LUMISEE®

High Power Ceramic 3535 UV 3W
L35U-***11C2A-LGVV

RoHS

Product Brief（产品简介）

Description （描述）

. This surface-mount LED size is standard package: 3.45x3.45x2.26mm
. The L35U series is designed for high flux output applications with high current operation capability.

Features And Benefits （特性优点）

. Ceramic and Silicone Molding Package
. Low thermal resistance
. Pb-free reflow soldering application
. High Reliability
. RoHS Compliant
. Suitable for all SMT assembly and solder process

Key Applications （应用）

- Ultraviolet Disinfection
- UV Curing
- UV Ink Curing
- Printing
- Moth-killing lamp
- Medical Treatment and Health
- General Use

Table 1. Product Selection Table （产品目录）

Parameter	Peak Wavelength (5nm/Bin)			
	Color	Min.	Typ.	Max.
L35U-36511C2A-LGVV	UV	365	-	370
L35U-38011C2A-LGVV	UV	380	-	385
L35U-38511C2A-LGVV	UV	385	-	390
L35U-39011C2A-LGVV	UV	390	-	395
L35U-39511C2A-LGVV	UV	395	-	400
L35U-40011C2A-LGVV	UV	400	-	405
L35U-40511C2A-LGVV	UV	405	-	410
L35U-41011C2A-LGVV	UV	410	-	415
L35U-41511C2A-LGVV	UV	415	-	420
L35U-42011C2A-LGVV	UV	420	-	425

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Performance

Table 2. Electro Optical Characteristics （光电特性）, Ta = 25℃, RH60%

WP Bin Code	IF=350mA, Unit: nm	
	Min	Max
B1	365	370
B2	370	375
B3	375	380
B4	380	385
B5	385	390
B6	390	395
B7	395	400
B8	400	405
B9	405	410
G1	410	415
G2	415	420
G3	420	425

•Wavelength measurement tolerance is ±2nm.
• Correlated Color Temperature is derived from the CIE 1931 Chromaticity diagram.
• The luminous intensity Iv was measured at the peak of the spatial pattern which may not be aligned with the mechanical axis of the LED package.
• The lumen table is only for reference.

Performance

Table 3. Electro Optical Characteristics （光电特性）, Ta = 25℃, RH60%

Part Number	Peak Wave length (nm)	Forward Current	Forward Voltage (V)			Radiometric Power (mW)		
			Min.	Max.	Typ.	Min.	Max.	Typ.
L35U-36511C2A	365-370	500	3.2	3.8	-	1000	1100	-
L35U-38011C2A	380-385	500	3.2	3.8	-	1000	1100	-
L35U-38511C2A	385-390							
L35U-39011C2A	390-395	500	3.2	3.8	-	1000	1100	-
L35U-39511C2A	395-400							
L35U-40011C2A	400-405	500	3.2	3.8	-	1000	1100	-
L35U-40511C2A	405-410							
L35U-41011C2A	410-415	500	3.2	3.8	-	900	1000	-
L35U-41511C2A	415-420							
L35U-42011C2A	420-425	500	3.2	3.8	-	900	1000	

Table 4. Absolute Maximum Ratings （最大额定参数）, Ta = 25℃, RH60%

Item	Symbol	Absolute Maximum Ratings	Unit
Forward Current	IF	1000	mA
Power Dissipation	PD	3	W
Peak Forward Current	IFP	1000	mA
Operating Temperature	Topr	-40～+85	℃
Storage Temperature	Tstg	-40～+100	℃
Electrostatic Discharge	ESD	2000	V
Junction Temperature	Tj	125	℃
Thermal Resistance	Rth(j-s)	4.5	℃/W
Spectrum Radiation Bandwidth	Δλ	12	nm
Viewing Angle	2Θ1/2	120	Deg.

- Tolerance of measurement of Luminous Flux or Radiometric Power: ±10%
- Tolerance of measurement of wavelength: ±2nm
- Tolerance of measurement of Forward Voltage: ±0.05V
- All the data are just for reference, specific parameters refer to the label
- When the LEDs are in operation the maximum current should be decided after measuring the package temperature, junction temperature should not exceed the maximum rate.

