

紫外光 LED emitter COB 型封裝產品規格書

Ultraviolet (UV) LED emitter COB type package product data sheet

C100U1010-100-001



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產品特性與應用 Features and Applications:

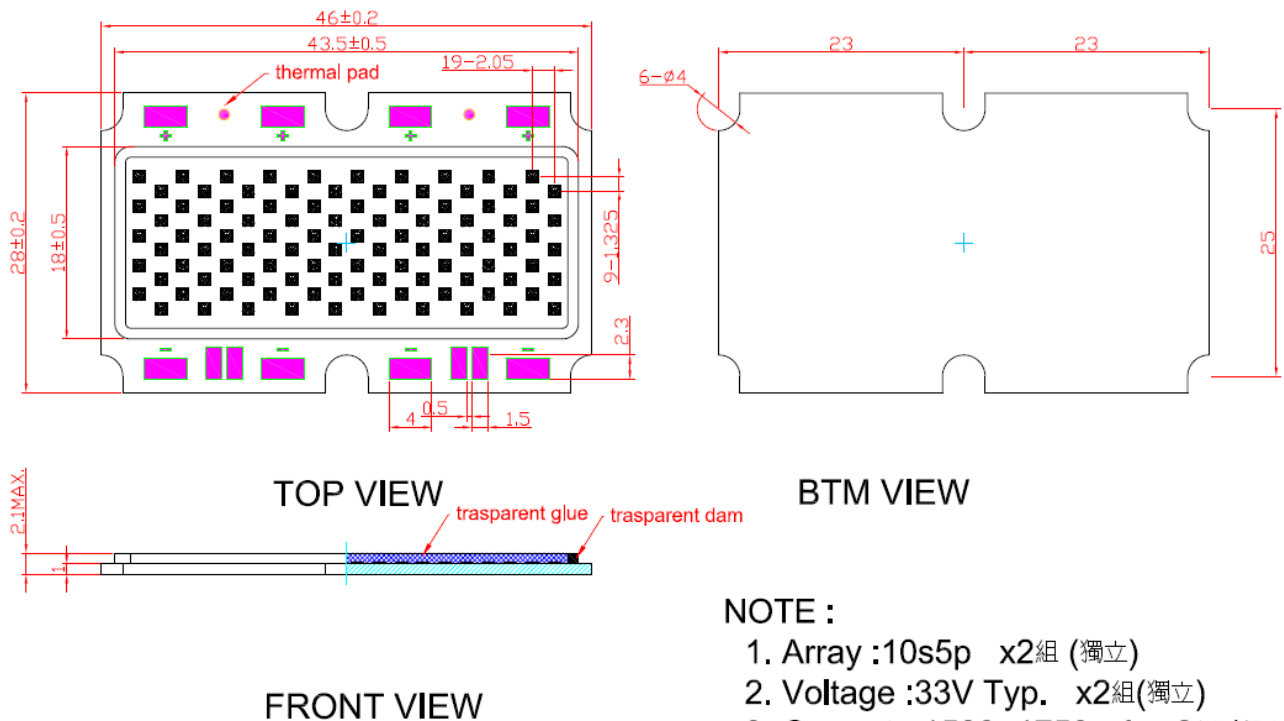
■ Feature 特性

- ◆ Offer All Series Wide UVA Wavelength: 365nm-430nm
- ◆ Half Angle ($2\theta_{1/2}$) : 120°
- ◆ Lens Color : Silicone Water Clear
- ◆ 芯片直接與銅基板鍵結 Die Direct bonding to copper
- ◆ 高導熱 High thermal conductivity: 401W/(m·K)
- ◆ 溫度量測點 Thermocouple attach point

■ Applications 應用

- ◆ Special Lighting (特殊照明)
- ◆ Industrial Lighting (工業照明)
- ◆ Medical Lighting (醫療照明)

封裝外觀尺寸 Package Dimensions:



- NOTE :
1. Array :10s5p x2組 (獨立)
 2. Voltage :33V Typ. x2組(獨立)
 3. Current : 1500~1750mA x2組 (獨立)

Notes :

1. All dimensions are in millimeters (所有尺寸以 mm 毫米為單位)
2. Tolerance is ± 0.25 mm (公差)



光電特性 Electrical/Optical Characteristics (Ta=25°C)

