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› LEDUPDATES Triac Dimmable LED Driver 100W (Model OTM-TDJ100) User Manual

## LEDUPDATES OTM-TDJ100

# LEDUPDATES Triac Dimmable LED Driver 100W (Model OTM-TDJ100) User Manual

## 1. INTRODUCTION

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This manual provides detailed instructions for the installation, operation, and maintenance of your LEDUPDATES Triac Dimmable LED Driver, Model OTM-TDJ100. This ETL-listed constant voltage power supply is designed to convert 100V-130V AC input to a stable 12V DC output, making it suitable for various 12V LED lighting applications such as LED strip lights, puck lights, and module lights. It is compatible with most AC wall dimmers, including Lutron and Leviton models, offering smooth and quiet dimming performance.

## 2. SAFETY INFORMATION

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Please read all safety instructions carefully before installation and operation. Failure to follow these instructions may result in electrical shock, fire, or other hazards.

- Installation should be performed by a qualified electrician in accordance with national and local electrical codes.
- Always disconnect power at the circuit breaker before installing or servicing the LED driver.
- Ensure proper grounding to prevent electrical shock.
- Do not exceed the maximum output wattage of 100W. Overloading the driver can cause damage and fire hazards.
- Ensure adequate ventilation around the driver. Do not install in enclosed spaces without proper airflow.
- This product is designed for indoor use only. Avoid exposure to moisture or extreme temperatures.
- Verify that the input voltage (100-130V AC) and output voltage (12V DC) match your application requirements.

## 3. PRODUCT OVERVIEW

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The LEDUPDATES Triac Dimmable LED Driver is housed in a durable junction box enclosure, providing

protection and ease of installation. It features clearly labeled input and output terminals for straightforward wiring.



Image: The LEDUPDATES Triac Dimmable LED Driver with its junction box cover removed, revealing the AC input and DC output wiring terminals, and the internal power supply unit. The product label with specifications is visible.

## Key Features:

- ETL listed for high quality and safety standards.
- Converts 100-130V AC to 12V DC.
- Compatible with Lutron, Leviton, and most AC wall dimmers.
- Supports 12V LED strip lights, puck lights, module lights, and other low voltage 12V LED applications.
- Provides smooth, quiet, and reliable dimming performance.
- Easy to install with a built-in junction box.
- Requires only a 5% minimum load to eliminate buzzing and humming noise.

## 4. SETUP AND INSTALLATION

### 4.1. Before Installation

- Turn off power at the main circuit breaker before beginning any electrical work.
- Calculate the total wattage of your 12V LED lights. Ensure the total load does not exceed 100W. It is recommended to operate the driver at 80% of its maximum capacity for optimal performance and longevity.
- Ensure you have all necessary tools and materials, including wire strippers, screwdrivers, and appropriate wire connectors.

### 4.2. Wiring Instructions

Refer to the wiring diagram below for correct connections. All wiring must comply with local and national electrical codes.

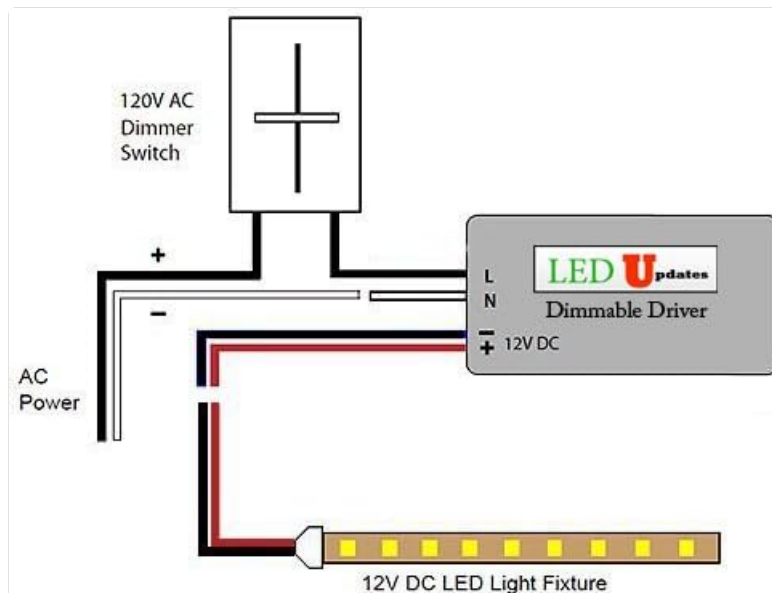


Image: A schematic wiring diagram illustrating how to connect the LEDUPDATES Dimmable Driver. It shows the 120V AC power connected to a 120V AC dimmer switch, which then connects to the driver's AC input (L and N). The driver's 12V DC output (+ and -) is connected to a 12V DC LED light fixture.

1. **AC Input Connection:** Connect the AC input wires from your power source to the driver's AC input terminals. The driver accepts 100-130V AC.
  - Connect the **Black (L)** wire from the AC power source (via the dimmer switch) to the driver's **L (Black)** terminal.
  - Connect the **White (N)** wire from the AC power source to the driver's **N (White)** terminal.
  - Connect the **Green/Yellow (Ground)** wire from the AC power source to the driver's **Ground** terminal.
- **Dimmer Connection:** If using a dimmer, connect the output of your 120V AC dimmer switch to the AC input (L and N) of the LED driver. Ensure the dimmer is a compatible Triac (leading-edge or trailing-edge) AC wall dimmer.
- **DC Output Connection:** Connect your 12V DC LED lights to the driver's DC output terminals.
  - Connect the **Red (+)** wire from the LED lights to the driver's **V+ (Red)** terminal.
  - Connect the **Black (-)** wire from the LED lights to the driver's **V- (Black)** terminal.
- Secure all connections with appropriate wire connectors and ensure no bare wires are exposed.
- Close the junction box cover securely after wiring is complete.