Relative Spectral Distribution

Fig 1. Color Spectrum （光谱图）, Ta = 25℃, RH60%

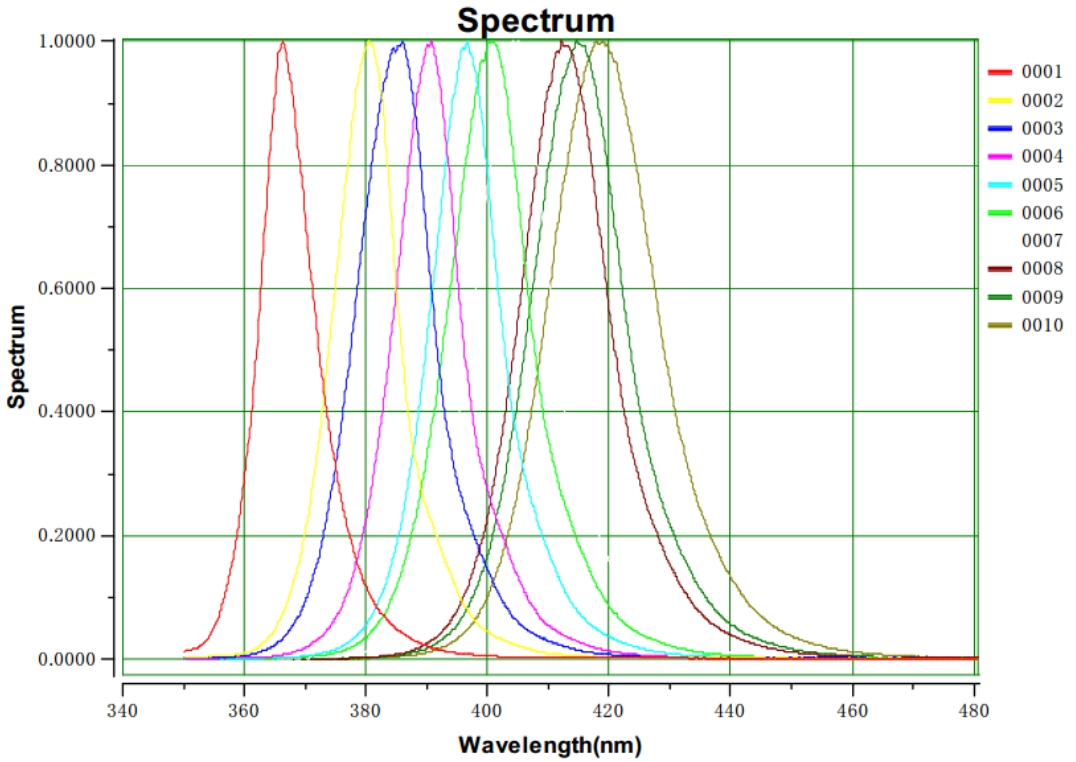
