

GRV 6-T10-3828-W

GRV T10 921 194 C921 LED Bulb User Manual

Model: 6-T10-3828-W | Brand: GRV

1. INTRODUCTION

This user manual provides comprehensive instructions for the installation, operation, and maintenance of your GRV T10 921 194 C921 LED Bulbs. These high-performance LED bulbs are designed for various 12V applications, including RV ceiling dome lights, RV interior lighting, trailer campers, and other vehicle interior lighting needs.

The GRV T10 921 194 C921 LED Bulbs are supplied as a pack of six (6) with a Warm White color temperature (3000K-3500K). Each bulb delivers 400 lumens of brightness and operates at 3 watts, powered by 38-piece 2835SMD LED Chips for a wide 180-degree light spread. They are designed for DC12V systems and are 8-12V dimmable.

2. PRODUCT FEATURES

- **Superior Brightness:** These LED bulbs are 300% brighter than standard halogen bulbs, providing enhanced illumination for your space.
- **Extended Lifespan:** Utilizing high-brightness 2835SMD lamp chips with gold wire technology and pure copper brackets for effective heat dissipation, these bulbs boast a lifespan of over 50,000 hours. This significantly reduces the need for frequent replacements and maintenance.
- **Broad Compatibility:** Designed to fit a wide range of T10, 921, and 194 bulb bases, including 158, 161, 168, 168A, 168NA, 175, 194, 194NA, 2821, 2825, 2827, 2886X, 3652, 558, 658, PC168, PC175, PC194, PC195, W5W, W5WB, W5WLL, 124, 160, 161B, 192, 193, 194A, 194B, 194G, 194NAK, 194R, 195, 2825L, PC160, PC161, PC168B, PC194G, PC195NA, and W10W LED light bulbs.
- **Versatile Application:** Ideal for nearly any 12V DC application, including RVs, campers, cars, marine vessels, motorhomes, and 5th wheel boat interior lights. Common automotive applications include interior lights, ceiling dome lights, map lights, door lights, tail lights, brake lights, reverse lights, side marker lights, and backup lights.
- **Efficient and User-Friendly:** Features easy plug-and-play installation, low operating temperature, and significantly lower power consumption (approximately 1/10th of an incandescent bulb). These bulbs are free from UV or IR radiation.

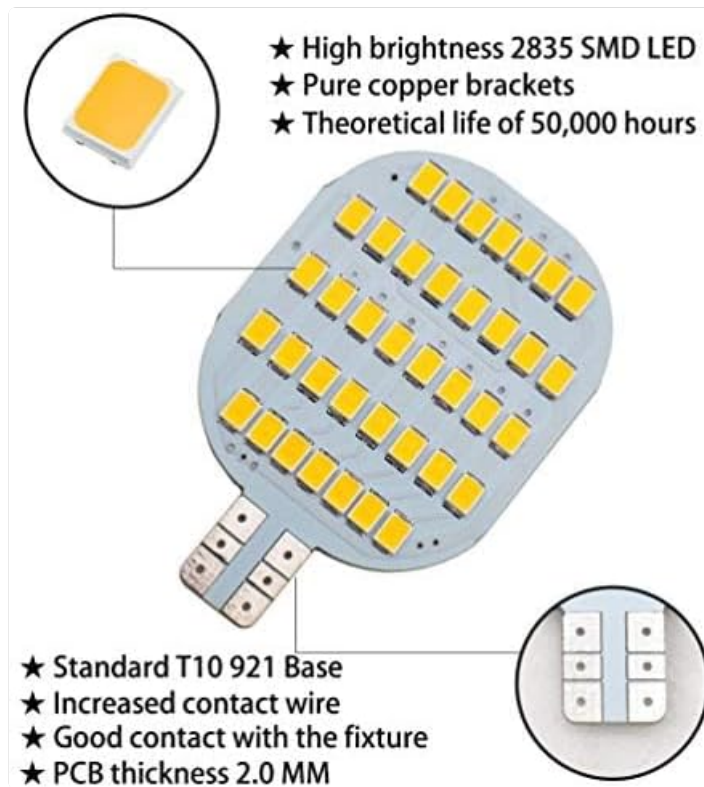


Figure 2.1: Detailed features of the GRV T10 LED Bulb, highlighting the 2835 SMD LED, pure copper brackets, 50,000-hour theoretical life, standard T10 921 base, increased contact wire, good contact with fixture, and 2.0mm PCB thickness.