Parameter (參數)	Symbol (符號)	Conditions (測試條件)	Min. (最小值)	Avg. (平均值)	Max. (最大值)	Units (單位)
Irradiance ^{Note(1)} (輻射照度)	Ee	IF=1500mAx2		360		mW/cm ²
Peak Wavelength (主波長)	WLP	IF=1500mAx2	365		430	nm
Forward Voltage (順向電壓)	V _F	IF=1500mAx2	30		40	V
Thermal Resistance Junction To Board (熱阻)	Rth _{J-B}	IF=1500mAx2		0.2		°C/W
Temperature Coefficient of Forward Voltage (順向電壓之溫度係數)	ΔVF/ΔT	IF=1500mAx2		8		mV/°C
Reverse Current (反向漏電流)	IR	VR=5V			10	μA
Viewing Angle[1] (發光角度)	2θ _{1/2}	IF=1500mAx2	100	120	140	Deg

Note (1): Irradiance(輻射照度) measured by UV Intensity Meter, and the distance of Test is 5mm.

絕對最大額定值 Absolute Maximum Rating (Ta=25°C)

Parameter (參數)	Symbol (符號)	Ratings (數值)	Units (單位)
Power Dissipation (消耗功率)	P _D	100	W
Continuous Forward Current (持續順向輸入電流)	I _F	3000	mA
Peak Forward Current [2] (順向脈衝電流)	I _F (Peak)	4500	mA
LED Junction Temperature (接面溫度)	T _J	120	°C
Reverse Voltage (反向電壓)	V _R	5	V
Operating Temperature Range (工作溫度)	T _{OPR}	-30°C To +80°C	
Storage Temperature Range (儲存溫度)	T _{STG}	-40°C To +100°C	
Manual Soldering Temperature (手工焊接溫度)	T _{SOL}	260°C±20°C For 3-5 Seconds	
ESD Sensitivity (抗靜電能力)	ESD	500V HBM	

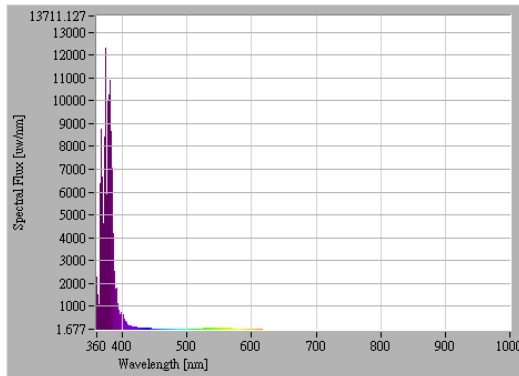
Notes:

[1]. Tolerance Θ:10° · (Θ 公差為 10°)

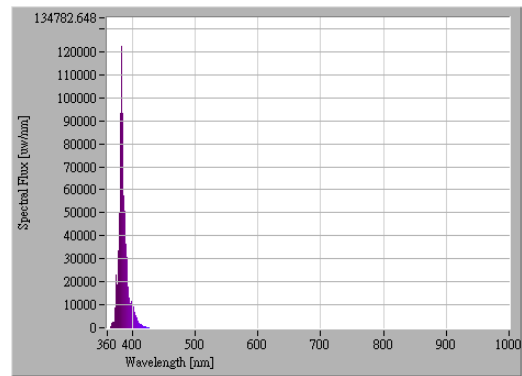
[2]. 1/10 Duty Cycle 0.1ms Pulse Width. (脈衝寬度 0.1ms · 占空比 1/10)



