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DORHEA 1S

DORHEA 1S Battery Level Indicator Capacity Module User Manual

Model: 1S | Brand: DORHEA

1. OVERVIEW

The DORHEA 1S Battery Level Indicator Capacity Module is designed to display the remaining charge of various battery types, including lithium, lead-acid, and Ni-MH batteries. It features a clear blue LED display with four segments to indicate battery capacity.

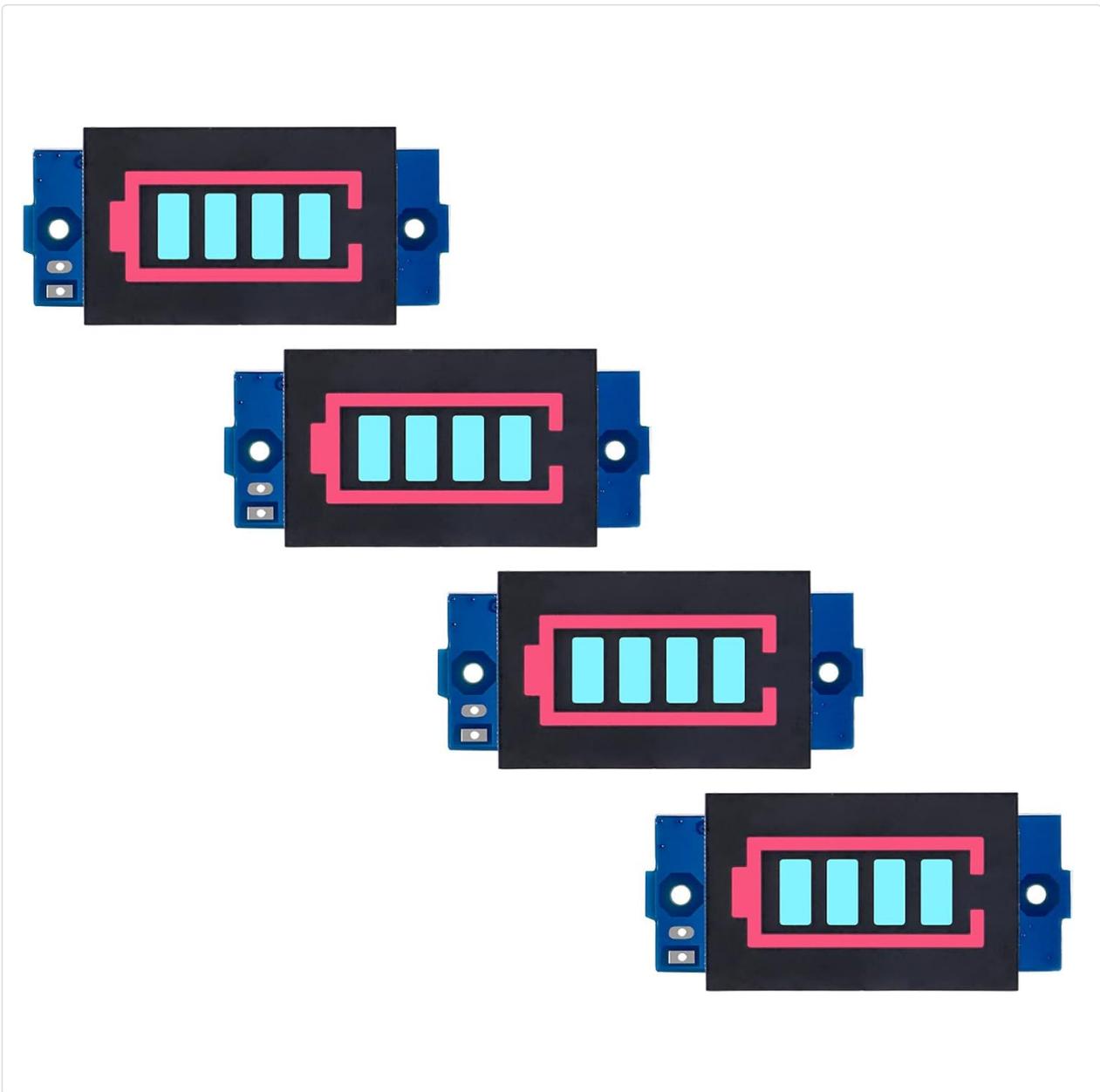


Image: A set of four DORHEA 1S battery level indicator modules, each displaying a full charge with four blue LED segments within a red battery outline.

