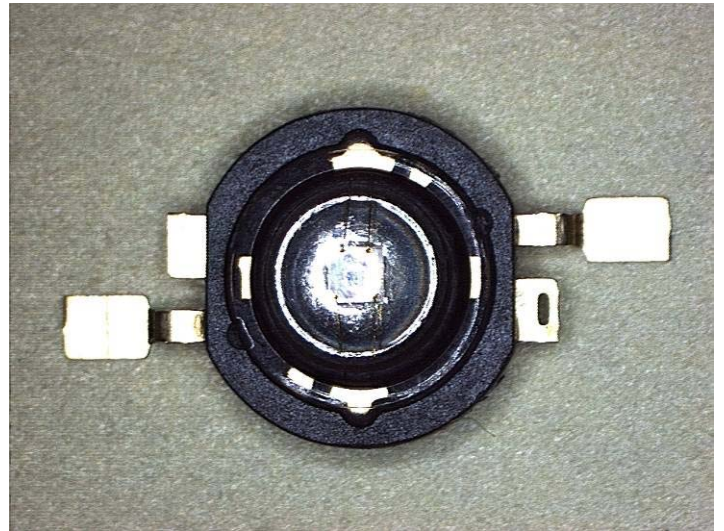


紫外光 3W emitter 黑殼封裝產品規格書

Ultraviolet (UV) 3W emitter package product data sheet

PE-U2C3AA-T0/R0



Contents

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- 產品編碼 Product Nomenclature
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- 典型迴焊曲線 Typical Re-flow Profile
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- 使用注意事項 Notice



產品特性與應用 Features and Applications:

■ Feature 特性

- ◆ 3W High Power Emitter LED
(3W 仿流明大功率 LED)
- ◆ Silicone compression molding lens
(矽膠壓模成型透鏡)
- ◆ Half Angle (2θ 1/2) : 140°
(視角：140°)
- ◆ Lens Color : Silicone Water Clear
(透鏡顏色：矽膠無色透明)

■ Applications 應用

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

產品編碼 Product Nomenclature

下表將描述產品品名 (Product Type) 之命名原則，有關光電特性規格之定義，請參考分類碼規格 (Bin Code Specification) 章節之規範。

P E - U 2 C 3 A A - T 0
 X1 X2 X3 X4 X5 X6 X7 X8 X9 X10

X1&X2 - Module (模組)	
Code (X1&X2)	Type
PA	5630 SMD
PE	Emitter
PS	5050 SMD

X3 - Color 顏色	
Code(X3)	Type
U	Ultraviolet
B	Blue
G	Green
Y	Yellow
R	Red
C	Infrared(660nm)
E	Infrared(740nm)
D	Infrared(850nm)

X4 - Lens 透鏡	
Code(X4)	Type
0	Flat
1	Lambertian-I
2	Lambertian-II
3	60° Lens

X5 - Substrate 基板	
Code(X5)	Type
A	White LF Au-plating
B	White LF Ag-plating
C	Black LF Au-plating
D	Black LF Ag-plating
H	Black LF Au-凹杯

X6 - Power 功率	
Code(X6)	Type
1	1W (2-4V)
2	2W (2-4V)
3	3W(2-4V)
H	0.5W(2-4V)
Q	0.2W(2-4V)
S	0.06W(2-4V)

