AST GROUP

Datasheet

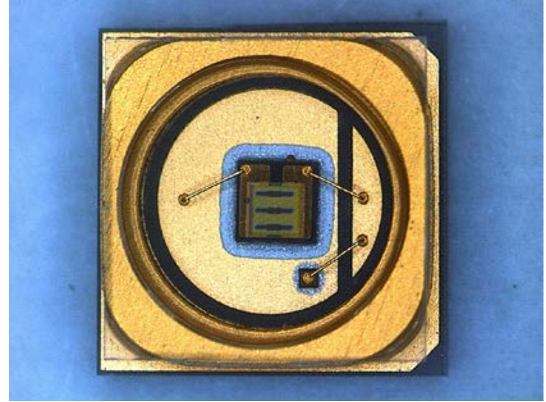
ASIANTECH OPTIC CORP.

深紫外光1W 3737 氮化鋁鍍金碗杯式陶瓷封裝產品規格書

Deep Ultraviolet(DUV) 1W 3737 AlN Au-plating Cavity Ceramic Package Product Data Sheet

一類產品/一種品名

PC-KYW1IO-R0



Contents

☐ 產品特性 Features

☐ 產品編碼 Product Nomenclature

☐ 封裝外觀尺寸 Package Dimensions

☐ 光電特性 Electro-optical Characteristics

☐ 絕對最大額定值 Absolute Maximum Ratings

☐ 光譜分佈圖 Spectrum Distribution

☐ 特性曲線 Characteristic Curves

☐ 典型發光圖形 Typical Radiation Pattern

☐ 典型迴焊曲線 Typical Reflow Profile

☐ 包裝方式 Packing

☐ 使用注意事項 Notice

產品特性與應用 Features and Applications:

■ Feature 特性

◆ 1W 3737 Cu Cavity AlN Au-plating Ceramic Package
(1W 3737 銅杯氮化鋁鍍金陶瓷封裝)

◆ Viewing Angle (2θ1/2) : 120˚
(視角：120˚)

◆ Solder Pastes for Die Attach
(錫膏固晶)

■ Applications 應用

◆ Special Lighting
(特殊照明)

產品編碼 Product Nomenclature

P	C	-	K	Y	W	1	I	O	-	R	0
X1	X2		X3	X4	X5	X6	X7	X8		X9	X10

X1&X2 - Module (模組)	
Code(X1&X2)	Type
PC	Ceramic

X3 - Color 顏色	
Code(X3)	Type
K	UV 265-285nm

X4 - Lens 透鏡	
Code(X4)	Type
F	60° Quartz Lens
K	Sapphire Flat
Y	石英 Flat
X	120° Quartz Lens

X5 - Substrate 基板	
Code(X5)	Type
W	3737 Cu Cavity

X6 - Power 功率	
Code(X6)	Type
1	1W 單晶
Q	0.2W 單晶

X7 - Chip 芯片	
Code(X7)	Type
I	UVC on submount

X8 - Version 版本	
Code(X8)	Type
M	Solder paste 固晶+單向zener
O	Solder paste 固晶+雙向zener

X9 - Packing 包裝	
Code(X9)	Type
R	Reel

X10 - CRI 演色性	
Code(X10)	Type
0	no limit

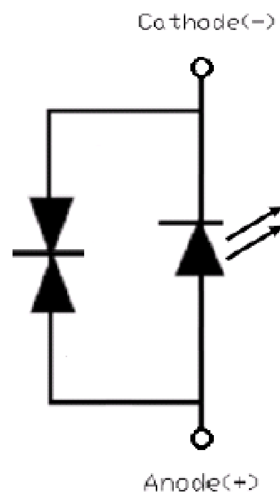
封裝外觀尺寸 Package Dimensions:

Cathode
3,7
3,7
0,15
0,6
0,5
1,52
3,7
3,7
Anode
3,3
0,53
0,45
3,3

0,5
1,15
0,5
0,4
1,65
3,3
0,5
1,3
3,3

Recommended Solder Pad

CirCuit Diagram



Notes :

