

Cleiscry TM1814300L

Cleiscry TM1814 DC12V 24V LED Strip Light User Manual

Model: TM1814300L

1. INTRODUCTION

This manual provides essential instructions for the safe and effective use of your Cleiscry TM1814 DC12V/24V LED Strip Light. Please read this manual thoroughly before installation and operation to ensure proper functionality and longevity of the product. This LED strip features TM1814 ICs, enabling addressable RGBW/RGBWW lighting with 5050 SMD LEDs.

Important Note: The LED strip requires a compatible DC12V or DC24V power supply and a pixel controller (e.g., SP617E, SP630E, SP634E) for operation. These components are not included with the LED strip. Please be aware that solder joints are present approximately every 0.5 meters along the strip.

2. SAFETY INFORMATION

- **Power Supply:** Always use a stable DC12V or DC24V power supply that matches the voltage requirements of your specific LED strip variant. Using an incorrect voltage will damage the strip.
- **Controller Compatibility:** Ensure your pixel controller is compatible with the TM1814 IC for proper addressable control.
- **Electrical Connections:** All electrical connections should be made by a qualified individual or with extreme caution. Ensure power is disconnected before making any connections.
- **Cutting:** The LED strip can be cut at designated points. Refer to the specifications for cutability (5cm for 12V, 10cm for 24V). Always cut only at the marked lines to avoid damaging the circuit.
- **Waterproofing:**
 - **IP30 (No Waterproof):** For indoor use only. Avoid moisture and direct water exposure.
 - **IP65 (Epoxy Waterproof):** Offers protection against water jets. Suitable for damp indoor environments or sheltered outdoor use.
 - **IP67 (Silicone Tube):** Provides higher protection against immersion. If cut, the ends must be properly re-sealed to maintain waterproofing for outdoor use.
- **Heat Dissipation:** Ensure adequate airflow around the LED strip, especially when installed in enclosed

spaces, to prevent overheating.

- **Flexibility:** While flexible, avoid sharp bends or excessive force that could damage the circuit board or LEDs.

3. PRODUCT OVERVIEW

The Cleiscry TM1814 LED Strip Light is an advanced addressable lighting solution featuring 5050 SMD LEDs. Each LED package contains RGB (Red, Green, Blue) and a dedicated Warm White or Pure White chip, allowing for a wide spectrum of colors and true white light. The integrated TM1814 IC enables individual control of LED segments, creating dynamic and customizable lighting effects.

