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› Aexit 100 x 3mm Round Head Purple LED Diodes Instruction Manual

Aexit f190413ae097812

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INTRODUCTION

This manual provides essential information for the safe and effective use of Aexit 100 x 3mm Round Head Purple LED Diodes. These light-emitting diodes feature a 3mm round head and two terminals for reliable electrical connection, designed to emit a distinct purple light. They are suitable for a variety of electronic applications, including colored displays, indicator lights, and analytical diagnostic equipment.



This image displays a set of Aexit 3mm round head purple LED diodes, showing their transparent lens and two metal terminals.

SETUP

Proper setup is crucial for the longevity and performance of your LED diodes. Follow these steps for installation:

1. **Identify Polarity:** LEDs are polarized components. The longer lead is typically the anode (positive), and the shorter lead is the cathode (negative). Some LEDs may also have a flat edge on the cathode side of the casing. Incorrect polarity will prevent the LED from lighting up.
2. **Current Limiting Resistor:** Always use a current-limiting resistor in series with the LED. Connecting an LED directly to a power source without a resistor will cause it to burn out due to excessive current. The resistor value depends on your supply voltage and the LED's forward voltage and current.
3. **Connection:** Connect the anode (positive) of the LED to the positive terminal of your power supply (via the current-limiting resistor). Connect the cathode (negative) of the LED to the negative (ground) terminal of your power supply. Ensure secure connections to prevent intermittent operation.
4. **Mounting:** These 3mm round head diodes can be mounted into appropriate holes in circuit boards or enclosures. Ensure the mounting method does not stress the leads or the diode casing.

OPERATING

Once properly set up, these LEDs operate by emitting light when a suitable forward current flows through them. Adhere to the following operating parameters:

- **Forward Voltage (Vf):** The typical forward voltage for these purple LEDs is 3.2V to 3.8V.
- **Maximum Continuous Forward Current (If):** Do not exceed 20mA (milliamperes) of continuous current. Operating above this limit can significantly reduce the LED's lifespan or cause immediate failure.
- **Peak Wavelength:** The emitted light has a peak wavelength between 395nm and 405nm, producing a purple hue.
- **Luminous Intensity:** The light output ranges from 3000mcd to 5000mcd (millicandelas).

Ensure your power supply and current-limiting resistor are correctly chosen to maintain operation within these specifications.

MAINTENANCE

Aexit LED diodes are designed for long-term, low-maintenance operation. Follow these guidelines to ensure optimal performance:

- **Cleaning:** If necessary, gently clean the LED lens with a soft, dry cloth. Avoid abrasive materials or harsh chemicals that could scratch or damage the lens.
- **Environmental Conditions:** Operate the LEDs within a stable temperature range. While the product specifications mention a temperature range of 0-1 degrees Celsius, this is likely a generic placeholder. LEDs generally perform best in typical room temperatures and should be protected from extreme heat or cold.
- **Avoid Overcurrent:** Continuously verify that the current flowing through the LEDs does not exceed the maximum specified forward current (20mA). Overcurrent is the primary cause of premature LED failure.
- **Physical Protection:** Protect the diodes from physical impact or excessive bending of the leads, which can cause internal damage.

TROUBLESHOOTING

If your LED diode is not functioning as expected, consider the following troubleshooting steps:

- **LED Not Lighting Up:**
 - **Check Polarity:** Ensure the anode (positive) and cathode (negative) are connected correctly. Reverse polarity will prevent the LED from illuminating.
 - **Verify Power Supply:** Confirm that your power supply is providing the correct voltage and is active.
 - **Inspect Resistor:** Ensure the current-limiting resistor is present and has the correct value. A resistor that is too large may result in no light or very dim light, while no resistor or one that is too small can damage the LED.
 - **Check Connections:** Ensure all electrical connections are secure and free from shorts or breaks.
 - **Test LED:** If possible, test the LED with a known good power source and resistor to rule out a faulty diode.
- **LED is Dim:**

- **Resistor Value:** The current-limiting resistor might be too high, reducing the current below optimal levels.
- **Insufficient Voltage:** The supply voltage might be too low for the LED's forward voltage requirements.
- **Aging:** Over extended periods, LEDs can experience a gradual decrease in luminous intensity.

SPECIFICATIONS

Feature	Specification
Product Name	Emitting Diode
Brand	Aexit
Part Number (Model)	f190413ae097812
ASIN	B07BWH296K
Material	Metal, Plastic
Emitting Light Color	Purple
Lens Color	Clear
Head Diameter	3 mm / 0.118 inches
Total Length (approx.)	33 mm / 1.3 inches
Forward Voltage (Vf)	3.2 - 3.8 V
Max Continuous Forward Current (If)	20 mA
Peak Wavelength	395 - 405 nm
Luminous Intensity	3000 - 5000 mcd
Weight	17g (for 100 pieces)
Package Content	100 Pcs (-/+ 2%) x Purple Emitting Diode
First Available Date	April 13, 2019

WARRANTY INFORMATION

Specific warranty details for this product are not provided in the available information. Please refer to the retailer or manufacturer's official website for any applicable warranty terms and conditions.

SUPPORT

For technical assistance or further inquiries regarding Aexit 100 x 3mm Round Head Purple LED Diodes, please contact the seller or refer to the Aexit official support channels. Contact information may be available on the product packaging or the retailer's website.