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

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

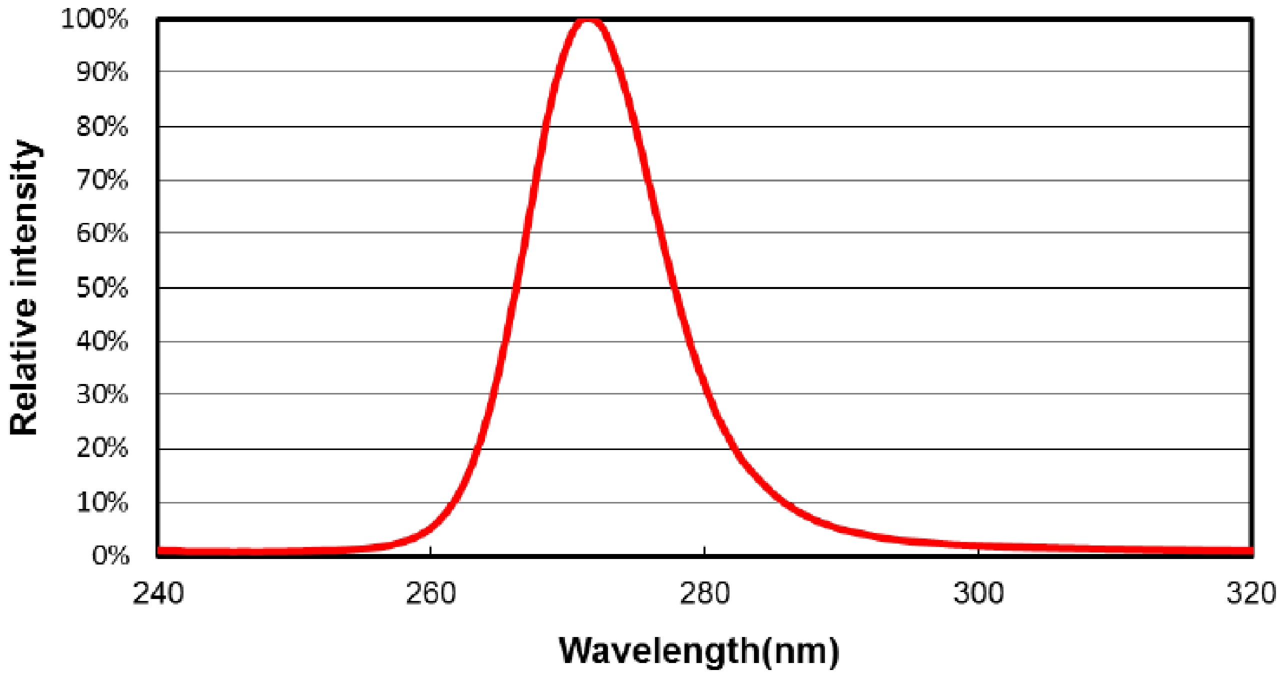
Parameter (參數)	Symbol (符號)	Conditions (測試條件)	Min. (最小值)	Avg. (平均值)	Max. (最大值)	Units (單位)
Radiant Flux (幅射通量)	Φe	IF=100mA	8		15	mW
Peak Wavelength (峰波長)	WLP	IF=100mA	265		300	nm
Forward Voltage (順向電壓)	V_F	IF=100mA	6		10	V
Viewing Angle[1] (發光角度)	$2\theta_{1/2}$	IF=100mA		120		degrees

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	1	W
DC Forward Current (順向直流電流)	I_F	100	mA
Operating Temperature Range (工作溫度)	T_{OPR}	-30℃ To +60℃	
Storage Temperature Range (儲存溫度)	T_{STG}	-40℃ To +100℃	

