

uxcell a18020500ux0141

uxcell 5W 5730 LED Chip Module Instruction Manual

Model: a18020500ux0141

1. INTRODUCTION

This manual provides essential information for the safe and effective use of your uxcell 5W 5730 LED Chip Module. This high-brightness, low-consumption LED chip is designed for various lighting applications, including the replacement of components in ceiling lights, downlights, spotlights, flashlights, and stage lights. Please read these instructions carefully before installation and operation.

2. SAFETY INFORMATION

- **Heat Dissipation:** This LED chip generates heat during operation. A heatsink is absolutely required for proper cooling. Failure to use a heatsink will result in immediate damage to the LED chip.
- **Thermal Grease:** Apply thermal grease evenly between the bottom of the LED chip module and the heatsink surface to ensure efficient heat transfer.
- **Power Supply:** This LED chip must be powered by a constant current LED driver power supply. Do not connect it directly to a constant voltage power supply without an appropriate current limiting device, as this will damage the chip.
- **Electrical Connections:** Ensure all electrical connections are secure and correctly polarized (positive to positive, negative to negative). Incorrect polarity can damage the LED chip.
- **Professional Installation:** If you are unfamiliar with electrical components or soldering, seek assistance from a qualified professional.
- **Eye Protection:** Avoid direct eye exposure to the illuminated LED chip, as the high brightness can cause discomfort or temporary vision impairment.

3. PRODUCT OVERVIEW

The uxcell 5W 5730 LED Chip Module features 10 individual 5730 Surface Mounted Devices (SMD) LEDs mounted on a 40mm diameter aluminum board. It provides pure white light (6500K) with high brightness and energy efficiency.



Image 3.1: uxcell LED Chip Boards, emphasizing super bright and energy-saving characteristics.



40mm / 1.57"

Image 3.2: Top view of the LED chip module, illustrating its 40mm diameter and the arrangement of 10 LED chips.

