

DollaTek DZ1295

DollaTek LD35 USB Electronic Load Tester Instruction Manual

Model: DZ1295

1. INTRODUCTION

The DollaTek LD35 is a versatile USB electronic load tester designed for constant current discharge testing. It features a user-friendly interface and robust performance indicators, suitable for various testing requirements. This device can handle constant discharge tasks up to 4A, 25V, and 35W. It is equipped with a 4-bit LED digital display for real-time monitoring of voltage, current, and power values, and includes Micro USB and Type-C input ports for comprehensive testing of charging cables.

Key features include precise current adjustment, an efficient all-aluminum heat sink with an intelligent temperature-controlled fan, and multiple protection mechanisms against over-voltage, over-current, and high temperatures.

2. SAFETY INFORMATION

WARNING: The input polarity cannot be reversed. Reversing the input polarity will permanently damage the product and it cannot be repaired.

To ensure safe operation and prevent damage to the device or connected equipment, please observe the following:

- Do not exceed the maximum rated operational voltage of DC 4-25.0V.
- Do not exceed the maximum discharging power of 35W.
- The device includes built-in protection against over-voltage (OVP), over-power (OPP), and over-temperature (OTP). If any of these limits are exceeded, the device will automatically display a relevant code and stop discharging to prevent damage.
- Ensure proper ventilation around the device, especially when operating at higher loads, to allow the fan to dissipate heat effectively.
- When testing power banks, carefully check their output current capabilities. Adjust the load current to a smaller value if the power bank's output is limited to prevent damage to the power bank.

3. PRODUCT OVERVIEW

The DollaTek LD35 USB Electronic Load Tester features a compact design with essential controls and indicators for efficient testing.



Figure 3.1: Front view of the LD35 USB Electronic Load Tester, showing the fan, LED display, and control buttons.

LD35 Intelligent Electronic Load



Hydraulic bearing intelligent
temperature control fan

Figure 3.2: The LD35 Intelligent Electronic Load, highlighting the fan and digital display.