3. SAFETY INFORMATION

- Always disconnect power to the fixture before installing or replacing bulbs to prevent electrical shock.
- Ensure the voltage of your application matches the bulb's specified DC12V.
- Handle bulbs by their base to avoid touching the LED chips directly, which can transfer oils and reduce lifespan.
- Do not attempt to disassemble or modify the bulbs.
- Keep out of reach of children.

4. SETUP AND INSTALLATION

The GRV T10 LED bulbs are designed for simple plug-and-play installation, making them an easy upgrade for compatible fixtures.

1. **Prepare the Fixture:** Ensure the power to the light fixture is turned off and disconnected. If working in a vehicle, disconnect the battery or pull the fuse for the relevant circuit.
2. **Remove Old Bulb:** Carefully remove the existing incandescent or old LED bulb from the fixture. Allow hot bulbs to cool before handling.
3. **Insert New LED Bulb:** Align the base of the GRV T10 LED bulb with the socket. Gently push the bulb into the socket. If it does not light up, remove it, rotate it 180 degrees, and reinsert. LEDs are polarity sensitive.
4. **Secure the Fixture:** Once the bulb is securely in place and tested, reassemble the light fixture cover if applicable.
5. **Restore Power:** Reconnect power to the fixture or vehicle battery and test the new LED bulbs.