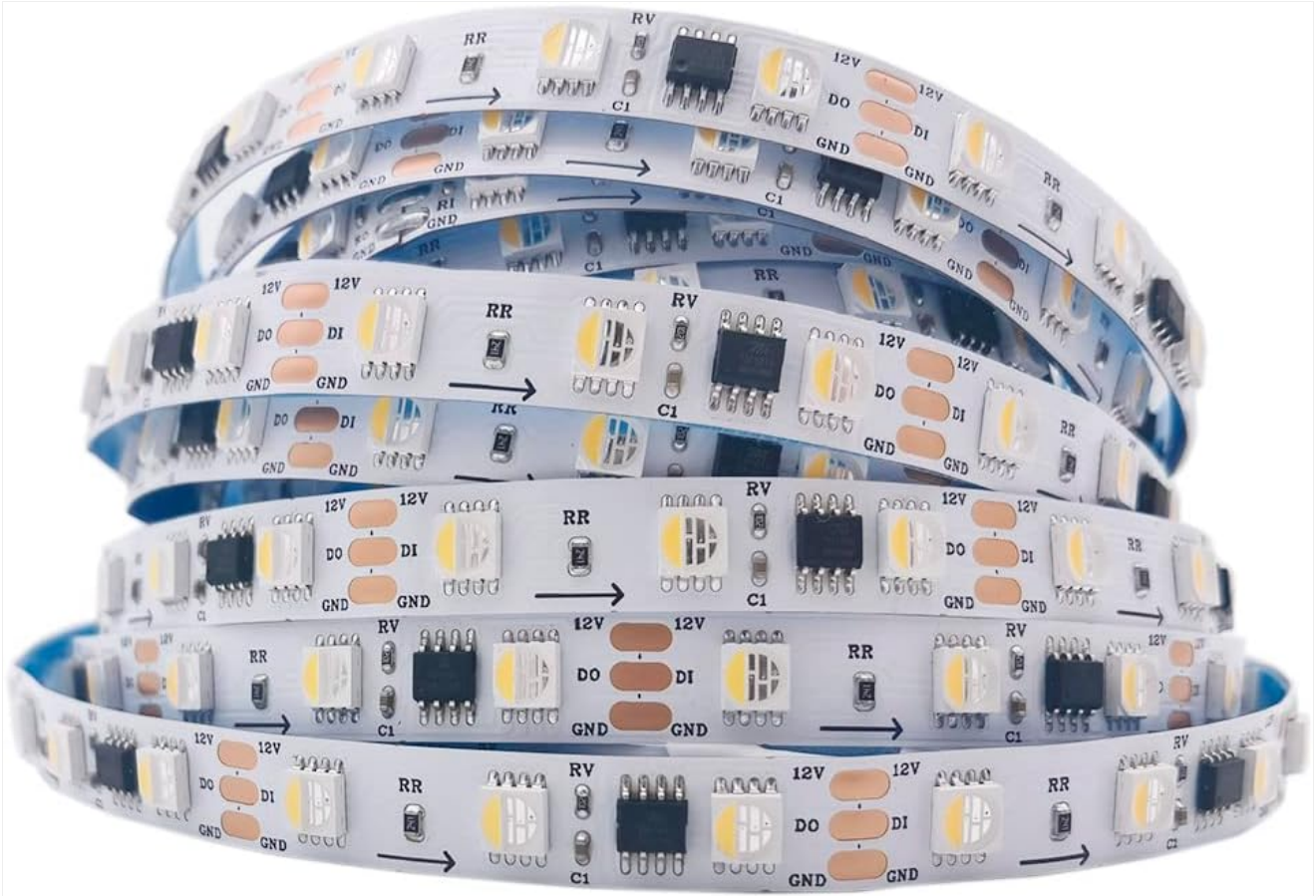


Image 3.1: Coiled Cleiscry TM1814 LED Strip Light, showcasing its flexible design and individual LED segments.

The strip's design allows for easy installation and can be bent to fit various contours. It is available in different voltage options (12V or 24V) and protection grades (IP30, IP65, IP67) to suit diverse application needs.