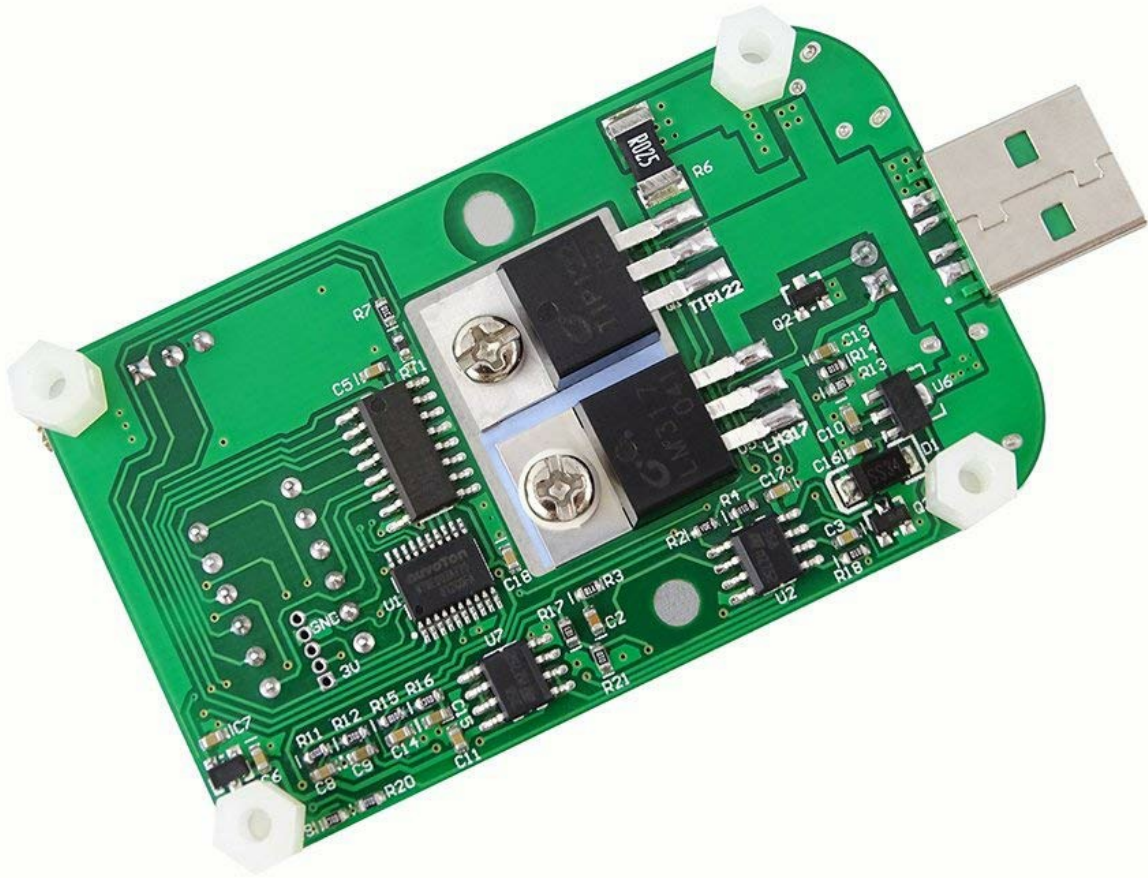


Figure 3.3: Rear view of the LD35 circuit board, showing internal components.

3.1 Components

- **USB-A Input Connector:** For connecting to the power source under test.
- **Micro USB Input Port:** Additional input for testing Micro USB cables.
- **Type-C Input Port:** Additional input for testing Type-C cables.
- **4-bit LED Display:** Shows real-time voltage, current, and power values.
- **Adjustable Potentiometer:** Used to precisely adjust the discharge current.
- **"ON/OFF" Button:** Toggles the load output on or off.
- **"SET" Button:** Cycles through display modes (Voltage, Current, Power) and is used for setting boot status and recovery.
- **Cooling Fan:** Intelligent temperature-controlled fan for heat dissipation.
- **Heat Sink:** All-aluminum heat sink for efficient thermal management.



Figure 3.4: Dimensions of the LD35 USB Electronic Load Tester (83.8mm x 41.1mm x 27.9mm).

4. SETUP

Setting up the LD35 is straightforward:

1. **Connect Power Source:** Insert the USB-A connector of the LD35 into the USB output port of the power source you wish to test (e.g., power bank, USB charger, computer USB port). Alternatively, use the Micro USB or Type-C input ports to test corresponding cables by connecting them to a power source and then to the LD35.
2. **Initial Display:** Upon connection, the LED display will light up, showing the current setting value. This indicates the device is powered on and waiting for output.
3. **Verify Connection:** Ensure the connection is secure and stable.

5. OPERATION INSTRUCTIONS

The LD35 offers intuitive controls for managing the load and monitoring parameters.