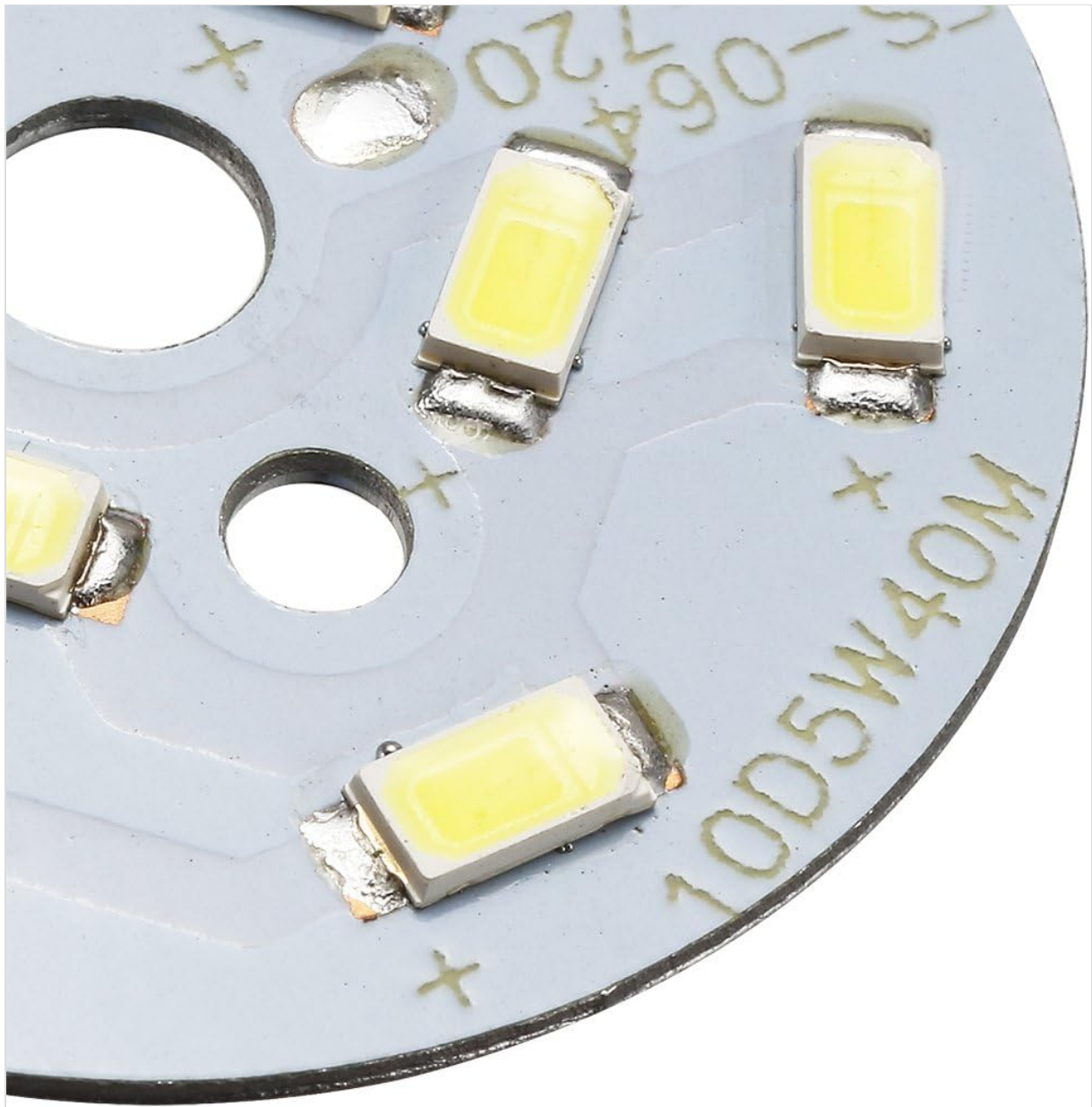


Image 3.3: Detailed view of the LED chip module, highlighting the 5730 SMD LEDs and positive/negative connection points.

This module is designed for integration into various lighting fixtures, offering a compact and powerful light source. Its aluminum board construction aids in heat dissipation when properly mounted to an external heatsink.

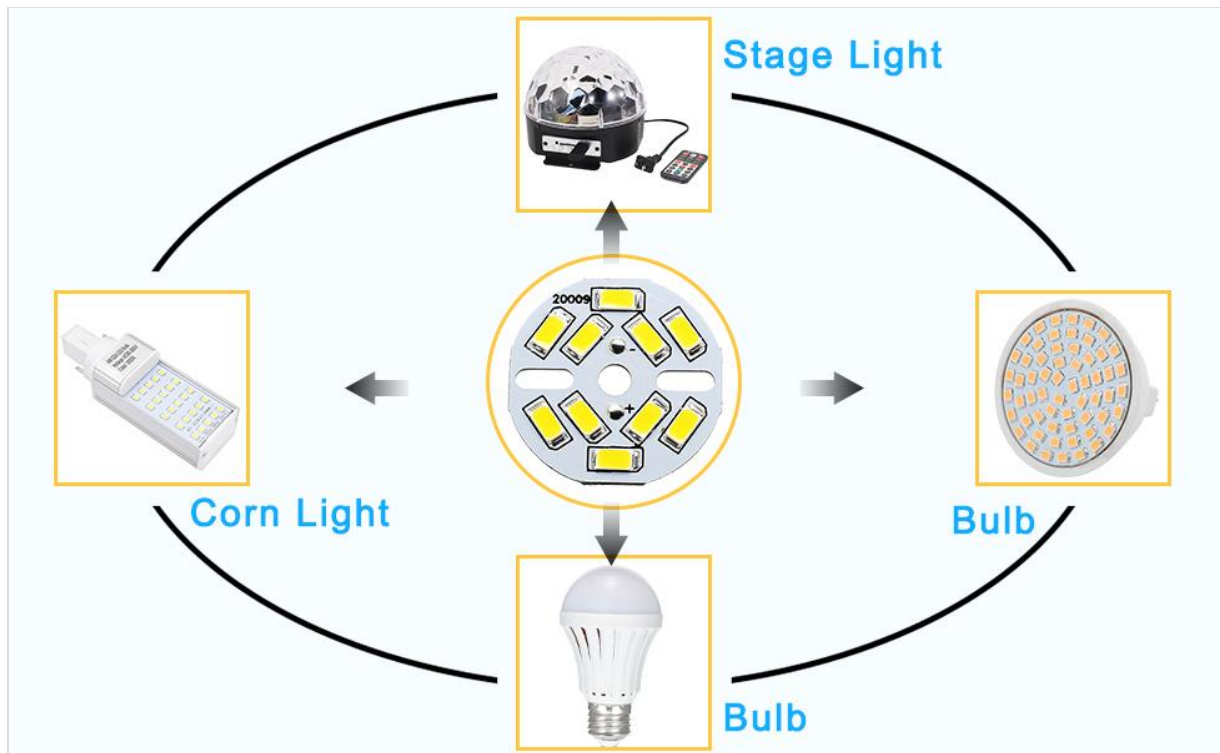


Image 3.4: Examples of common applications for the LED chip module, such as stage lighting, corn lights, and general bulbs.