2. PACKAGE CONTENTS

- 4 x 1S Battery Capacity Module

3. SETUP AND CONNECTION

To use the module, connect its positive and negative terminals to the positive and negative terminals of the battery you wish to test. The module will then display the real-time battery power.

3.1. Multi-Series Lithium Battery Configuration

For measuring multi-series lithium batteries (e.g., 2S, 3S, 4S, 6S), it is necessary to short-circuit the corresponding pads on the module. For example, if measuring a 2S battery (two batteries connected in series), a short circuit on the pad corresponding to 'S2' on the board is required. Refer to the module's PCB for 'S' markings.

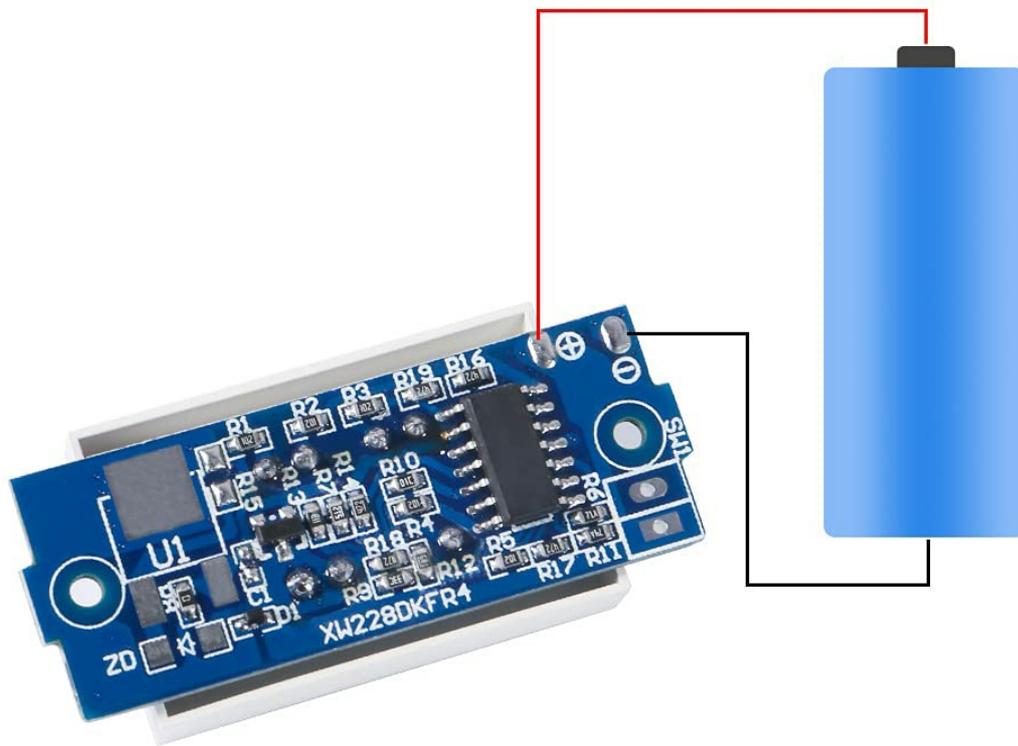


Image: A diagram illustrating the connection of the battery level indicator module to a single battery. The positive terminal of the battery connects to the '+' terminal on the module, and the negative terminal connects to the '-' terminal.

4. OPERATING INSTRUCTIONS

The module displays battery capacity using four blue LED segments. The red outline of the battery icon is always lit. The number of illuminated blue segments indicates the approximate charge level.