X7 - Chip 芯片	
Code(X7)	Type
A	Chip-A
B	Chip-B
C	Chip-C

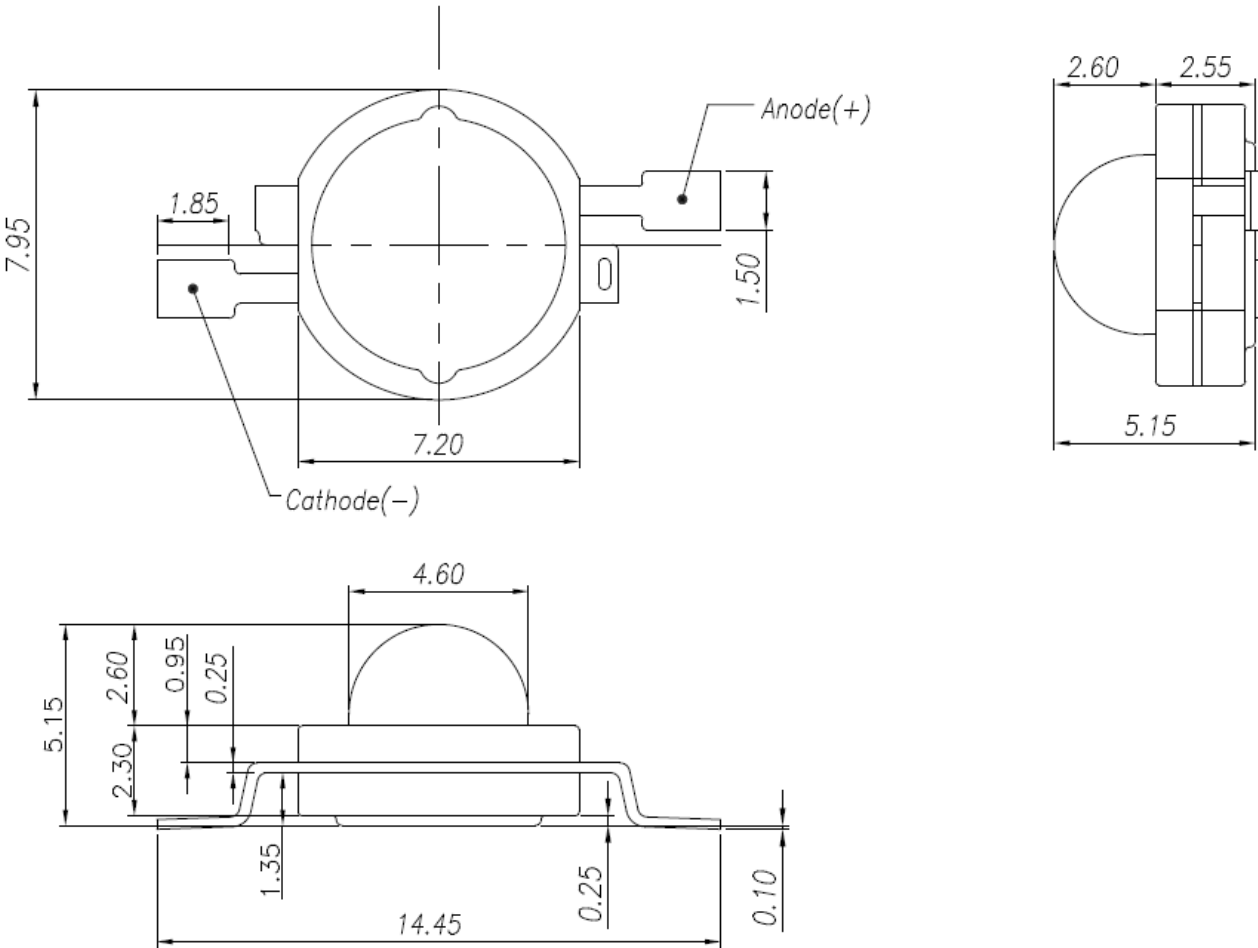
X8 - Version 版本	
Code(X8)	Type
A	Ver.A (Normal)
B	Ver.B (單向 Zener included)
C	Ver.C (STAR)
D	Ver.D (雙向 Zener included)

X9 - Packing 包裝	
Code(X9)	Type
T	Tube
R	Reel

X10 - CRI 演色性	
Code(X10)	Type
0	no limit
6	60 (min)
7	70 (min)
8	80 (min)
9	90 (min)



封裝外觀尺寸 Package Dimensions:



Notes :

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



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

Parameter (参数)	Symbol (符号)	Conditions (测试条件)	Min. (最小值)	Avg. (平均值)	Max. (最大值)	Units (单位)
Radiant Flux (幅射通量)	Φ_e	IF=350mA	15		600	mW
Peak Wavelength (主波長)	WLP	IF=350mA	365		430	nm
Forward Voltage (順向電壓)	V_F	IF=350mA	2.8		4	V
Thermal Resistance Junction To Board (熱阻)	R_{thJ-B}	IF=350mA		13		°C/W
Temperature Coefficient of Forward Voltage (順向電壓之溫度係數)	$\Delta V_F/\Delta T$	IF=350mA		2		mV/°C
Reverse Current (反向漏电流)	IR	VR=5V			10	μA
Viewing Angle[1] (發光角度)	$2\theta_{1/2}$	IF=350mA	130	140	150	Deg

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

Parameter (参数)	Symbol (符号)	Ratings (數值)	Units (單位)
Power Dissipation (消耗功率)	P_D	3	W
Continuous Forward Current (持續順向輸入電流)	I_F	700	mA
Peak Forward Current [2] (順向脈衝電流)	$I_F(\text{Peak})$	1000	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}	240°C±10°C For 3-5 Seconds	
ESD Sensitivity (抗靜電能力)	ESD	2000V HBM	

Notes:

[1]. Tolerance $\Theta:10^\circ$, (Θ 公差为 10°)