4. SETUP AND INSTALLATION

Follow these steps for proper installation of the LED chip module:

1. **Prepare Heatsink:** Ensure you have a suitable heatsink for the 5W LED chip. The heatsink should be clean and free of debris.
2. **Apply Thermal Grease:** Apply a thin, even layer of thermal grease to the contact surface of the heatsink where the LED module will be mounted. Also, apply a thin layer to the bottom of the LED module.
3. **Mount LED Module:** Carefully place the LED chip module onto the heatsink, ensuring good contact. Secure it using appropriate screws or fasteners through the mounting holes on the board.



Image 4.1: Bottom view of the LED chip module, illustrating the aluminum base for heatsink contact and mounting points.

4. **Connect Wiring:** Identify the positive (+) and negative (-) terminals on the LED chip module. Solder or connect wires from your constant current LED driver to these terminals, ensuring correct polarity.
5. **Connect Driver:** Connect the constant current LED driver to your main power source according to the driver's instructions.
6. **Test:** Before final assembly, briefly power on the system to verify the LED chip illuminates correctly.

5. OPERATING INSTRUCTIONS

Once properly installed and connected to a compatible constant current LED driver, the uxcell 5W 5730 LED Chip Module will illuminate when power is supplied to the driver. No further user interaction is typically required for basic operation.

- Ensure the constant current driver matches the specifications of the LED chip (e.g., 300mA for a 5W chip).
- Avoid operating the LED chip without a heatsink, even for short periods, as this will cause irreversible damage.

6. MAINTENANCE

The uxcell 5W 5730 LED Chip Module is designed for long-term, low-maintenance operation. However, periodic checks can help ensure optimal performance:

- **Cleanliness:** Keep the surface of the LED chip and heatsink free from dust and debris, which can impede light output and heat dissipation. Use a soft, dry cloth for cleaning.

- **Heatsink Check:** Periodically verify that the heatsink remains securely attached and that there are no obstructions to airflow around it.
- **Connection Integrity:** Ensure all electrical connections remain secure and free from corrosion.

7. TROUBLESHOOTING

If you encounter issues with your LED chip module, consider the following:

Problem	Possible Cause	Solution
LED does not light up	No power to driver; Incorrect wiring/polarity; Faulty driver; Damaged LED chip.	Check power supply to driver. Verify wiring connections and polarity. Test driver output. Replace LED chip if damaged.
LED is very dim or flickers	Insufficient current from driver; Incorrect driver type (e.g., constant voltage instead of constant current); Poor connections; Overheating.	Ensure driver matches LED current requirements. Confirm driver is constant current. Check all connections for looseness or corrosion. Verify heatsink is properly installed and thermal grease applied.
LED chip overheats rapidly	No heatsink or inadequate heatsink; Insufficient thermal grease; Excessive current from driver.	Install a suitable heatsink. Reapply thermal grease evenly. Ensure constant current driver output matches LED specifications (300mA).

8. SPECIFICATIONS

Feature	Specification
Brand	uxcell
Model Number	a18020500ux0141
Light Type	LED
LED Type	5730 SMD
Number of LEDs	10
Power	5 Watts
Operating Current	300mA (Constant Current)
Color Temperature	6500 Kelvin (Pure White)
Light Output	500 Lumens
Board Material	Aluminum
Diameter	40mm / 1.57 inches
Special Feature	High Power-Saving and Cooling (with proper heatsink)
Indoor/Outdoor Usage	Indoor (as a component)

9. WARRANTY AND SUPPORT

For warranty information or technical support regarding your uxcell 5W 5730 LED Chip Module, please refer to the purchase documentation or contact uxcell customer service directly. Ensure you have your model number (a18020500ux0141) and purchase details available when contacting support.