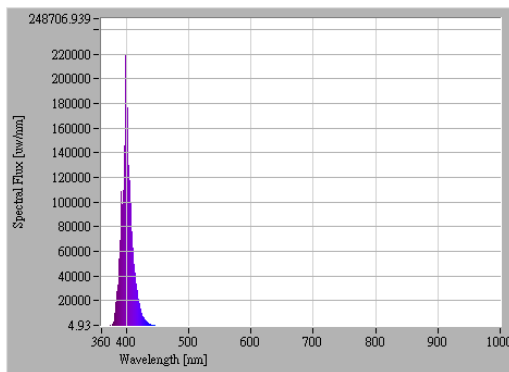
光譜分佈圖 Spectrum distribution



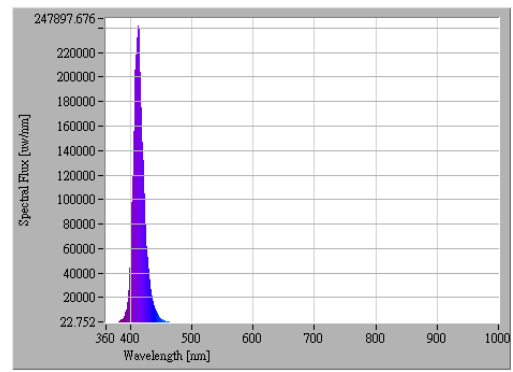
365nm



385nm



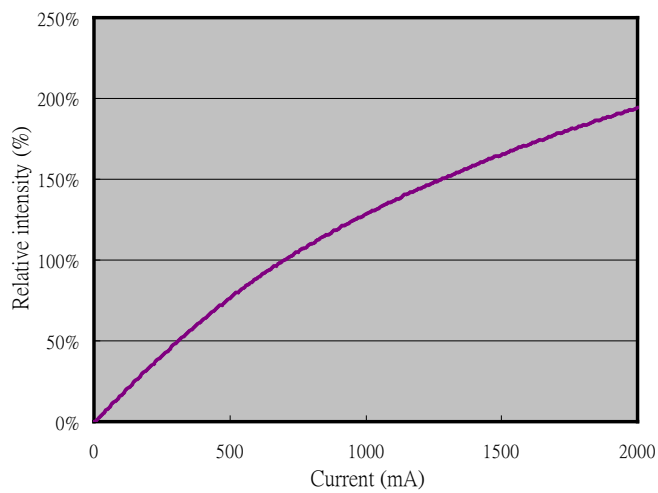
405nm



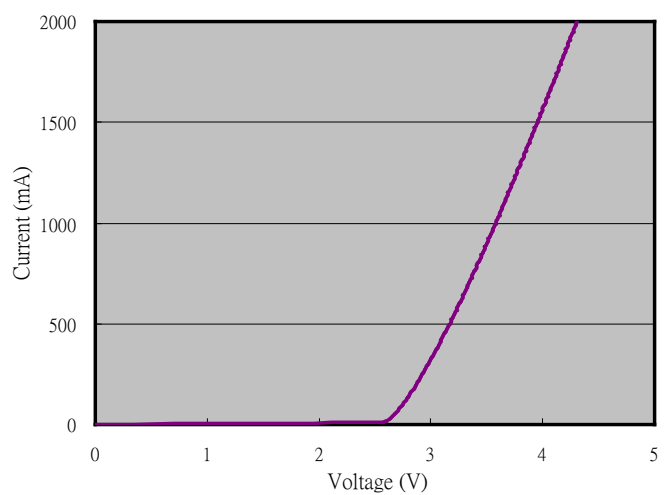