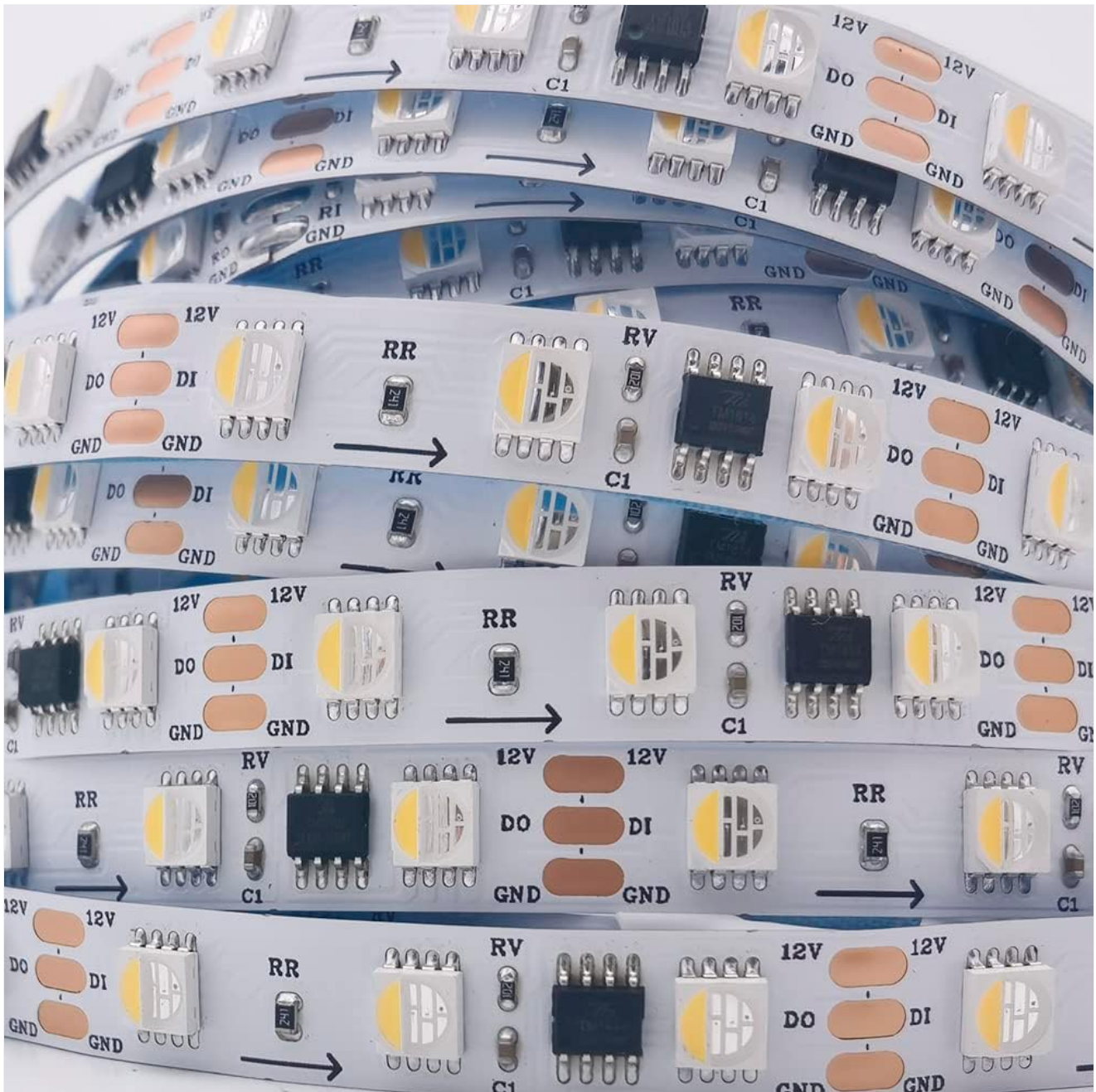


Image 3.2: A detailed view of the LED strip, highlighting the 5050 RGBW/RGBWW LEDs and the TM1814 integrated circuits (ICs) responsible for addressable control.

4. SPECIFICATIONS

| Parameter | Value |
|---------------------------|--|
| Working Voltage | DC12V / DC24V |
| LED Source | SMD 5050 RGBW |
| LED Quantity | 60 LEDs/Meter |
| IC Quantity (DC24V) | 10 Pcs IC/Meter (1 IC controls 6 LEDs) |
| IC Quantity (DC12V) | 20 Pcs IC/Meter (1 IC controls 3 LEDs) |
| Power (R+G+B mixed white) | 0.3W/LED |
| Power (Pure White) | 0.1W/LED |

| Parameter | Value |
|--------------------|---|
| Grey Scale | 256 / Color |
| Cutability (DC24V) | Every 10cm |
| Cutability (DC12V) | Every 5cm |
| Beam Angle | 120° |
| Dimension | 5000mm x 10mm x 2.4mm (Length x Width x Thickness) |
| Packaging | 5m/roll |
| Protection Grade | IP30 (No Waterproof), IP65 (Epoxy Waterproof), IP67 (Silicone Tube) |
| Material | Silicone (for IP67 variant) |
| Manufacturer | Cleiscry |
| Model Number | TM1814300L |