4.1. General Battery Level Indication

- When battery voltage is less than $N \times 3.3V$: All 4 blocks are off, indicating the battery is low and requires charging.
- When battery voltage is over $N \times 3.3V$: 1 block illuminates.
- When battery voltage is over $N \times 3.5V$: 2 blocks illuminate.
- When battery voltage is over $N \times 3.7V$: 3 blocks illuminate.
- When battery voltage is over $N \times 3.9V$: 4 blocks illuminate.

Note: 'N' represents the number of battery cells in series (e.g., $N=1$ for a 1S battery, $N=2$ for a 2S battery).

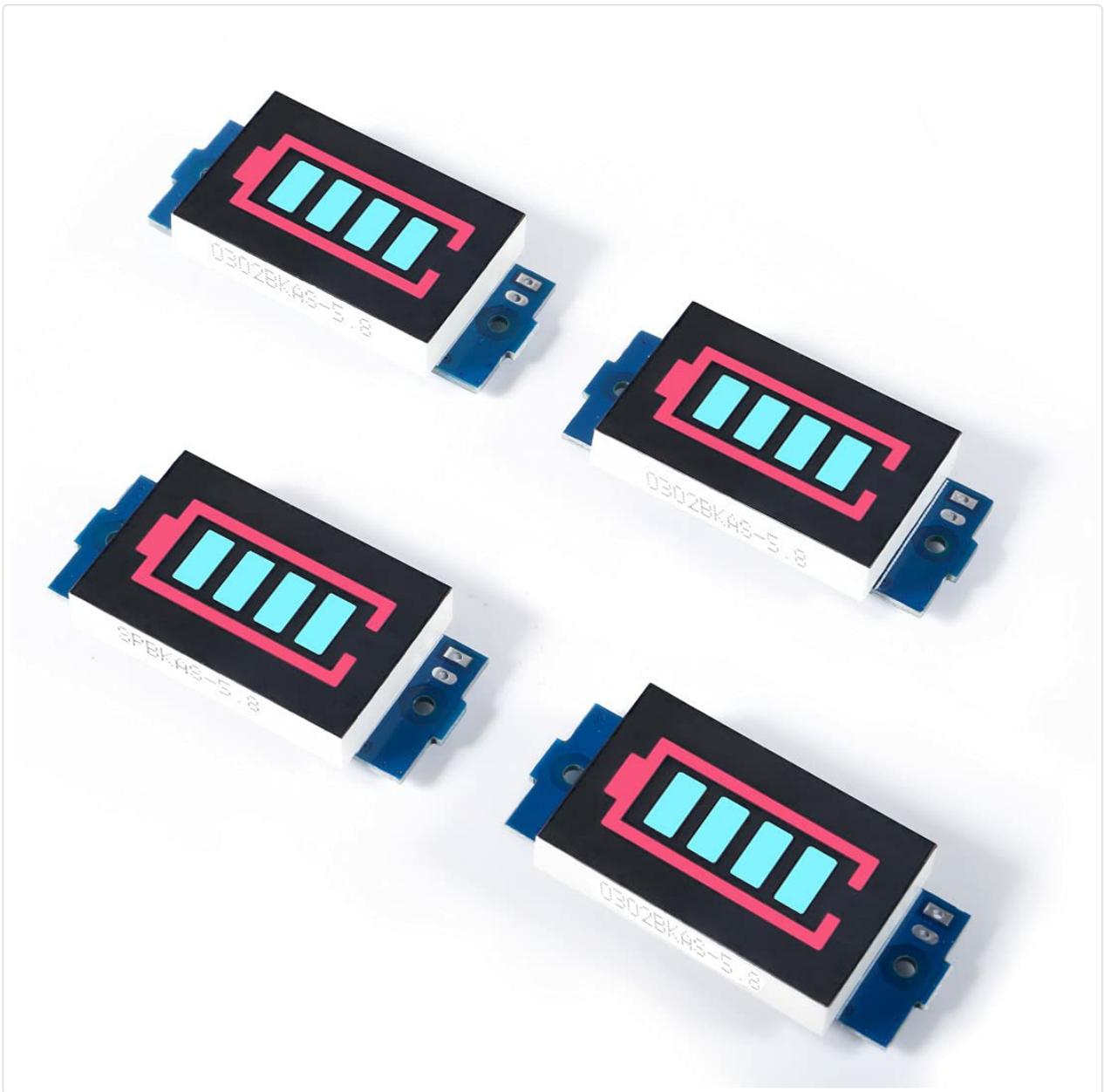


Image: Four DORHEA 1S battery level indicator modules, each displaying a full charge with four blue LED segments, providing a visual representation of the module's operational display.