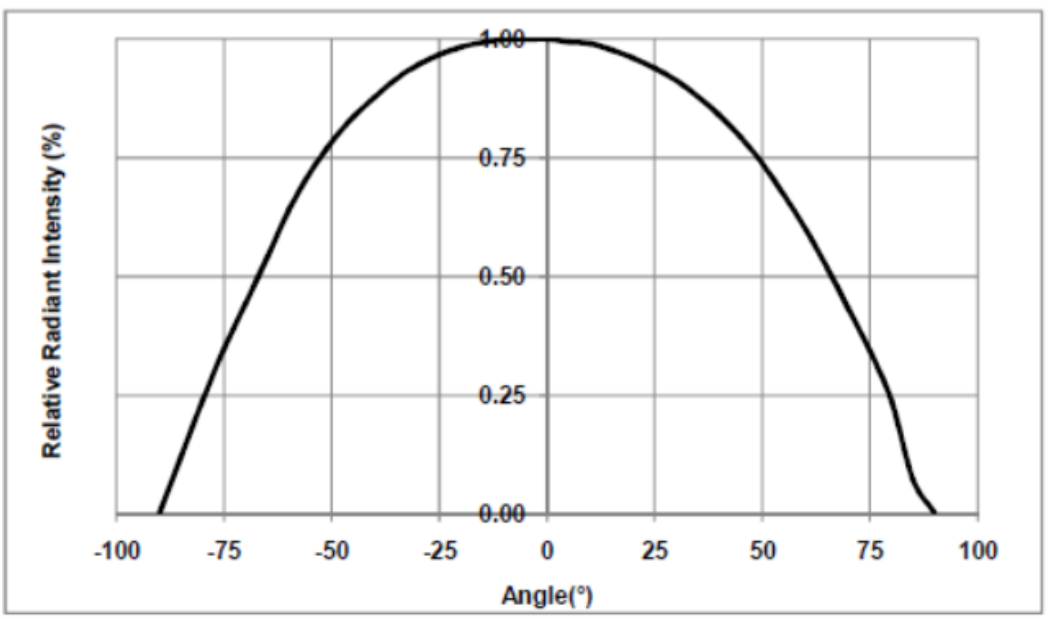
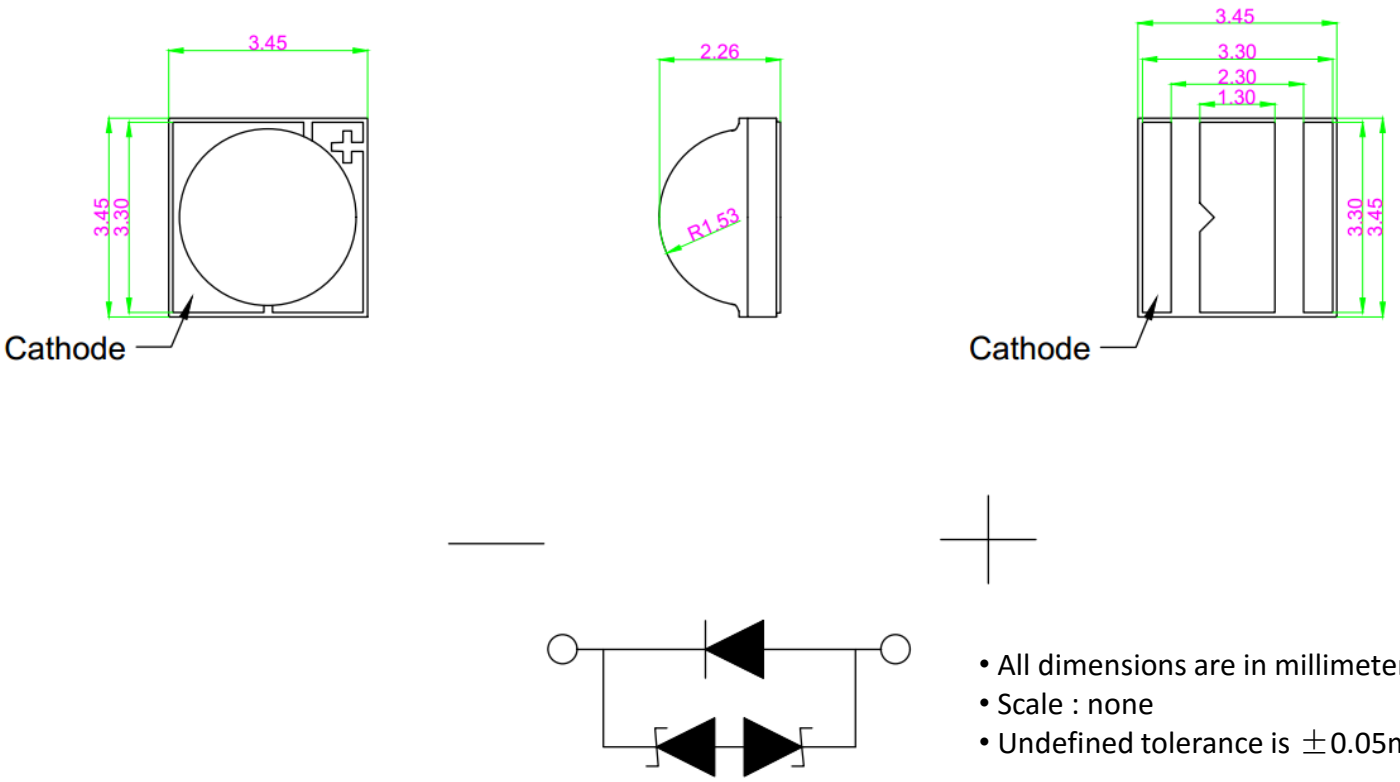