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



分類碼規格 Bin Code Specification

P F E A B Q 7 B 0
 Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8 Y9

Y1 - Item (類型)	
Code(Y1)	Type
P	STANDARD

Y2 - Condition 測試條件		
Code(Y2)	IF(mA)	Unit
H	150	mW
F	350	mW
J	700	mW

Y3/Y4 - Peak Wavelength Group 峰波長類別			
UV (400nm)			
Code(Y3/Y4)	WLP (nm)	Code(Y3/Y4)	WLP (nm)
VE	360.0-362.5	VS	395.0-397.5
VF	362.5-365.0	VT	397.5-400.0
VG	365.0-367.5	EA	400.0-402.5
VH	367.5-370.0	EB	402.5-405.0
VI	370.0-372.5	EC	405.0-407.5
VJ	372.5-375.0	ED	407.5-410.0
VK	375.0-377.5	EE	410.0-412.5
VL	377.5-380.0	EF	412.5-415.0
VM	380.0-382.5	EG	415.0-417.5
VN	382.5-385.0	EH	417.5-420.0
VO	385.0-387.5	EI	420.0-422.5
VP	387.5-390.0	EJ	422.5-425.0
VQ	390.0-392.5	EK	425.0-427.5
VR	392.5-395.0	EL	427.5-430.0

Y5&Y6 - Radiant Flux 輻射通量			
Code(Y5)	Code(Y6)	Min. (mW)	Max. (mW)
A	A	0.1	15
A	B	15	30
A	C	30	45
A	D	45	60
A	E	60	75
A	F	75	90
A	G	90	105
A	H	105	120
A	I	120	135
A	J	135	150
A	K	150	165
A	L	165	180
B	O	180	210
B	P	210	240
B	Q	240	285
B	R	285	325
B	S	325	380
A	X	380	410
A	Y	410	440
A	Z	440	480
B	A	480	520
B	B	520	560
B	C	560	600
B	D	600	650
B	E	650	700
B	X	700	820
B	Y	820	950
B	Z	950	1100
C	A	1100	1300
C	B	1300	1500

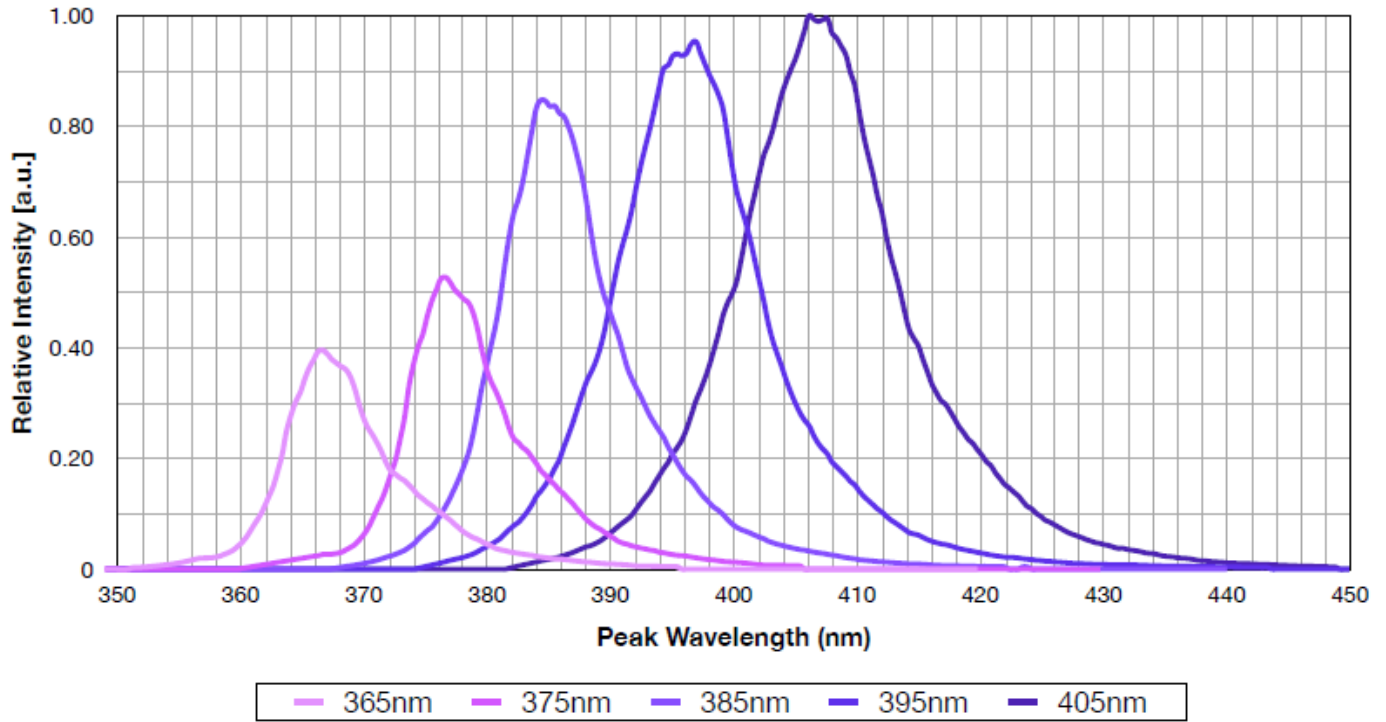
Y7 - Forward Voltage 順向電壓		
Code(Y7)	Min. (V)	Max. (V)
0	1.8	2
1	2	2.2
2	2.2	2.4
3	2.4	2.6
4	2.6	2.8
5	2.8	3
6	3.0	3.2
7	3.2	3.4
8	3.4	3.6
9	3.6	3.8
A	3.8	4.0
B	4.0	4.2
C	4.2	4.4
D	4.4	4.6
E	4.6	4.8
F	4.8	5