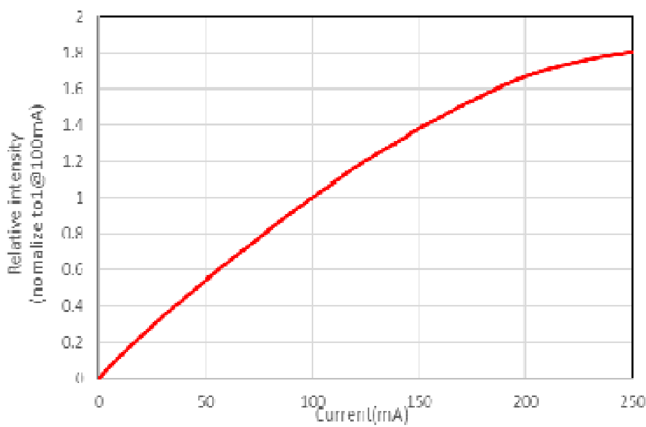
Notes :
[1]. Tolerance ⊖:10˚ (⊖ 公差為 10˚)
[2]. 1/10 Duty Cycle 0.1ms Pulse Width (脈衝寬度 0.1ms，佔空比 1/10)

光譜分佈圖 Spectrum Distribution

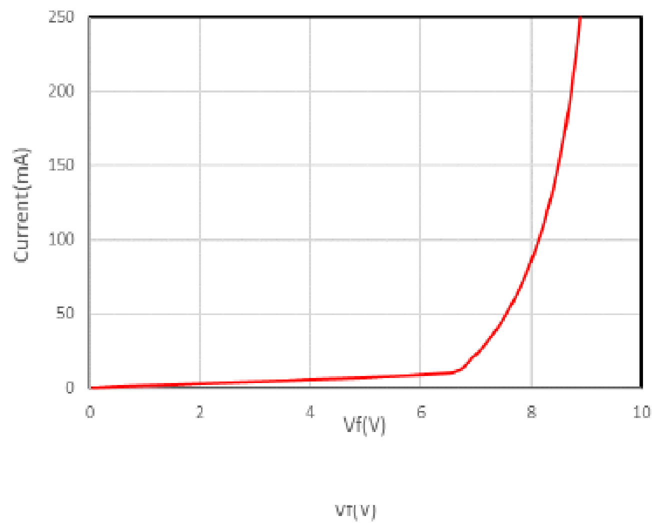


特性曲線 Characteristic Curves

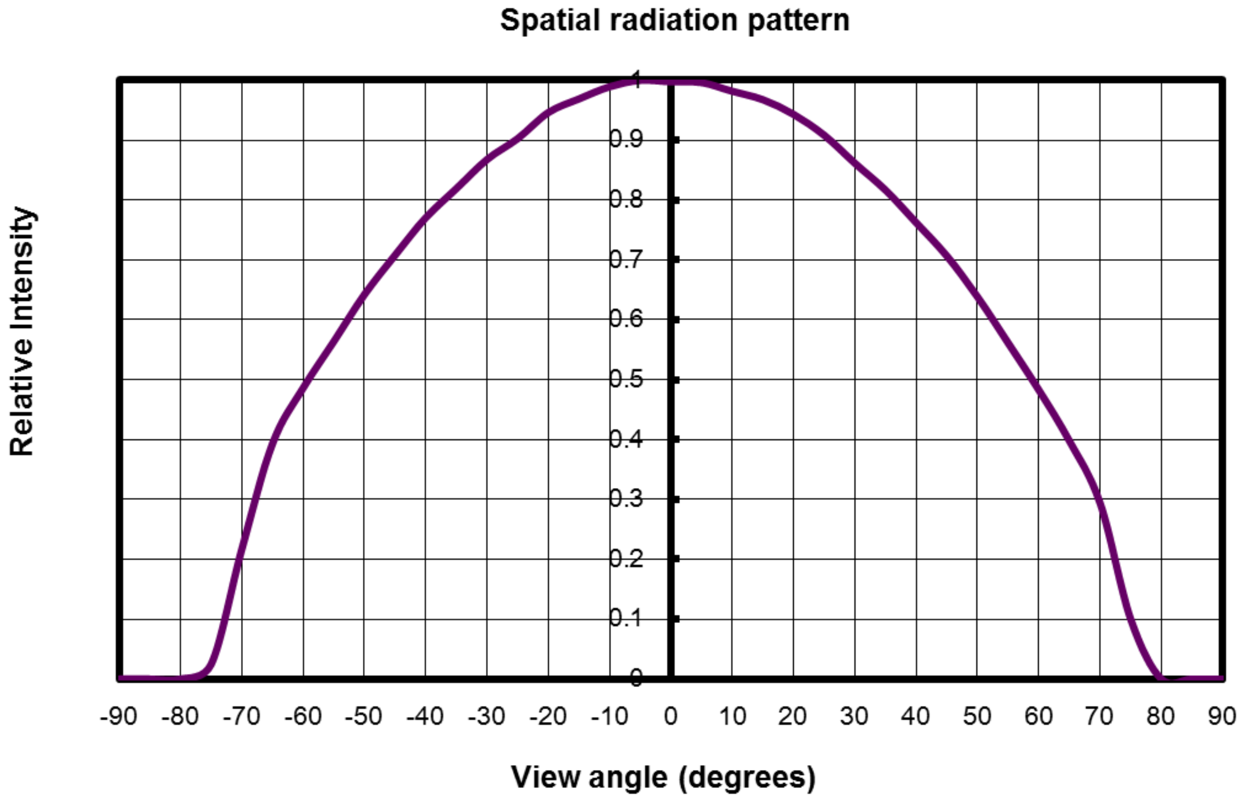
Radiant flux (Φe) vs Current(IF)