Fig 2. Radiation Diagram （发光角度）, Ta = 25℃, RH60%



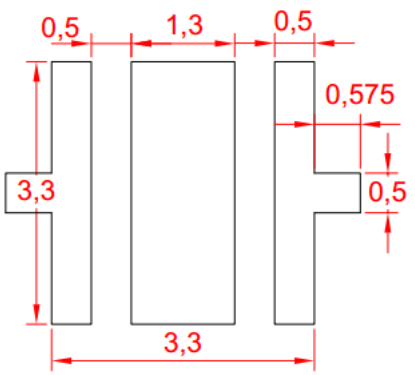
Outline Vs. Recommended Solder Pad

Fig3. Mechanical Dimensions （产品尺寸）

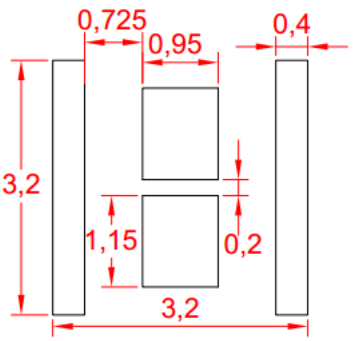


- All dimensions are in millimeters.
- Scale : none
- Undefined tolerance is ±0.05mm

Fig4. Recommended Solder Pad



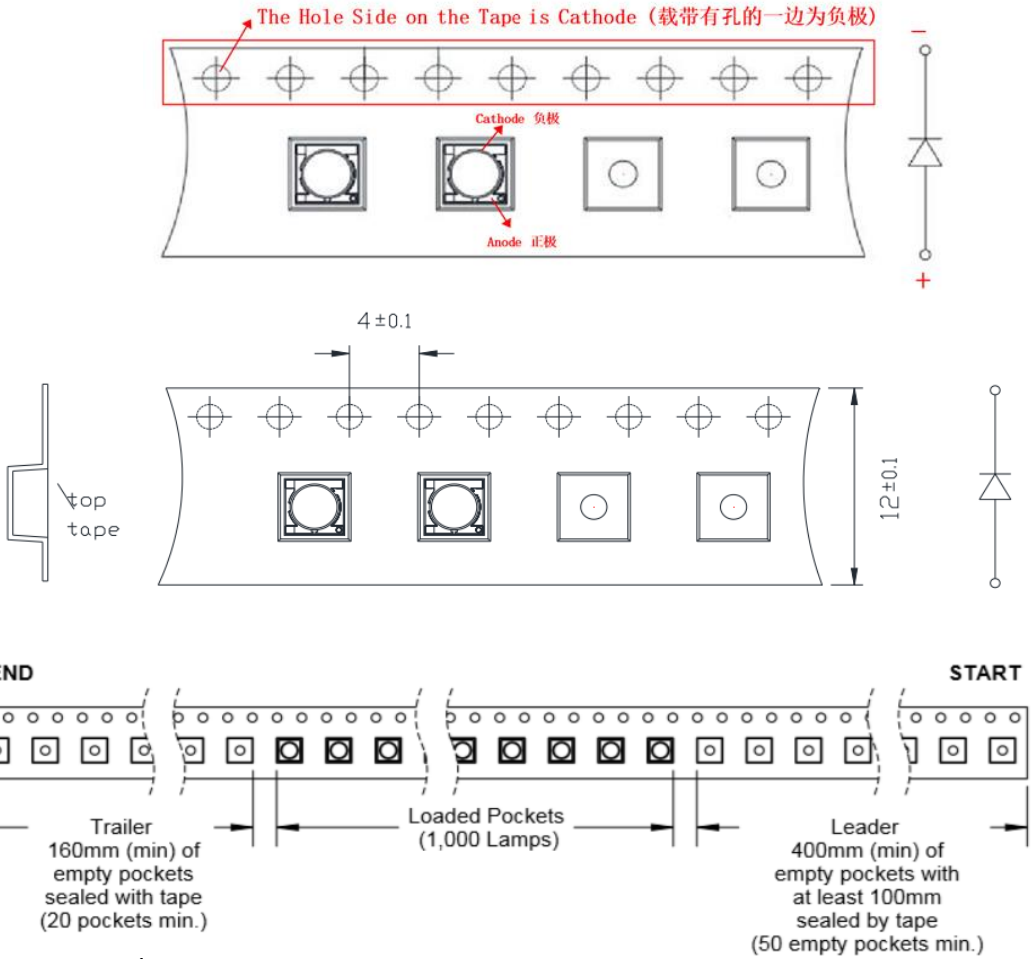
Recommended PCB Solder Pad



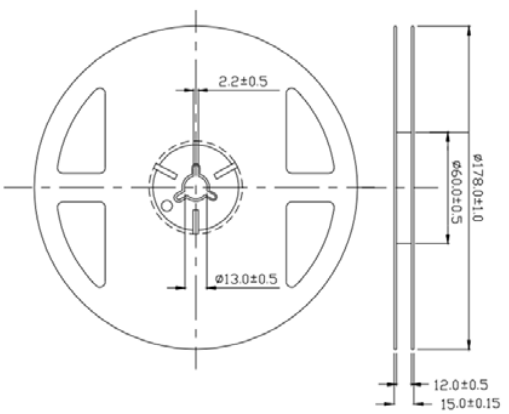
Stencil: 0.12mm
Recommended Stencil Pattern

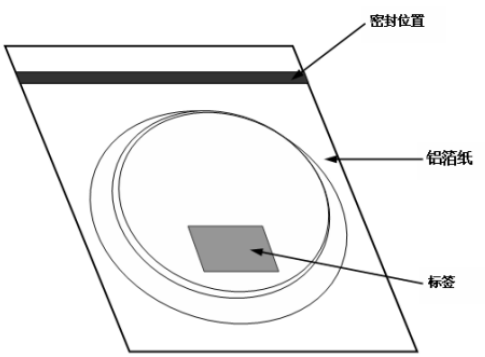
Packaging Information

Fig5. Reel Packaging, 1000pcs/Reel（卷带包装, 1000pcs/卷）



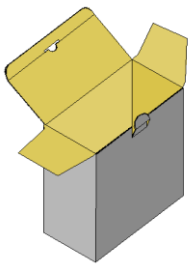
- Quantity : Max 1000pcs/Reel
- Cumulative Tolerance : Cumulative Tolerance/10 pitches to be ±0.25mm
- Adhesion Strength of Cover Tape Adhesion strength to be 0.1-0.7N when the cover tape is turned off from the carrier tape at the angle of 10˚ to the carrier tape.
- Package : P/N, Manufacturing data Code No. and Quantity to be indicated on a damp proof Package.