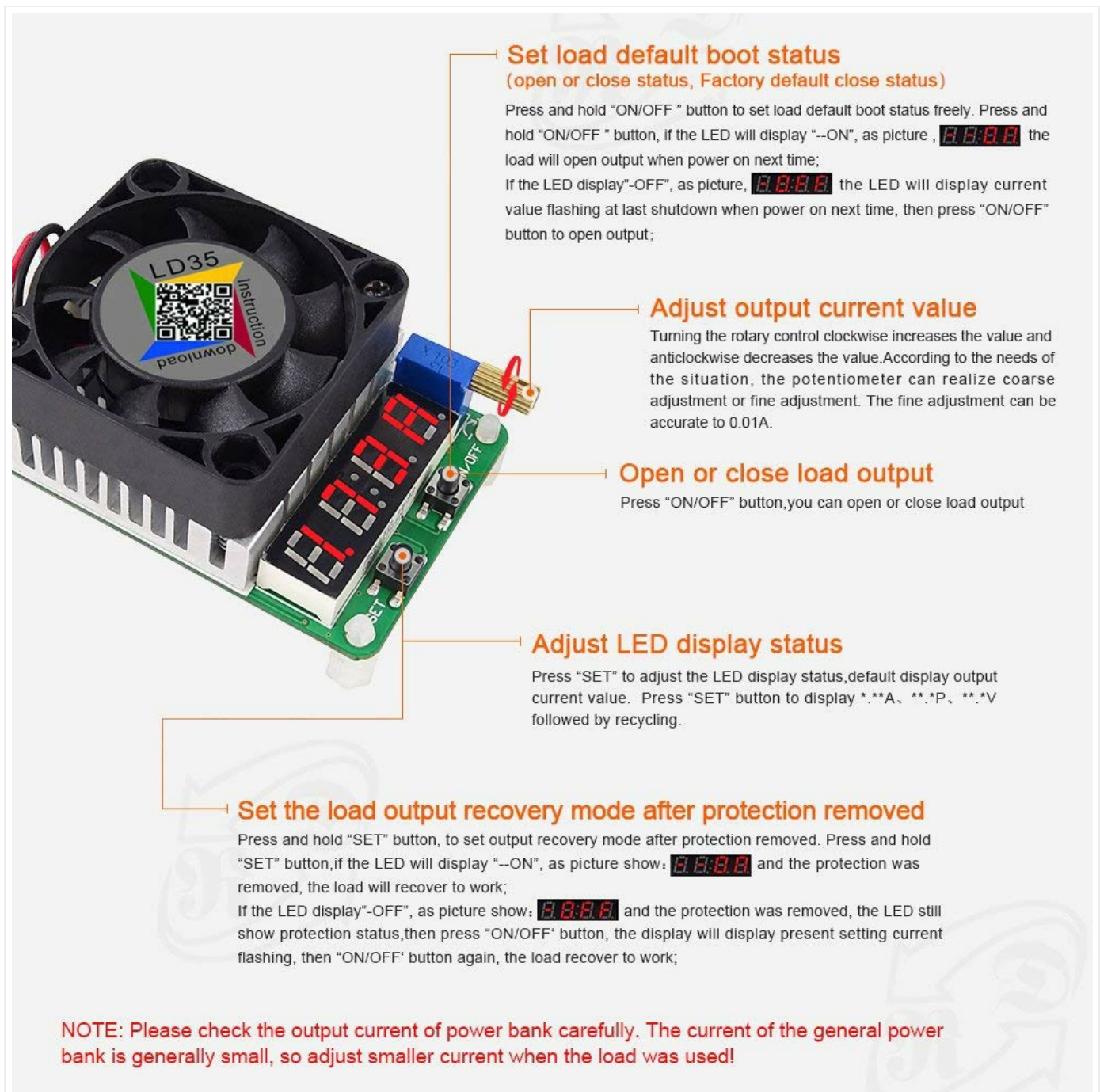


Figure 5.1: Diagram illustrating the operational controls and functions of the LD35.

5.1 Open or Close Load Output

- Press the **"ON/OFF"** button to toggle the load output. When the load is active, the device will begin drawing current according to the set value.

5.2 Adjust Output Current Value

- Rotate the **adjustable potentiometer** (blue knob) clockwise to increase the current value and counter-clockwise to decrease it.
- The potentiometer allows for both coarse and fine adjustments. The fine adjustment capability ensures precise current setting, down to 0.01A, preventing accidental damage from sudden large current changes.

5.3 Adjust LED Display Status

- Press the **"SET"** button to cycle through the displayed parameters: current (A), power (P), and voltage (V). The default display shows the output current value.

5.4 Set Load Default Boot Status

- To set the default boot status (open or close load), press and hold the **"ON/OFF"** button.
- If the LED displays "ON", the load will automatically open output when powered on next time.
- If the LED displays "OFF", the load will remain closed on power-up. To open the load, press the "ON/OFF" button.

5.5 Set Load Output Recovery Mode After Protection

- If the device enters a protection state (OVP, OPP, OTP), the LED display will show a relevant error code.
- To set the recovery mode, press and hold the **"SET"** button.
- If the LED displays "ON", the load will automatically recover to work after the protection condition is removed.
- If the LED displays "OFF", the protection will be removed, but the load will remain closed. You must then press the "ON/OFF" button to resume operation.

NOTE: When testing power banks, always check their output current capacity. For power banks with generally small output currents, adjust the load to a smaller current value to prevent damage.

