADE IN TAIWAN: Production Place

MADE IN TAIWAN

Notes

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.

2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.

3. These specification sheets include materials protected under copyright of EVERLIGHT corporation

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