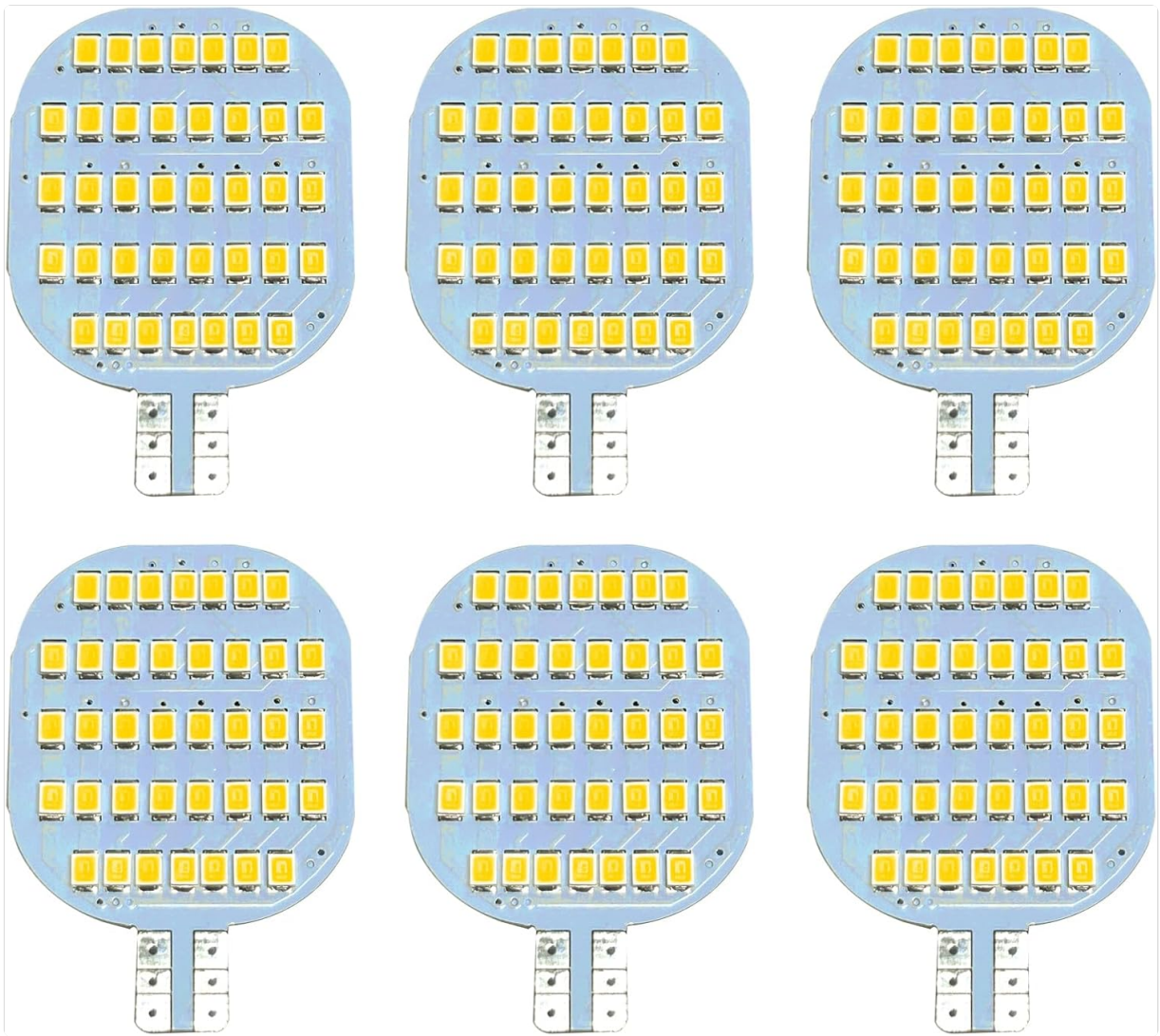


Figure 4.1: A pack of six GRV T10 921 194 C921 LED Bulbs, ready for installation.



Figure 4.2: Rear view of several GRV T10 LED bulbs, showing the circuit board and contact pins.



Figure 4.3: A single GRV T10 LED bulb illuminated with warm white light, demonstrating its brightness and color temperature.

Installation Demonstration Video

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Video 4.1: This video demonstrates the installation process of the GRV T10 LED bulbs into a typical RV light fixture, showcasing both cool white and warm white options and their immediate illumination upon connection to a 12V power source.

5. OPERATION

GRV T10 LED bulbs are designed for continuous operation within their specified voltage range (DC12V, 8-12V dimmable). They provide consistent, bright illumination with significantly lower power consumption compared to traditional incandescent bulbs, making them ideal for battery-powered applications like RVs and campers.



Figure 5.1: An example of an RV interior brightly and efficiently lit by GRV LED bulbs, demonstrating their wide application.

6. MAINTENANCE

Due to their long lifespan of over 50,000 hours and robust construction, GRV T10 LED bulbs require

minimal maintenance. They are designed to be a durable and reliable lighting solution.

- **Cleaning:** If necessary, gently wipe the surface of the bulb with a soft, dry cloth to remove dust or debris. Do not use abrasive cleaners or solvents.
- **Inspection:** Periodically inspect the bulbs and their connections for any signs of wear or damage. While the bulbs themselves are low-heat, ensure surrounding fixture components are not overheating, especially if replacing older, higher-wattage bulbs.
- **Replacement:** In the rare event of a bulb failure, follow the installation steps in Section 4 to replace it.

7. TROUBLESHOOTING

If you encounter issues with your GRV T10 LED bulbs, please refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Bulb does not light up.	Incorrect polarity.	Remove the bulb, rotate it 180 degrees, and reinsert. LEDs are polarity sensitive.
Bulb does not light up.	No power to the fixture.	Check the power source, fuses, and wiring connections to the fixture.
Bulb flickers or dims unexpectedly.	Unstable voltage or incompatible dimmer.	Ensure a stable 12V DC power supply. If using a dimmer, ensure it is compatible with LED lighting (8-12V dimmable).
Bulb burns out quickly.	Voltage spikes or mixed bulb types on circuit.	Ensure all bulbs on the circuit are LED. For RV applications, consider installing a kickback diode (e.g., AP-HRN-510) near components like water heater relays to protect against voltage spikes.

8. SPECIFICATIONS

Attribute	Value
Brand	GRV
Model Number	6-T10-3828-W
Brightness	400 Lumen per bulb
Item Package Quantity	6 bulbs
Color Temperature	Warm White (3000K-3500K)
Voltage	12 Volts (DC), 8-12V Dimmable
Wattage	3 Watts per bulb
LED Chip Type	38-piece 2835SMD LED Chips
Beam Angle	180 degrees

Attribute	Value
Operating Life	50,000+ Hours
Product Dimensions	1.97 x 1.38 x 0.2 inches
Item Weight	2.08 ounces (total package)
Country of Origin	China

9. WARRANTY AND SUPPORT

GRV is committed to providing high-quality LED products and excellent customer service. While specific warranty details are not provided in this manual, GRV stands by its products and aims to ensure customer satisfaction.

For any questions, technical assistance, or support regarding your GRV T10 LED Bulbs, please contact GRV customer service through the retailer where you purchased the product or visit the official GRV store page for contact information.

[Visit the GRV Store on Amazon](#)