Distribution Wiring Diagram

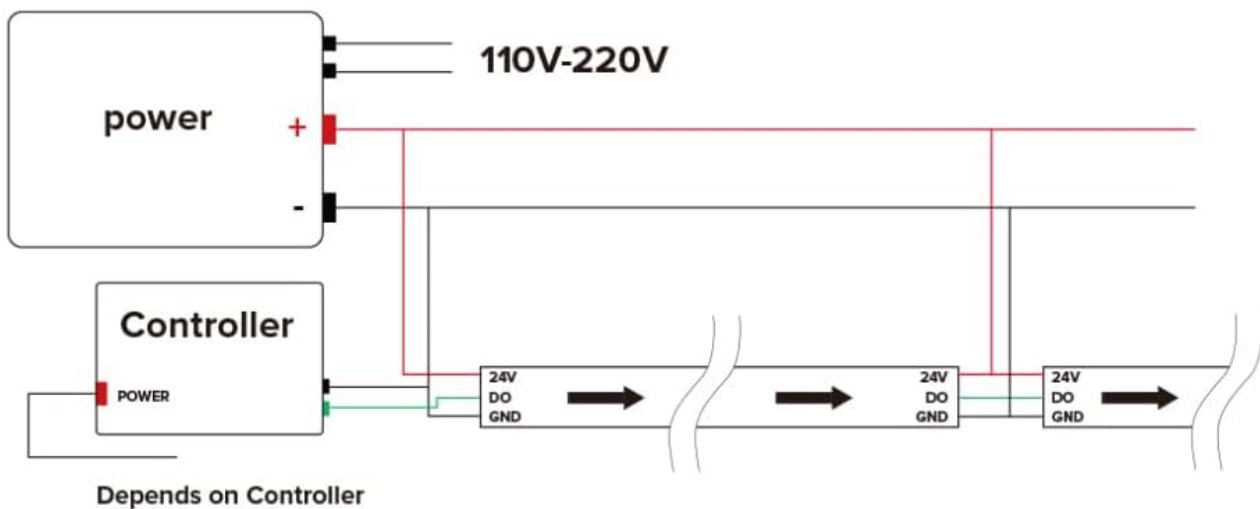


Image 4.1: Visual comparison illustrating the difference in IC control and cutability between 12V (1 IC controls 3 LEDs, cut every 5cm) and 24V (1 IC controls 6 LEDs, cut every 10cm) TM1814 LED strips.

5. SETUP AND INSTALLATION

Follow these steps for proper installation of your LED strip light.

- 1. Plan Your Layout:** Before cutting or connecting, plan the desired layout and measure the required length of the LED strip.
- 2. Prepare the Surface:** Ensure the installation surface is clean, dry, and smooth for optimal adhesion (if using adhesive-backed strips).
- 3. Cutting the Strip (if necessary):**
 - Identify the designated cut lines on the LED strip. These are typically marked with a scissor icon or copper pads.

- For 12V strips, cut every 5cm. For 24V strips, cut every 10cm.
 - Use sharp scissors to make a clean cut directly on the marked line.
 - **Warning:** Cutting anywhere other than the designated marks will damage the circuit and render that section of the strip unusable.
4. **Connect Power Supply:** Connect a compatible DC12V or DC24V power supply to your pixel controller. Ensure the power supply's wattage is sufficient for the total length of the LED strip being used.
 5. **Connect Controller to Strip:** Connect the data (DI), ground (GND), and power (V+) wires from your pixel controller to the corresponding input pads on the LED strip. Pay close attention to polarity and pin assignments. The strip typically has 3 pins for data, power, and ground.
 6. **Mounting:**
 - If your strip has an adhesive backing, peel off the protective layer and firmly press the strip onto the prepared surface.
 - For non-adhesive strips or for added security, use mounting clips (not included) to secure the strip.
 7. **Waterproofing Cut Ends (IP67 only):** If you have an IP67 (silicone tube) strip and have cut it, you must re-seal the cut ends using appropriate silicone sealant and end caps (not included) to maintain its waterproof rating.

6. WIRING DIAGRAM

The following diagram illustrates a typical wiring setup for the Cleiscry TM1814 LED Strip Light with a power supply and controller.



Image 6.1: A general wiring diagram showing the connection from a 110V-220V power source to a power supply, then to a controller, and finally to multiple segments of the TM1814 LED strip. Note the data (DO) and ground (GND) connections between the controller and the strip, and the power connections directly from the power supply to the strip.

Note: The specific connections for the controller may vary. Always refer to your controller's instruction manual for precise wiring details. Ensure correct polarity for power connections (positive to positive, negative to negative/ground).

7. OPERATION

Once properly installed and wired, the Cleiscry TM1814 LED Strip Light is controlled via a compatible pixel controller.

- **Controller Functionality:** Your controller (e.g., SP617E, SP630E, SP634E Bluetooth controllers) will allow you to select various lighting effects, adjust colors, brightness, and speed.
- **Addressable Effects:** The TM1814 IC enables advanced "dream color" lighting effects such as curtain-up, flowing water, raindrops, and jump flashes.
- **Software Control:** Many compatible controllers offer software or app-based control, allowing you to customize and edit animation effects.

- **RGBW/RGBWW Capability:** Utilize the dedicated white LED chip for pure white light or mix with RGB for a broader color palette.



Image 7.1: The LED strip illuminated in a vibrant red, demonstrating its color capabilities.



Image 7.2: The LED strip illuminated in green, showcasing another primary color output.