5. BATTERY TYPE CONFIGURATION AND VOLTAGE THRESHOLDS

The module can be configured for different battery types and series. Ensure the correct 'S' pad is shorted for multi-series lithium batteries. The following are specific voltage thresholds for common battery types:

5.1. 1S Lithium Battery (Li-po/Li-ion)

- Voltage > 3.3V: 1 grid bright
- Voltage > 3.5V: 2 grids bright
- Voltage > 3.7V: 3 grids bright
- Voltage > 3.9V: 4 grids bright

5.2. Lead-Acid Battery Voltage Ranges

4V Lead-Acid (can use 1S lithium iron phosphate battery settings)

- Voltage > 3.3V: 1 grid bright
- Voltage > 3.5V: 2 grids bright
- Voltage > 3.7V: 3 grids bright
- Voltage > 3.9V: 4 grids bright

6V Lead-Acid (can use 2 series of lithium iron phosphate battery settings)

- Voltage > 5.6V: 1 grid bright
- Voltage > 5.9V: 2 grids bright
- Voltage > 6.2V: 3 grids bright
- Voltage > 6.6V: 4 grids bright

12V Lead-Acid (can use 4 series of lithium iron phosphate batteries settings)

- Voltage > 11.0V: 1 grid bright
- Voltage > 11.8V: 2 grids bright
- Voltage > 12.3V: 3 grids bright
- Voltage > 13.1V: 4 grids bright

24V Lead-Acid (can use 8 series of lithium iron phosphate battery settings)

- Voltage > 22.3V: 1 grid bright
- Voltage > 23.5V: 2 grids bright
- Voltage > 24.7V: 3 grids bright
- Voltage > 26.3V: 4 grids bright

6. SPECIFICATIONS

- **Brand:** DORHEA
- **Model:** 1S
- **Display Type:** Blue LED segments with red outline
- **Min. Operating Voltage:** 3.3 Volts
- **Color:** Blue, Red
- **Package Dimensions:** 3.31 x 2.05 x 0.47 inches
- **Item Weight:** 0.63 ounces (per 4 modules)