415nm

特性曲線 Characteristic curves for single chip

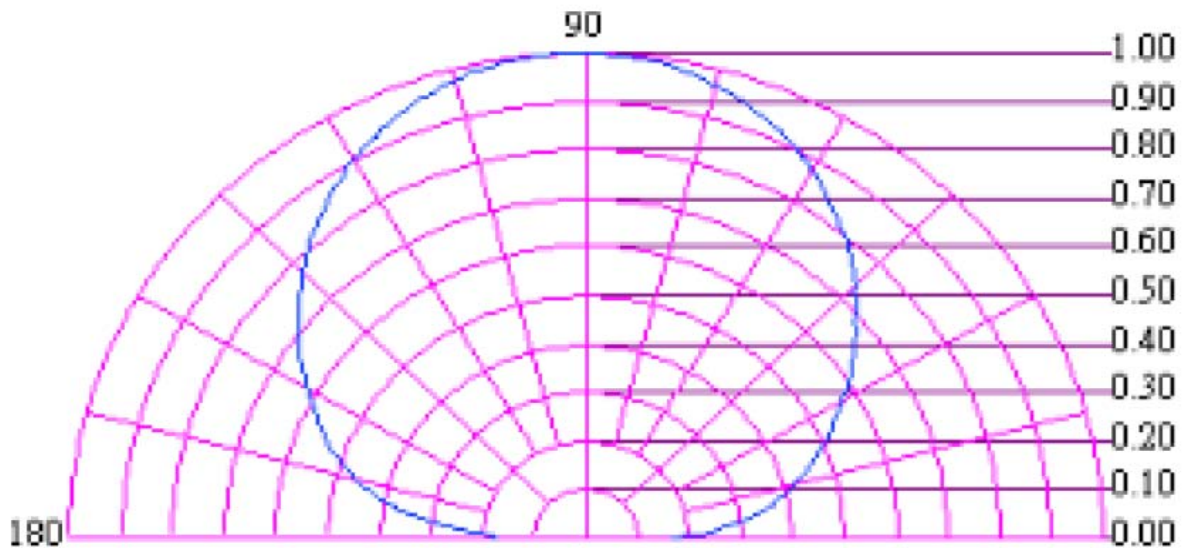
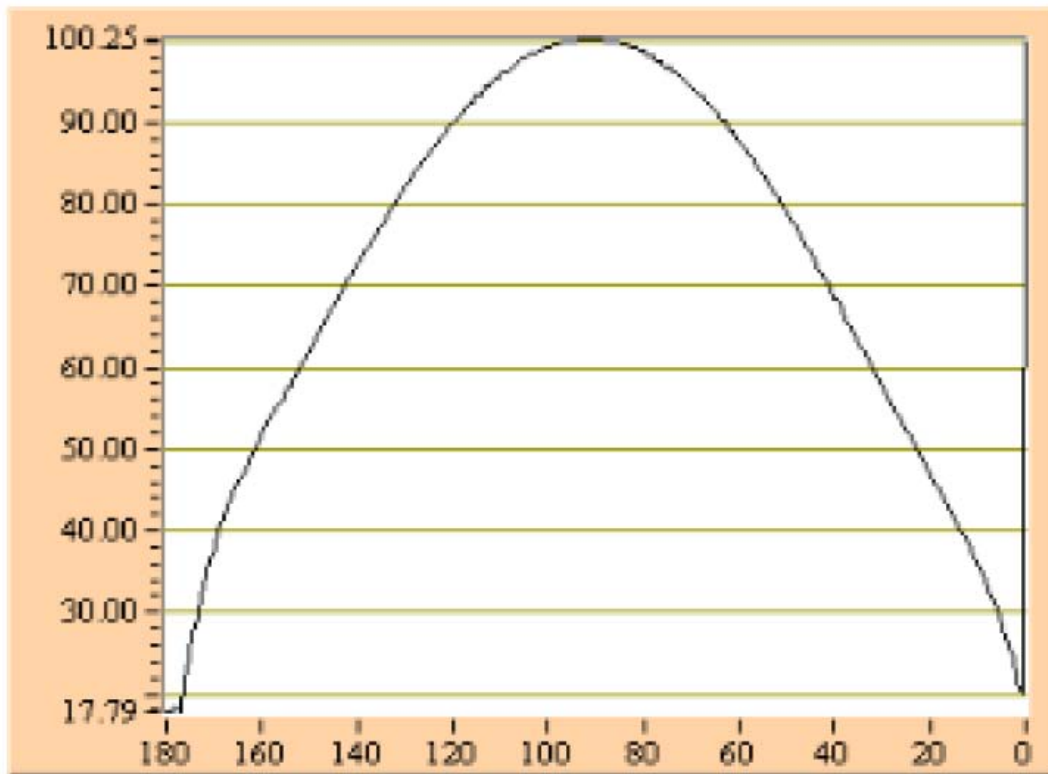
Radiant flux (Φ_e) vs Current (IF)



Current (IF) vs Voltage (VF)