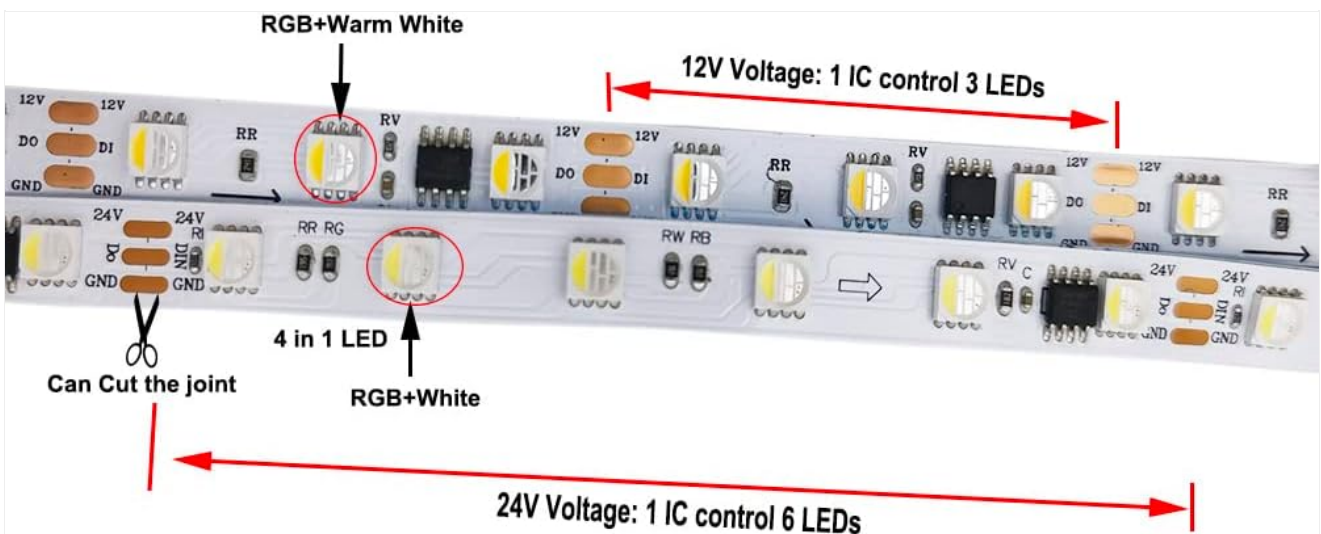


Image 7.3: The LED strip displaying a combination of blue and white light, highlighting the RGBW/RGBWW functionality.

8. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your LED strip light.

- **Cleaning:** Gently wipe the LED strip with a soft, dry cloth to remove dust. For IP65/IP67 strips, a slightly damp cloth can be used, but ensure no water enters exposed connections. Do not use harsh chemicals or abrasive cleaners.
- **Connection Check:** Periodically inspect all power and data connections to ensure they are secure and free from corrosion.
- **Waterproofing Integrity (IP65/IP67):** For outdoor or damp installations, regularly check the integrity of the waterproofing, especially at cut ends or connection points. Re-seal if any degradation is observed.
- **Environmental Conditions:** Ensure the strip is not exposed to extreme temperatures or direct prolonged sunlight beyond its specified operating conditions.

9. TROUBLESHOOTING

If you encounter issues with your LED strip, refer to the following common troubleshooting steps:

- **Strip Not Lighting Up:**
 - Verify the power supply is connected and providing the correct voltage (DC12V or DC24V).
 - Check all wiring connections (power, ground, data) for correct polarity and secure contact.
 - Ensure the controller is powered on and functioning correctly.
 - Confirm the LED strip is not cut at an incorrect point, which could break the circuit.
- **Incorrect Colors or Effects:**
 - Ensure your pixel controller is configured for the correct IC type (TM1814).
 - Verify the data line (DI) is connected to the correct input on the strip and the controller.
 - Check the controller's settings for color order (e.g., GRBW, RGBW) if applicable.
 - Remember that for 12V strips, 1 IC controls 3 LEDs, and for 24V strips, 1 IC controls 6 LEDs. This means animations will group LEDs accordingly, not control each individual LED independently.
- **Flickering or Unstable Lighting:**
 - Ensure your power supply has sufficient current capacity for the entire length of the strip. Voltage drop can occur over long runs.
 - Check for loose connections or damaged wires.
 - Reduce the brightness setting on your controller to see if it stabilizes.
- **Partial Strip Failure:**
 - A section of the strip not lighting up often indicates a damaged cut point or a faulty solder joint.
 - Inspect the affected section for physical damage.

For more specific troubleshooting related to controller functions or advanced effects, please consult the manual provided with your pixel controller.

10. WARRANTY AND SUPPORT

For information regarding product warranty, please refer to the purchase documentation or contact the seller directly.

If you require further technical assistance or have questions not covered in this manual, please contact Cleiscry customer support through the retailer's platform or the manufacturer's official website.