Y8 - Others 其它		
Code(Y8)	Ir (μA)	WLP step
B	0-10	2.5 nm

Y9 - TBD. 保留碼	
Code(Y9)	Type
0	Default

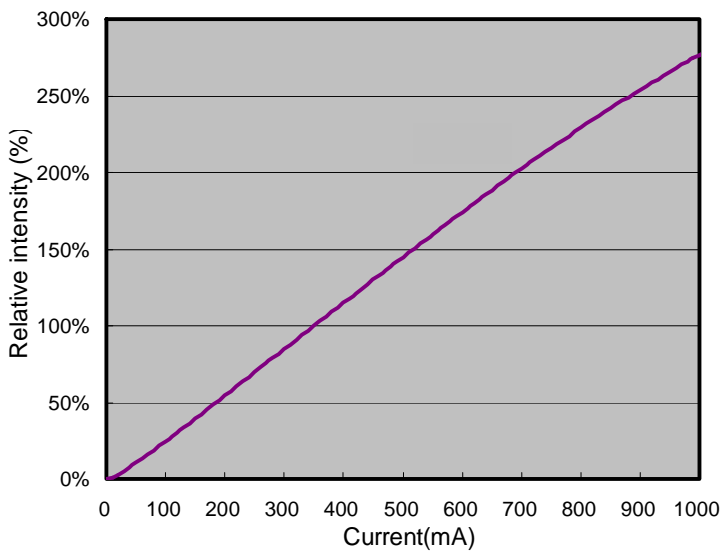


光譜分佈圖 Spectrum Distribution

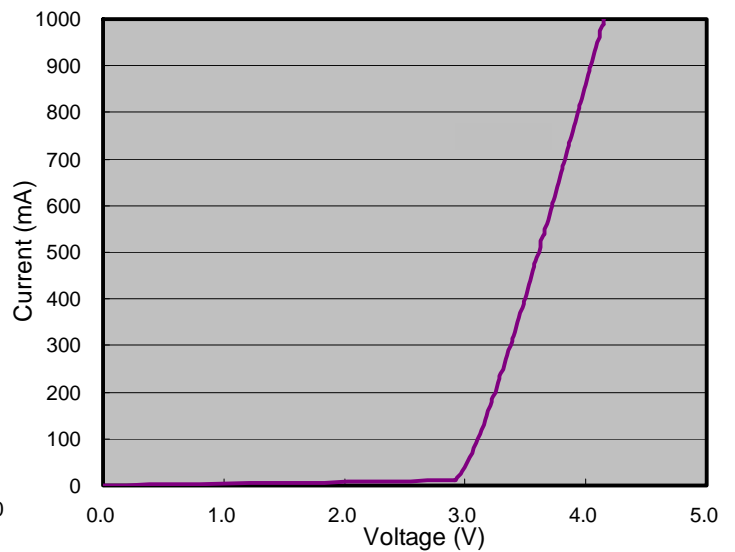


特性曲線 Characteristic Curves

Radiant flux (Φ_e) vs Current(IF)