6. SPECIFICATIONS

The following table details the technical specifications of the DollaTek LD35 USB Electronic Load Tester:

PRODUCT PARAMETERS

Rated operational voltage:	DC4-25.0V	Max discharging power:	35W
Rated operational current:	0.25-5.00A (when fan don't work, the minimum constant current is 0.05A)	Fan Speed:	Large size intelligent temperature control fan, speed 8000±10%RPM
Constant current resolution:	± (1%+3 digits)	Heat dispatch method:	intelligent temperature control fan + All aluminum fan
Working temperature:	-10℃-40℃	Adjustable potentiometer:	Precision multiloop adjustable potentiometer
Display mode:	4 bit LED tube	Expansion port:	Micro USB port Type-C port
Product weight:	57g	Product size:	83.8x41.1x27.9mm

OPERATION INSTRUCTIONS:

The load is powered at the range of 4-25.0 V (the input polarity cannot be reversed, otherwise the product is permanently damaged and cannot be repaired), the LED will be flashing to remind current setting value, waiting for output. Press ON/OFF button, open output to start work!

Figure 6.1: Detailed product parameters for the LD35.

Parameter	Value
Rated Operational Voltage	DC 4-25.0V
Rated Operational Current	0.25-5.00A (Fan operates above 0.05A)
Max Discharging Power	35W
Constant Current Resolution	± (1% + 3 digits)
Working Temperature	-10°C to 40°C
Fan Speed	8000 ± 10% RPM (Intelligent temperature control)
Adjustable Potentiometer	Precision multi-loop adjustable potentiometer

Parameter	Value
Display Mode	4-bit LED tube
Expansion Port	Micro USB port, Type-C port
Product Weight	57g
Product Size	83.8 x 41.1 x 27.9 mm
Compliance	CE, NIST, RoHS

7. TROUBLESHOOTING

This section addresses common issues you might encounter with the LD35 USB Electronic Load Tester.

7.1 Protection Triggered (OVP, OPP, OTP)

- **Symptom:** The LED display shows an error code (e.g., OVP, OPP, OTP) and the load output stops.
- **Cause:** The input voltage, power, or internal temperature has exceeded the safe operating limits.
- **Solution:**
 - a. Disconnect the power source.
 - b. Identify and resolve the cause (e.g., use a power source within the specified voltage range, reduce the set current to lower power, ensure adequate ventilation).
 - c. If the recovery mode is set to "ON" (see Section 5.5), the device will automatically resume operation once the condition is resolved. If set to "OFF", press the "ON/OFF" button to restart the load.

7.2 Fan Not Operating or Stuttering

- **Symptom:** The cooling fan does not spin or stutters during operation.
- **Cause:** The fan is temperature-controlled and will only activate when the internal temperature reaches a certain threshold. If the input voltage drops too low (e.g., below 4.5V), the fan may not receive sufficient power to operate correctly.
- **Solution:**
 - a. Verify that the device is drawing sufficient current to generate heat, which would trigger the fan.
 - b. Ensure the input voltage from the power source is stable and within the operational range (DC 4-25.0V). If the voltage sags under load, the fan might stop.
 - c. Check for any obstructions to the fan blades.

7.3 Inaccurate Readings

- **Symptom:** The displayed voltage, current, or power values appear incorrect.
- **Cause:** External factors, faulty connection, or device malfunction.
- **Solution:**
 - a. Ensure all connections are secure and free from corrosion.
 - b. Compare readings with a calibrated multimeter if available.
 - c. Ensure the device is operating within its specified parameters.

8. MAINTENANCE

The DollaTek LD35 USB Electronic Load Tester requires minimal maintenance to ensure long-term performance.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Do not use liquid cleaners or solvents. Ensure no dust or debris accumulates in the fan or heat sink fins, as this can impede cooling.
- **Storage:** Store the device in a cool, dry place away from direct sunlight and extreme temperatures.
- **Handling:** Handle the device with care to avoid physical damage, especially to the USB connectors and potentiometer.

9. SUPPORT AND WARRANTY

For technical support or inquiries regarding the DollaTek LD35 USB Electronic Load Tester, please refer to the manufacturer's resources.

An instruction PDF can be found by scanning the QR code on the fan or by visiting the following link:

[DollaTek LD35 Instruction PDF](#)

This document provides additional details and diagrams that may be helpful for advanced users.

Manufacturer: DollaTek

Warranty information is typically provided at the point of purchase or through the retailer. Please retain your proof of purchase for any warranty claims.

