

6. Electrical Specifications

Power input	AC 220V / 50Hz
Series rating	DC 0-250V / 0-20mA
Common panel rating	DC 0-230V / 0-25mA
Display	Single meter, LED voltage (V)
Voltage accuracy	0.01V (series data)
Adjustment	Continuous voltage / current / brightness knob
Isolation	Partial isolation (capacitive current limiting)

Panel markings may vary by production batch. Follow the rating printed on the actual unit supplied.

7. Safety



Never touch the positive and negative outputs with separate hands.

Current limiting does not eliminate electric-shock risk.



Hold insulated probe grips only. Never operate with wet hands or bare feet, and keep metal tips away from the body and conductive benches.



Mild warmth during extended use is normal. After about **2 hours**, unplug the unit and let it rest for **5 minutes**.

8. Care and Storage

- Switch off and unplug after use; store the probes separately.
- Keep the unit dry. Stop using it if overheating, odor or damage occurs. Do not open the enclosure.

CA250

ADJUSTABLE LED TESTER

LED Bead & TV Backlight Repair Tester

USER MANUAL

1. Product Features

- Adjustable output:** one knob controls voltage, current and LED brightness.
- Voltage display:** the single meter shows the voltage across the LED or strip.
- Automatic adaptation:** works with LEDs, strips and panels of different forward voltages.
- Current limiting:** helps prevent damage during normal testing.
- Wide coverage:** tests LED beads, strips, panels and TV backlight assemblies.

2. Nearby Model Comparison

Model	Voltage	Current	Display	Accuracy	Leak
CA250	0-250V	0-20mA	V	0.01V	No
CB250	0-250V	0-20mA	V+I	0.01V	Yes
CX300	0-320V	0-40mA	V+I	0.01V	No
CF300	0-300V	0-300mA	V+I	0.2V	No

Values above are series ratings. See the back cover for CA250 panel variations.

3. Quick Start

- Set the adjustment knob low, then connect AC 220V power.
- Connect the red probe to positive and the black probe to negative. Hold insulated grips only.
- Touch both ends of the LED or strip and turn the knob slowly.
- The LEDs light above their forward voltage. Continue slowly to adjust brightness.

If it stays dark: lower the knob, reverse polarity and check contact before judging the LED or strip as faulty.

4. Front Panel and Connections



Use the front view as a guide. Labels and minor details may vary by production batch.

- Adjustment knob**
Voltage / current / brightness
- Voltage display**
Unit: V
- Positive output**
Red terminal
- Negative output**
Black terminal

5. Checking LED Strips

- Compare voltage:** matching strips should read similarly at similar brightness.
- Find anomalies:** a difference above roughly 3V within a matching set may indicate a fault.
- Use a good sample:** comparison with a known-good strip helps locate the problem.
- Limit brightness:** use only enough light for diagnosis; avoid prolonged over-bright testing.

Suitable for: LED beads, strips, panels, boards and LCD TV backlight assemblies.