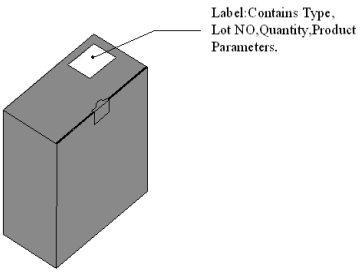




Packaging Information

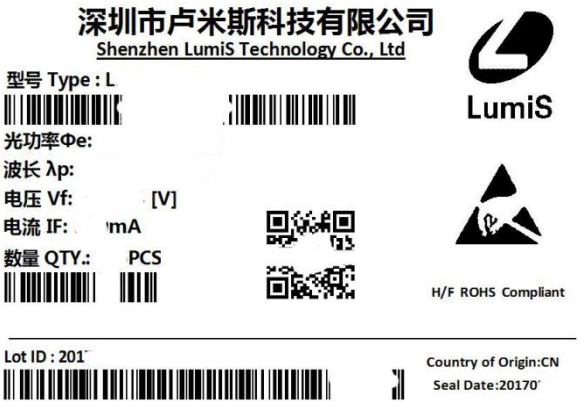
Inner Box（内箱）



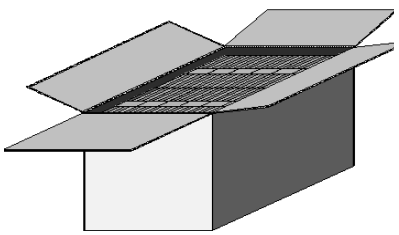


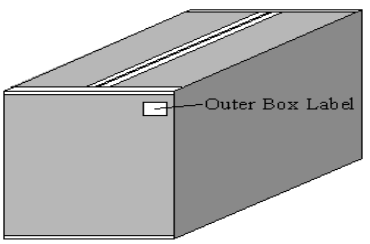
* Capacity 5 or 10 reels per box（内箱容量：5或10卷）

Label（标签）



Outer Box（外箱）





* Capacity 30 or 60 reels per box（外箱容量：30或60卷）

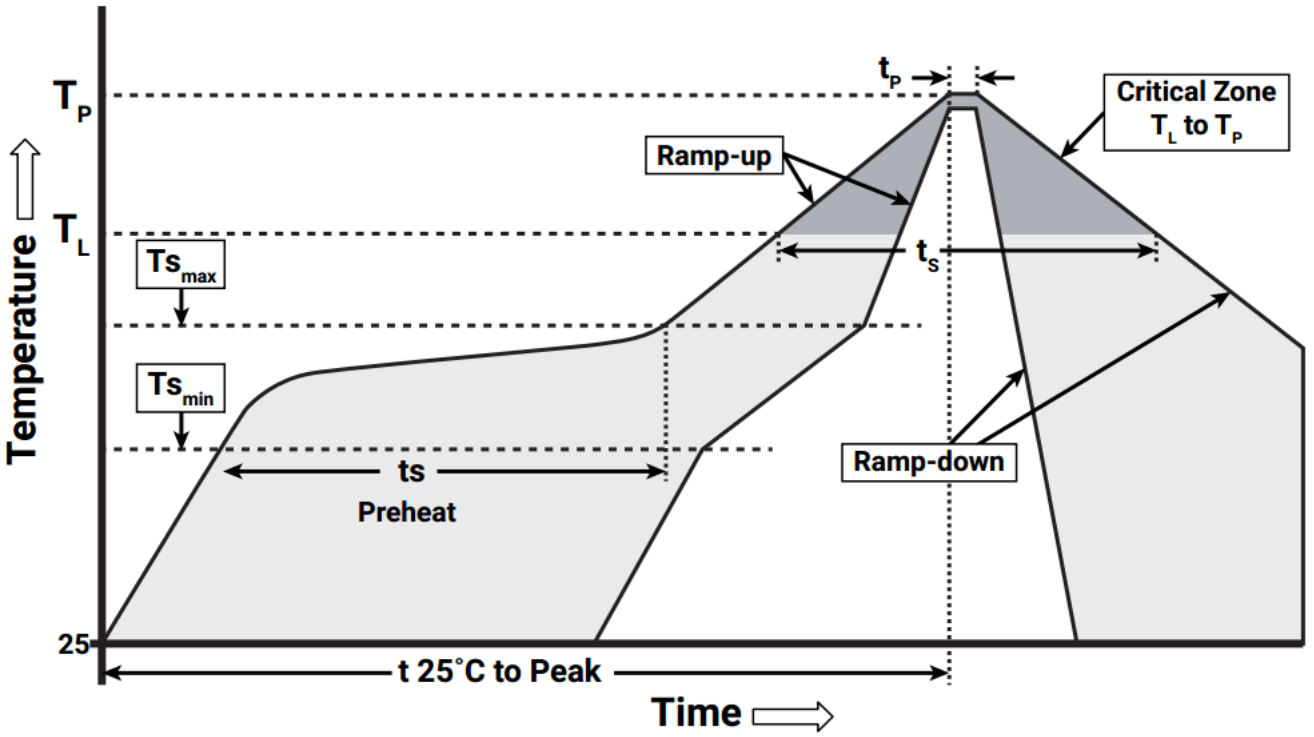
Table 5. Part Numbering System : L □□ □ — □□□ □ □ □ □ - □□□□