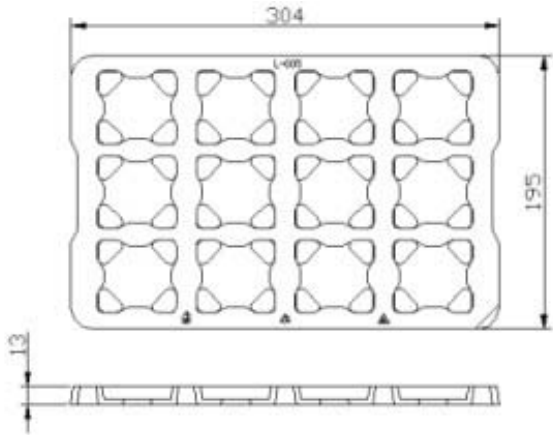
典型發光圖形 Typical radiation pattern





包裝方式 Packing

包裝盤尺寸 PET TRAY dimension

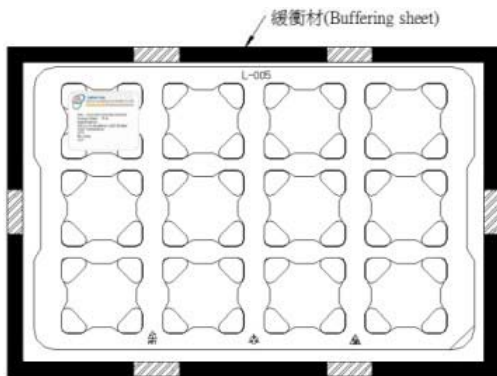


內標籤型式 Label format

FLEDA P/N: C100U1010-100-001-XXXXXX
Bin Code: XXXXXXXX
Lot no.: R-XXXX-XX-X
Amount: EA

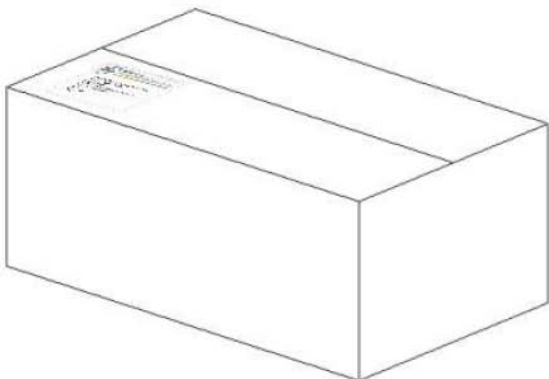
裝入緩衝材

Put tray into Buffering sheet

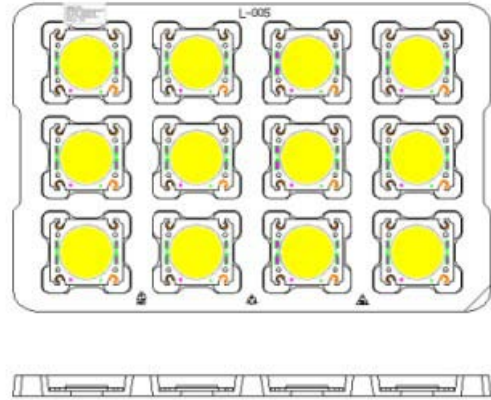


裝入小箱並貼標籤

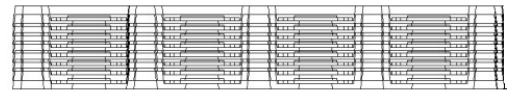
Put into Carton and add label outside



燈芯擺入包裝盤 Put Emitter onto tray



堆疊 加 1 片上蓋 (滿箱)
stack tray with 1 cover (full)



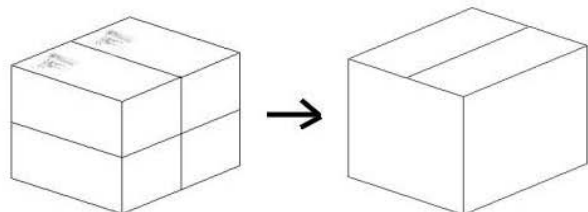
蓋上緩衝材上蓋

Add buffering sheet cover



裝入外箱(外箱=4 小箱)

Put into Outer Box (4 cartons)



使用注意事項 Notice

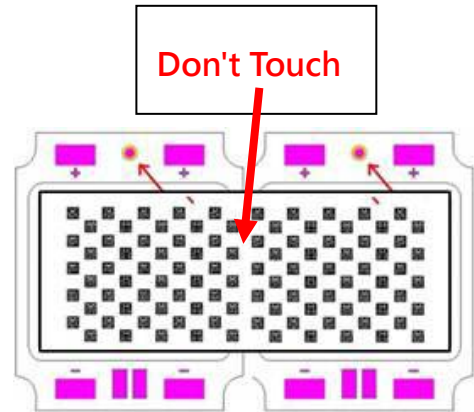
組裝注意事項

1) 禁止碰觸發光區域

Do not touch emitting area

禁止碰觸或破壞發光矽膠外型區域, 會造成晶片或者是金線鍵結力, 進而造成損壞現象

Do not touch or scratch silicon forming matrix area since it could damage the bonding of LED chips or wires and cause dead zone.