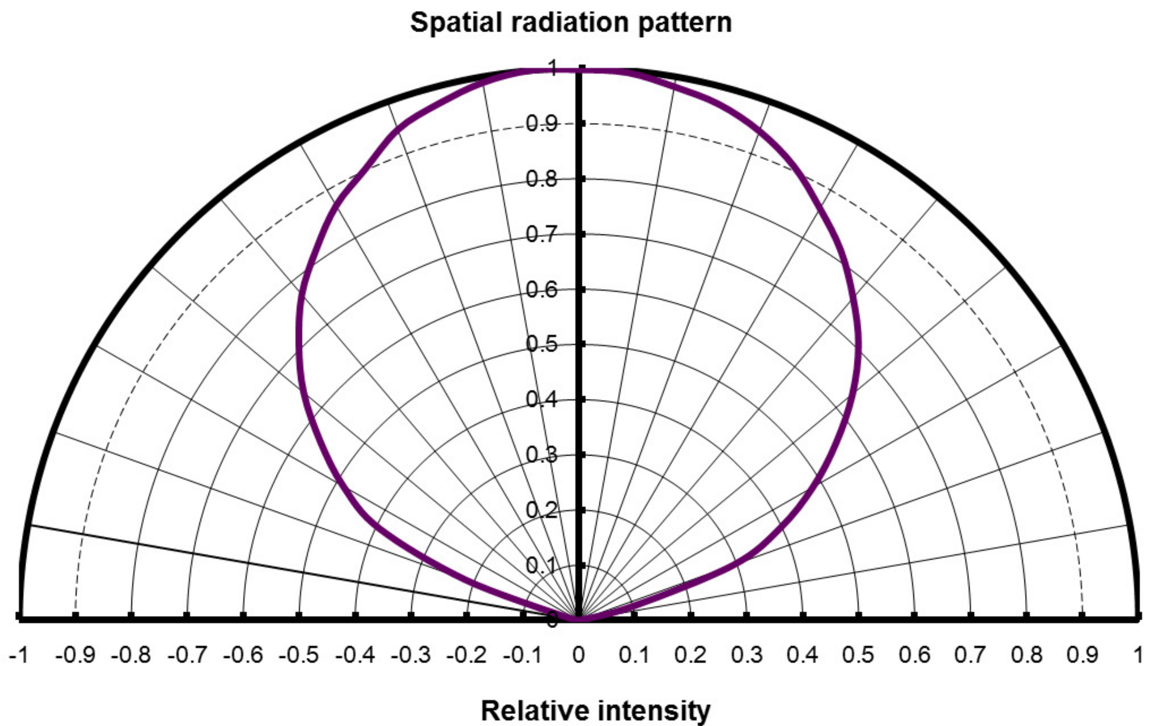


Current(IF) vs Voltage(VF)