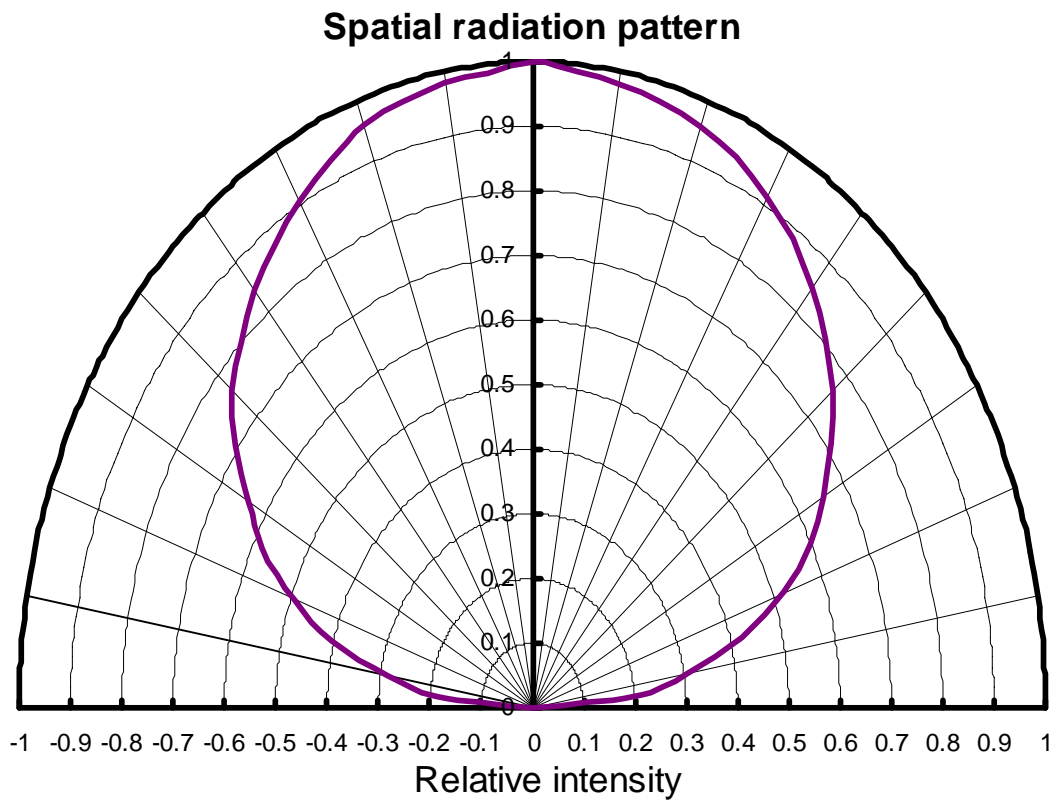
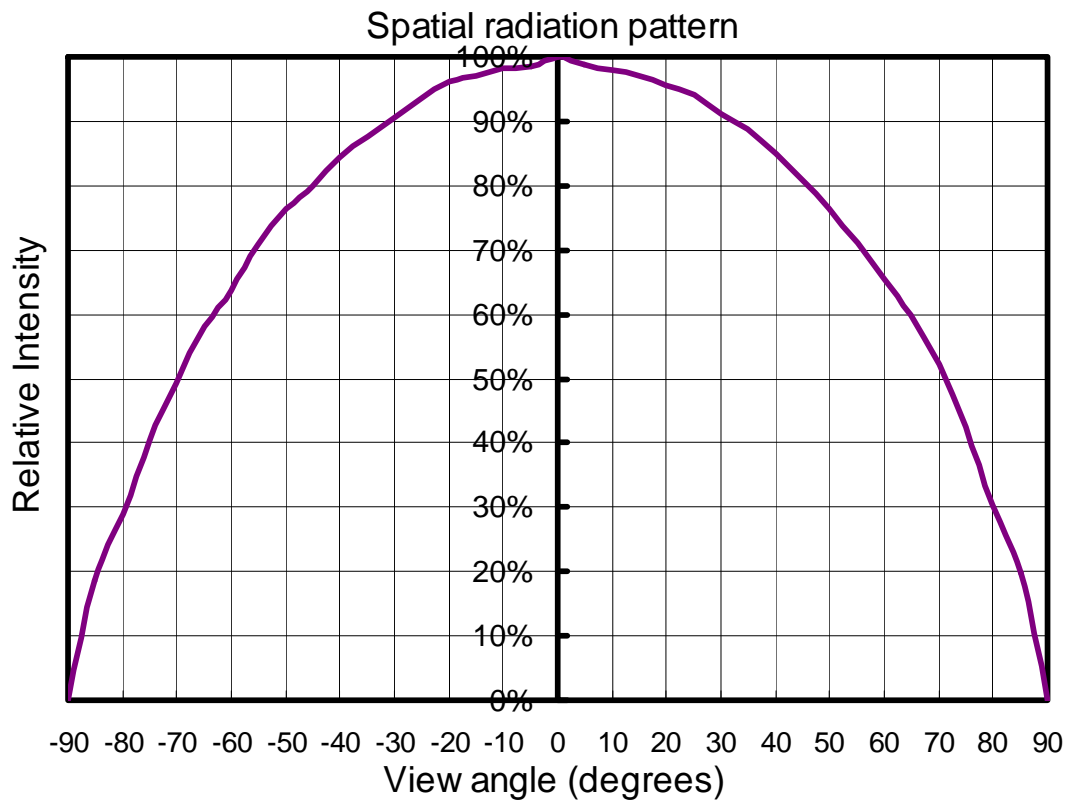