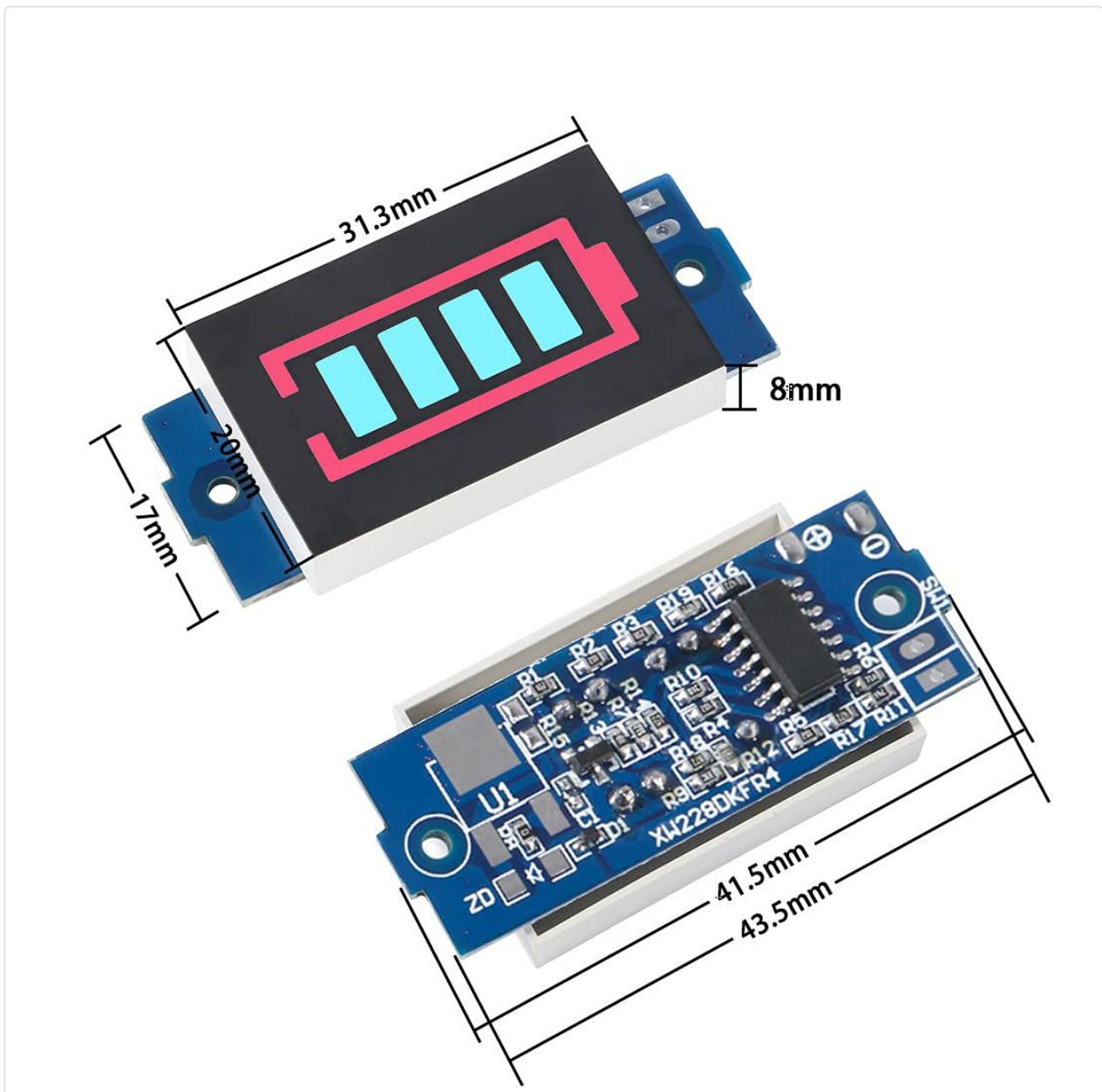


Image: A detailed view of the DORHEA battery level indicator module with key dimensions labeled in millimeters, showing its compact size suitable for various applications.

7. TROUBLESHOOTING

- **Display not lighting up:** Ensure positive and negative connections are correct and secure. Verify the battery voltage is within the module's operating range (above $N \times 3.3V$).
- **Inaccurate readings:** Ensure the correct 'S' pad is shorted for multi-series lithium batteries. The electricity quantity parameter is a reference value and may have a small error range (approximately 2%).
- **High current draw:** The module has a current draw of approximately 35mA. If left continuously connected, it can drain the battery over time. For applications where continuous display is not required, consider using a momentary push-button switch to activate the display only when needed.
- **Only red outline visible, no blue bars:** This indicates the battery voltage is below the minimum threshold ($N \times 3.3V$) for the first blue segment to illuminate. The battery requires charging.

8. MAINTENANCE

- This module is not waterproof. Ensure it is used in a dry environment to prevent damage to electronic

components.

- Always ensure the number of corresponding battery strings matches the module's configuration (e.g., 'S' pad shorting) and use it within the specified voltage range.
- Do not exceed a voltage of $4.3 * N$ at most. For example, if the 'S3' pad is selected, the maximum voltage detected by the module should not exceed $4.3 * 3 = 12.9V$.

9. WARRANTY AND SUPPORT

For any questions, technical assistance, or support regarding your DORHEA 1S Battery Level Indicator Capacity Module, please contact the seller or manufacturer through the platform where the product was purchased. Please refer to your purchase documentation for specific warranty details.