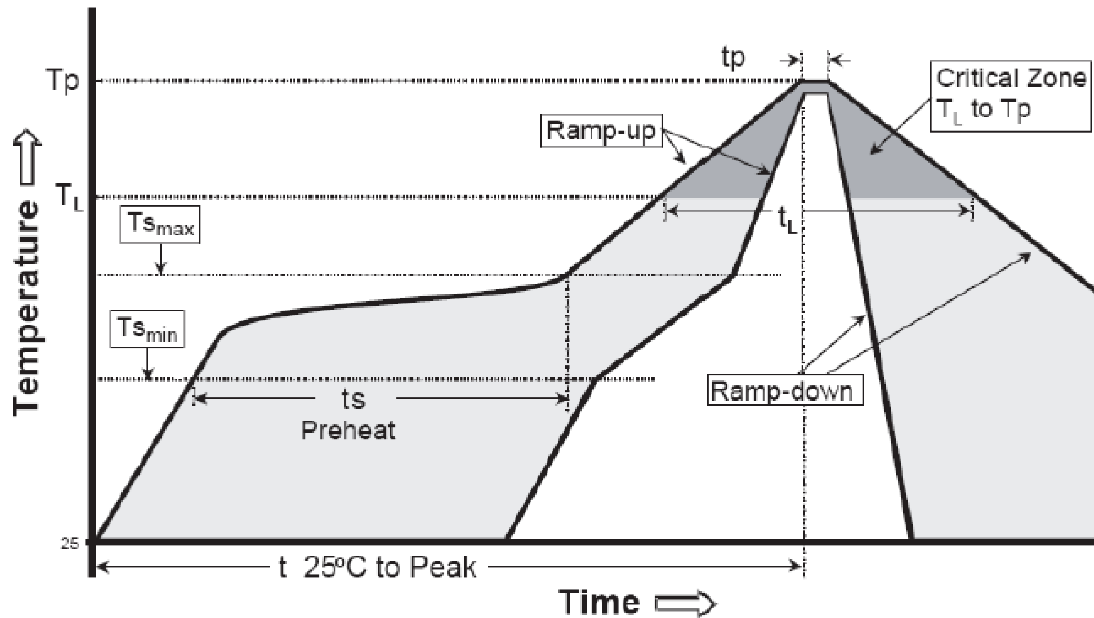
典型發光圖形 Typical Radiation Pattern





典型迴焊曲線 Typical Reflow Soldering Profile

- Reflow Soldering Temperature Profile

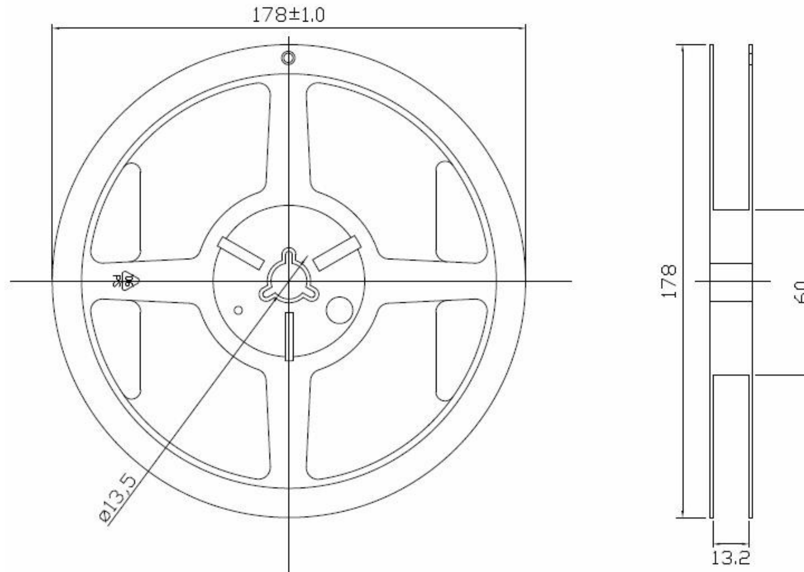


Profile Feature	Typical parameters
Average Ramp-Up Rate (Ts_{max} to Tp)	3 °C/second max.
Preheat Temperature Min (Ts_{min})	100 °C
Preheat Temperature Max (Ts_{max})	150 °C
Time (Ts_{min} to Ts_{max})	60-120 seconds
Time maintained above Temperature (TL)	180 °C
Time maintained above Time (TL)	60-150 seconds
Peak/Classification Temperature (Tp)	200 °C
Time within 5 °C of Actual Peak Temperature (Tp)	5 seconds
Ramp-Down Rate	6 °C/second max.
Time 25 °C to Peak Temperature	6 minutes max.

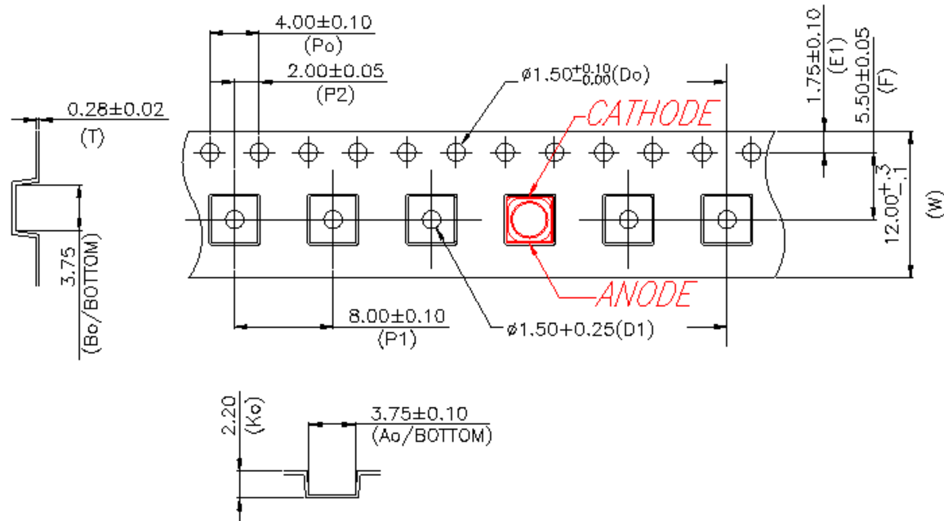
包裝方式 Packing

料帶包裝 (Tape-and-Reel Packing)

- Reel Dimensions



- Carrier Tape Dimensions



Note

All dimensions are in millimeters (所有尺寸以mm 毫米為單位)

使用注意事項 Notice

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℃~30℃，濕度：≤60%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：60℃±5℃/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再另行通知。
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、該產品必須配置恆流源驅動。
十三、本產品為錫膏固晶，回流焊作業時，最高溫度不得超過200°C。

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°C~30°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 60°C±5°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 handing the LEDs . All devices, equipment and machinery should be properly grounded.
12. This product must be driven by constant power supplier.
13. This product die attach is solder pastes. The maximum temperature should not exceed 200 °C during reflow soldering.