Current(IF) vs Voltage(VF)



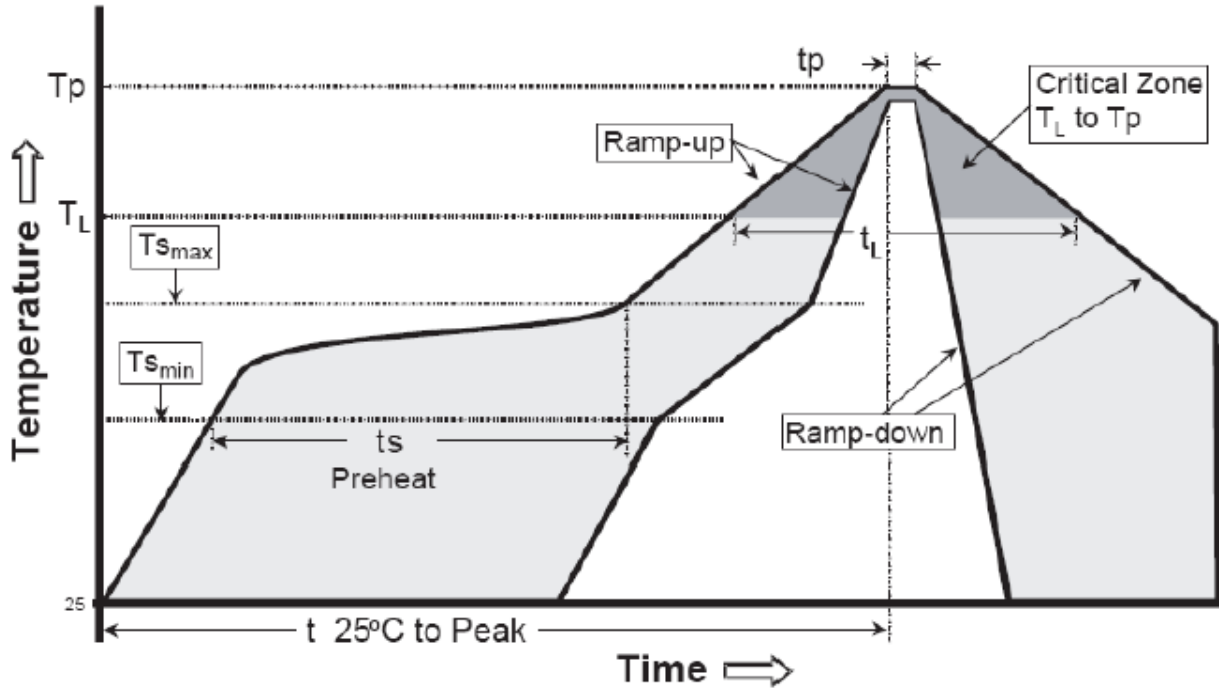


典型發光圖形 Typical Radiation Pattern



典型迴焊曲線 Typical Reflow Soldering Profile

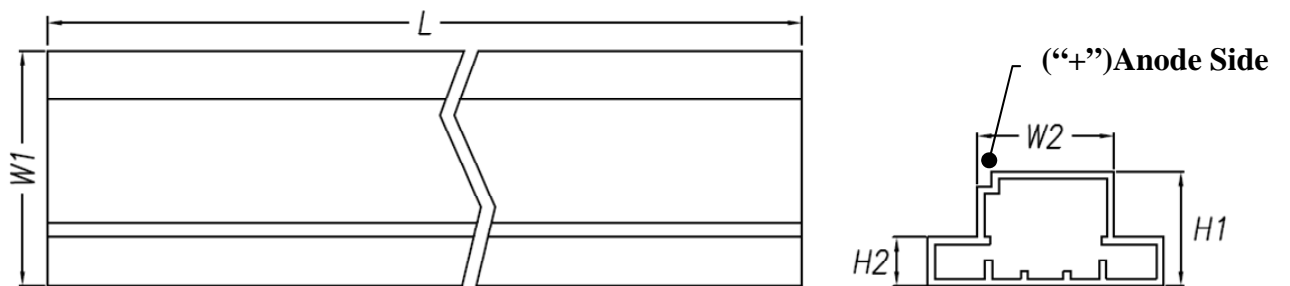
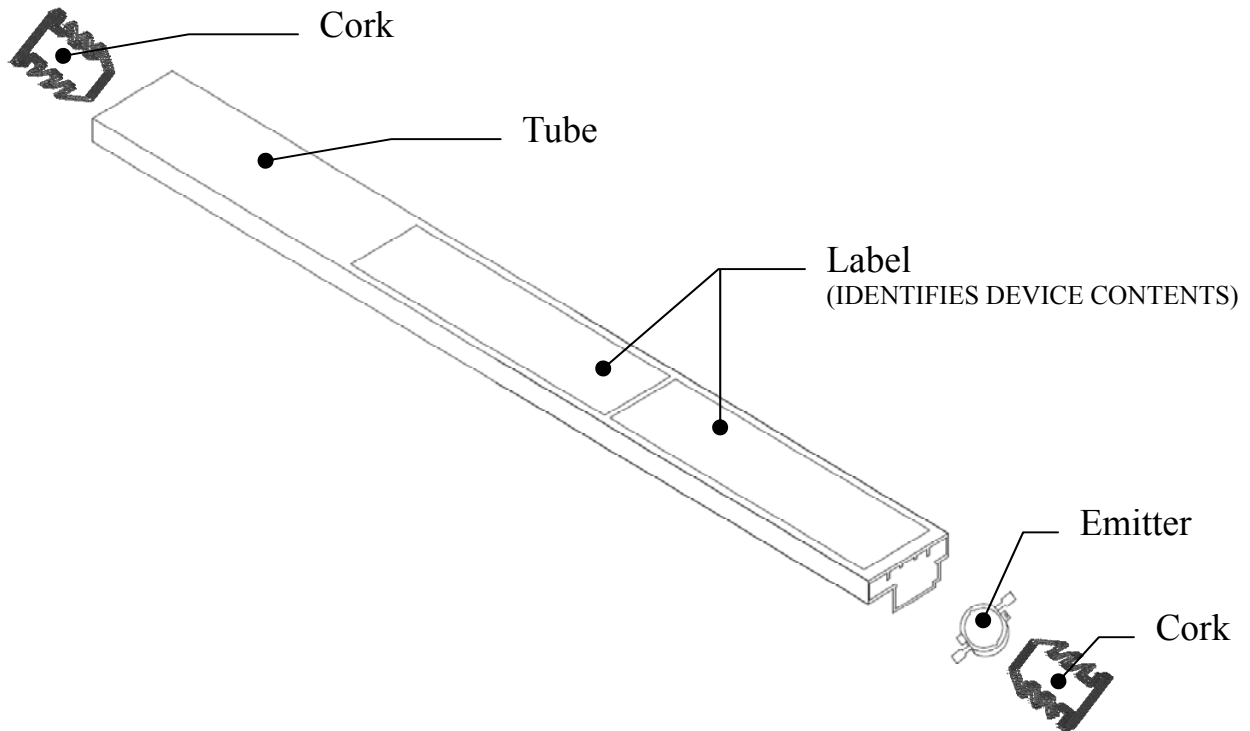
Reflow soldering temperature profile



Profile Feature	Typical parameters
Average Ramp-Up Rate ($T_{s_{max}}$ to T_p)	3 °C/second max.
Preheat Temperature Min ($T_{s_{min}}$)	150 °C
Preheat Temperature Max ($T_{s_{max}}$)	200 °C
Time ($t_{s_{min}}$ to $t_{s_{max}}$)	60-180 seconds
Time maintained above Temperature (T_L)	217 °C
Time maintained above Time (t_L)	60-150 seconds
Peak/Classification Temperature (T_p)	240 °C
Time within 5 °C of Actual Peak Temperature (t_p)	5 seconds
Ramp-Down Rate	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

包裝方式 Packing

料管包裝 (Tube packing)