2) 組裝方式 Assembly guide line

先將電線焊上燈芯正面之正負極, 再依圖示之螺絲孔位鎖附螺絲於散熱器上

Wiring emitter's anode/cathode pad, then fix emitter with screws onto heat sink

3) 焊接條件 Soldering method

- ◆ 正負極接墊焊錫條件 Cathode/Anode PAD soldering condition: 設定焊頭溫度 $400 \pm 10^{\circ}\text{C}$

Setup the temperature of welding head to $400 \pm 10^{\circ}\text{C}$ when soldering

- ◆ 將燈芯放在 $100 \pm 10^{\circ}\text{C}$ 熱盤上, 將焊槍溫度設為 $300 \pm 10^{\circ}\text{C}$

Put emitter on a $100 \pm 10^{\circ}\text{C}$ hot plate and setup welding head temperature to $300 \pm 10^{\circ}\text{C}$

以上兩者皆可(Either is ok.)

4) 電線(Wire):

燈芯外接電源線建議使用絞線(或軟性電線), 勿使用單芯線(較硬), 以避免組裝折線時, 對CuPCB上線路造成太大應力, 使焊墊之線路拔起而損壞

Suggested using strand wires(Softer) to connect power, don't use solid wires.



使用注意事項

- 一、為避免吸潮建議將產品貯存在放有乾燥劑的乾燥櫃中，貯存溫度為： $5^{\circ}\text{C}\sim 30^{\circ}\text{C}$ ，濕度： $\leq 60\% \text{HR}$ 。
- 二、貯存在濕度較高環境的產品使用前，建議乾燥，乾燥條件為： $100^{\circ}\text{C}\pm 5^{\circ}\text{C}/12$ 個小時。
- 三、產品在焊錫後冷卻過程中避免機械壓力和過大震動。
- 四、回焊後不允許快速冷卻。
- 五、禁止焊接在變形 PCB 板上。
- 六、產品不得接觸水、油、有機溶液。
- 七、產品使用最大溫度值應考慮工作電流大小。
- 八、打開防潮包裝後 7 天內產品使用完畢。
- 九、重新包裝未使用的產品置防潮袋密封好之後貯存在乾燥的地方。
- 十、產品外觀尺寸可更改而不另行通知。
- 十一、防靜電要求：使用產品時，必須戴防靜電環或防靜電手套，所有設備、裝置、機台必須有效接地。
- 十二、該產品必須配置恒流源驅動。

Notice

1. In order to avoid absorption of moisture, it is recommended that the products are stored in the dry box (or desiccators) with a desiccants. Alternatively the following environment is recommended:
Storage temperature : $5^{\circ}\text{C}\sim 30^{\circ}\text{C}$ Humidity:60% HR max.
2. If the storage conditions are of high humidity the product should be dried before use.
Recommended drying conditions: 12 hours at $100^{\circ}\text{C}\pm 5^{\circ}\text{C}$
3. Any mechanical force or any excess vibration should be avoid during the cooling process after soldering.
4. Reflow rapidly cooling should be avoided.
5. Components should not be mounted on distorted Printed Circuit Boards.
6. Devices should not contact with any types of fluid, such as water , oil , organic solvents.... etc.
7. The maximum ambient temperature should be taken into consideration when determining the operating current.
8. Devices should be soldered within 7 days after opening the moisture-proof packing.
9. Repack unused product in anti-moisture packing, fold to close any opening and store in a dry place.
10. The appearance and specifications of devices may be modified for improvement without notice.
11. ESD Precautions Static Electricity and surge damages LEDs. It is recommended that wrist bands or anti-electrostatic gloves be used when handling the LEDs . All devices, equipment and machinery should be properly grounded.
12. This product must be driven by constant power supplier.