### 4.3. Mounting

Mount the LED driver in a location that allows for adequate ventilation and is protected from moisture. Use appropriate screws or mounting hardware to secure the driver to a stable surface. Ensure the driver is easily accessible for future servicing if needed.

## 5. OPERATING INSTRUCTIONS

Once the LED driver is correctly installed and wired, restore power at the circuit breaker. If connected to a compatible Triac dimmer, you can control the brightness of your 12V LED lights using the dimmer switch. The driver is designed for smooth dimming from 5% to 100% of its output.

- Ensure the total load connected to the driver is at least 5% of its maximum wattage (5W for a 100W driver) to ensure stable dimming and prevent buzzing or humming.

- For optimal performance, use high-quality, compatible Triac dimmers.

## 6. MAINTENANCE

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The LEDUPDATES Triac Dimmable LED Driver requires minimal maintenance. Follow these guidelines to ensure long-term performance:

- Periodically inspect the driver and its connections for any signs of damage, loose wiring, or overheating.
- Keep the driver free from dust and debris to ensure proper heat dissipation. Use a soft, dry cloth for cleaning.
- Do not attempt to open or repair the driver yourself. This will void the warranty and may pose a safety risk.

## 7. TROUBLESHOOTING

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

- **No Power to LEDs:**
  - Check if the main power supply is on at the circuit breaker.
  - Verify all AC input and DC output connections are secure and correctly wired.
  - Ensure the total wattage of connected LEDs does not exceed 100W.
  - Test the LED lights with a known working 12V DC power source to rule out LED fixture issues.
- **Flickering or Unstable Dimming:**
  - Confirm that the dimmer switch is compatible with Triac (MLV/ELV) LED drivers.
  - Ensure the connected LED load meets the minimum 5% requirement (5W).
  - Check for loose wiring connections between the dimmer, driver, and LEDs.
  - Try a different compatible dimmer switch to rule out dimmer malfunction.
- **Buzzing or Humming Noise:**
  - Ensure the connected LED load meets the minimum 5% requirement (5W).
  - Verify the dimmer switch is a high-quality, compatible Triac dimmer.
  - Check for any loose components or mounting.
- **Overheating:**
  - Ensure the total wattage of connected LEDs does not exceed 100W.
  - Verify that the driver has adequate ventilation and is not installed in an overly confined space.
  - Check ambient temperature; operating temperature should not exceed 80°C.

## 8. SPECIFICATIONS

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Detailed technical specifications for the LEDUPDATES Triac Dimmable LED Driver 100W:

Specification	Value
Model Number	OTM-TDJ100
Input Voltage	90-130V AC
Input Frequency	48/60Hz
Output Voltage	12V DC
Output Current	8.33A
Output Power	100W
Dimming Type	Triac (MLV/ELV compatible)
Minimum Load	5% (5W)
Certification	ETL Listed (Intertek 5010819)
Operating Temperature (ta)	40°C to 80°C
IP Rating	IP54
Item Weight	2.61 pounds
Package Dimensions	10.87 x 3.46 x 1.54 inches

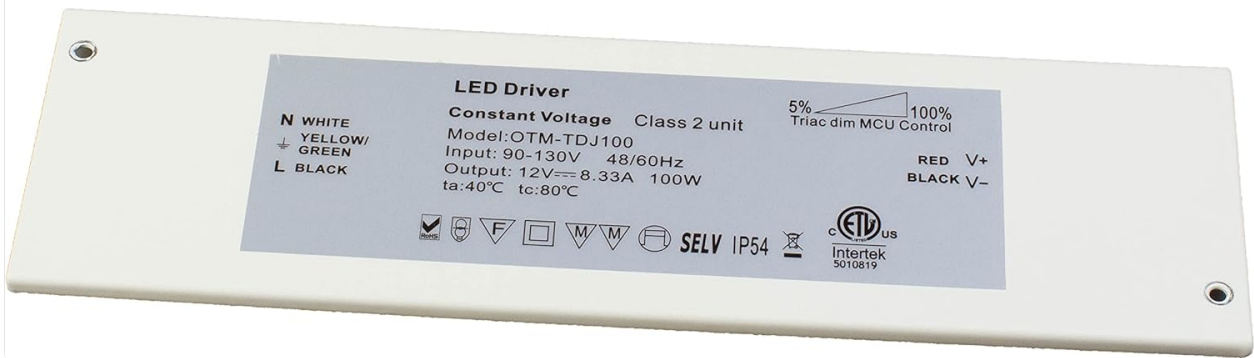


Image: The ETL Listed certification mark, indicating compliance with North American safety standards, along with the Intertek mark.

## 9. WARRANTY AND SUPPORT

For warranty information or technical support regarding your LEDUPDATES Triac Dimmable LED Driver, please contact the manufacturer directly. Keep your purchase receipt as proof of purchase for any warranty claims.