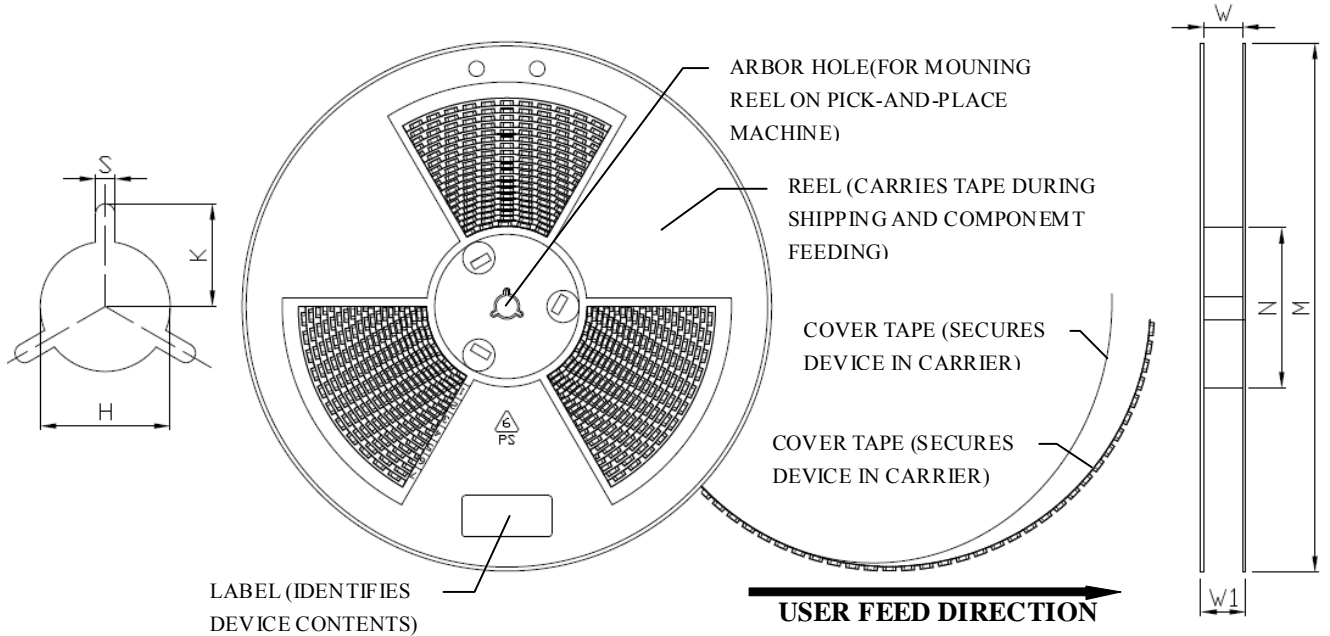


Unit : mm

W1	W2	H1	H2	L
16.5	9.6	8.0	3.4	424.0
±0.2	±0.2	±0.2	±0.2	±2.0

料帶包裝 (Tape-and-Reel packing)

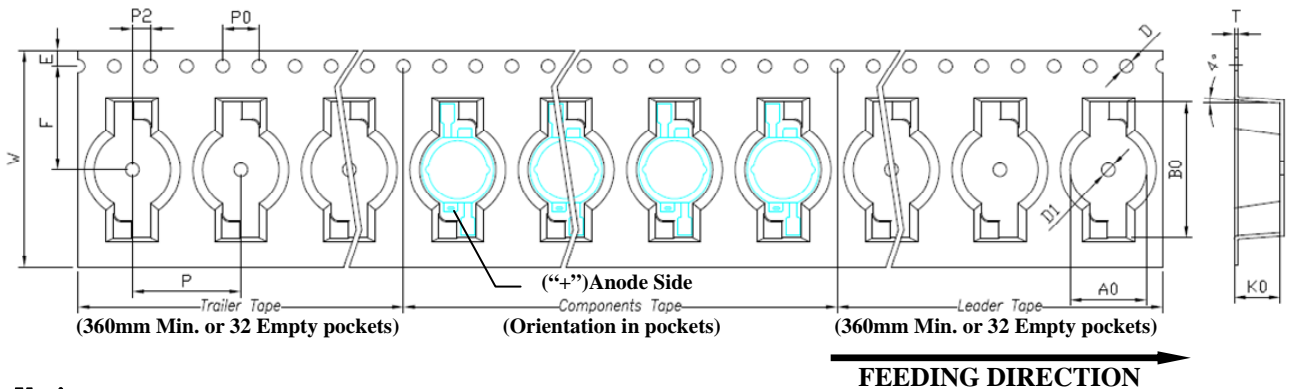
● Reel dimensions



Unit : mm

M	N	W	W1	H	K	S
Φ330.0	Φ99.5	24.4	29.0	Φ13.5	10.75	2.5
±1.0	±1.0	±1.0	±1.0	±0.5	±0.5	±0.5

● Carrier tape dimensions



Unit : mm

W	P	E	F	P2	D	D1	P0	A0	B0	K0	T
24.0	12.0	1.75	11.5	2.0	1.5	1.5	4.0	8.45	15.0	5.10	0.37
±0.3	±0.1	±0.1	±0.1	±0.1	+0.1	±0.25	±0.1	±0.1	±0.1	±0.1	±0.02



使用注意事項 Notice

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 handing the LEDs . All devices, equipment and machinery should be properly grounded.
12. This product must be driven by constant power supplier.