	X1	X2		X3	X4	X5	X6	X7		X8
L	35	U	-	365	1	1	C2	A	-	LGVV

Item Number Code	Description	Item Number
X1	LED Type Code 产品代码	60: 6060; 30: 3030; 35: 3535;
X2	Light Color 发光颜色	W: White Color; C: Colored; I: IR; U: UV
X3	Wavelength 波长	280: 280nm; 365: 365-370nm; 390: 395-400nm
X4	No. of Serial Chip 晶片串联数量	1-Z.
X5	No. of Parallel Chip 晶片并联数量	1-Z.
X6	Lead Frame Code 支架代码	E1: EMC; E2: SMC; C1: Al_2O_3 Ceramic; C2: AlN Ceramic
X7	Viewing Angle 发光角度	A: 120 Deg. ; B: 30 Deg. ; C: 60 Deg. ; D: 90 Deg.
X8	Material Code 物料代码	LumiS Material Code

Reflow Soldering

Recommended Mid-Temperature Solder Paste
建议使用中温锡膏



Profile Feature	Lead-Free Solder
Average Ramp-Up Rate (Ts_{max} to Tp)	1.2 °C/second
Preheat: Temperature Min (Ts_{min})	120 °C
Preheat: Temperature Max (Ts_{max})	170 °C
Preheat: Time (ts_{min} to ts_{max})	65-150 seconds
Time Maintained Above: Temperature (T_L)	217 °C
Time Maintained Above: Time (t_L)	45-90 seconds
Peak/Classification Temperature (Tp)	235 - 245 °C
Time Within 5 °C of Actual Peak Temperature (tp)	20-40 seconds
Ramp-Down Rate	1 - 6 °C/second
Time 25 °C to Peak Temperature	4 minutes max.

Pre-caution

Caution

1. Handling Precautions

- Do not handle the LEDs with bare hands as it will contaminate the LENS surface and may affect the optical characteristics.
- When handling the product with tweezers, be careful not to apply excessive force to glass LENS as it may cause the surface scratch.
- Dropping the product may cause damage.

2. Electrostatic Discharge (ESD)

- The product are sensitive to static electricity or surge voltage. ESD can damage a die and its reliability. When handling the products, the following measure against electrostatic dis-charge are strongly recommended:

Eliminating wrist strap, ESD footwear, clothes, and floors
Grounded workstation equipment and tools
ESD table/shelf mat made of conductive materials

- Ensure that tools, jigs and machines that are being used are properly grounded and that proper grounding techniques are used in work areas. For devices/equipment that mount the LEDs, protection against surge voltages should also be used.
- The customer is advised to check if the LEDs are damage by ESD

When performing the characteristics inspection of the LEDs in the application.
Damage can be detected with a forward voltage measurement at low current(≤1mA).

3. Eye Safety

- Please proceed with caution when handling any UVLEDs driven at low or high current. Since UV light can be harmful to eyes, do Not look directly into the UV light, even through an optical instrument.
- UV protective glasses are required to use in order to avoid damage by UV light in case of viewing UV light directly.

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Company Profile

Set up as a high-tech company in 2011, LumiSee has been dedicated in the R&D and manufacturing of High Power Ceramic products such as 3535/5050 RGB/RGBW/R/G/B/Y LED diode, UVA and IR recognition.

Based on the technological innovation & healthy life, LumiSee sticks to safety and health, quality and innovation with the concept of creating a new vision of LED technology and providing new applications in LED industry, further more LumiSee would take good advantages of Outdoor Lighting, Plant Glowing, health and safety, energy saving and environmental protection.

With years of engineers and a professional management team in LED industry, LumiSee has established strategical cooperation with famous companies both at home and abroad, but also developed together the LED applications of curing, health, medical care, security and safety etc.

LumiSee focuses on independent innovation and R&D. Now with dozens of inventions and utility model patents having been authorized, LumiSee would continue to recruit elites for industry innovations, improvements and services. LumiSee could strive to be one of the most influential companies in the field of health and safety of global LED industry.