UT659A/UT659D LED Tester User Manual

Preface

Thank you for purchasing the new LED tester. In order to use this product safely and correctly, please read this manual thoroughly, especially the *Safety Warning* part.

After reading this manual, it is recommended to keep the manual at an easily accessible place, preferably close to the device, for future reference.

Limited Warranty and Liability

Uni-Trend guarantees that the product is free from any defect in material and workmanship within one year from the purchase date. This warranty does not apply to damage caused by accident, negligence, misuse, modification, contamination or improper handling. The dealer shall not be entitled to give any other warranty on behalf of Uni-Trend. If you need warranty service within the warranty period, please contact your seller directly.

Uni-Trend will not be responsible for any special, indirect, incidental or subsequent damage or loss caused by using this device.

I. Safety Warning

This manual contains warning information and safety regulations. Please observe them strictly to ensure the safety of the user and tester.

⚠ **Caution:**

1. Please read and understand the contents of the manual before using the tester.
2. Please be sure to understand the safety aspects of the manual in detail.
3. Uni-Trend is not responsible for any damage caused by improper use or violation of the safety regulations in the manual.
4. This manual is subject to change without prior notice.

Safety symbol " ⚠ " has three meanings in the manual. Users should pay special attention to the operation with the symbol when reading.

⚠ **Danger-----** *identifies conditions and actions that are likely to pose serious or fatal hazards.*
⚠ **Warning----** *identifies conditions and actions that may pose serious or fatal hazards.*
⚠ **Caution-----** *identifies conditions and actions that may pose minor injury or damage the tester.*

Danger

⚠ *This tester is a power output device. Please do not use it to test live circuits.*
⚠ *This tester can output up to 30mA current/300V voltage. Please do not touch both ends of the output test leads.*

Warning

⚠ *This tester is a power output device. Do not use it to test circuits connected to vulnerable components, such as CPU on the board.*
⚠ *When the tester is testing at 30mA/300V, if the voltage rises but there is no LED lit, please discontinue the test.*

Caution

⚠ *Do not look directly at the high-brightness LED light source for a long time.*
⚠ *Do not light high-power LED lamps for a long time to avoid overheating of the tester.*
⚠ *If the tester is not used for a long time, please unplug the power.*

The meaning of the symbols associated with this tester:

⧈	Equipment protected throughout by DOUBLE INSULATION or REINFORCED INSULATION
⚠	Danger, Warning or Caution
⚠	Caution, possibility of electric shock
	Please read the instructions before use.
	Do not discard the tester or its accessories as unsorted municipal waste. Please dispose properly in accordance with local regulations.

II. Features

The UT659A/UT659D LED tester supports full voltage (85V~265V, 50Hz /60Hz) input, which can be used after powering it up for 1 minute to ensure stable voltage output. When performing a LED test at 30mA/300V, the LED polarity can be automatically identified (short-circuit the positive and negative ends of the test leads continuously for about 5s to switch between automatic identification of polarity and non-automatic identification of polarity), and the output voltage is adaptively adjusted according to the forward voltage drop of the tested LED. The internal chip of the tester has over temperature, overcurrent and overload protection functions.

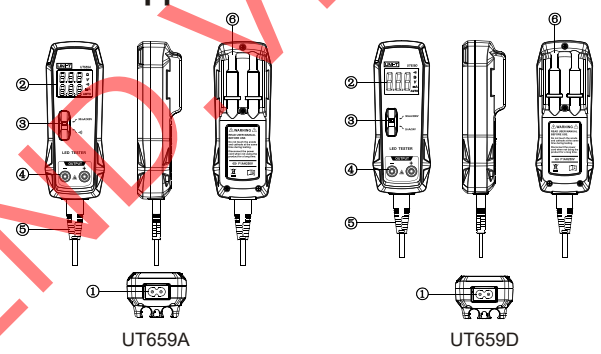
1. UT659A

1) When the toggle switch is placed in the 30mA/300V position, the LCD displays the output voltage and output current.
2) When the toggle switch is placed in the •)) position for circuit continuity test, the LCD displays the resistance value or OL.

2. UT659D

1) When the toggle switch is placed in the 2mA/24V position for single LED lamp bead test, automatic identification of LED polarity is not performed.
2) The LCD only displays the output voltage.

III. Tester Appearance and Main Accessory



UT659A UT659D

1	Input socket	4	Output ports
2	LCD	5	Input power cord
3	Toggle switch	6	Test lead slots

IV. Specifications

1. Technical indicators

UT659A					
Input voltage		AC 85V~265V, 50Hz/60Hz			
Function	Output voltage (MAX)	Output current (MAX)	Voltage display accuracy	Current display accuracy	Resistance display accuracy
30mA/300V	DC 320V	33mA	±2%±5 digit	±2%±5 digit	NA
•))	DC 5V	50mA	NA	NA	±2%±5 digit

UT659D			
Input voltage		AC 85V~265V, 50Hz/60Hz	
Function	Output voltage (MAX)	Output current (MAX)	Voltage display accuracy
30mA/300V	DC 320V	33mA	±2%±5 digit
2mA/24V	DC 24V	2mA	±2%±5 digit

2. Measurement Range (Function)

1) 30mA/300V:

Tests the TV backlight, LED lamp and other series circuit of multiple LED lamp beads with automatic identification of LED polarity (Note: Short-circuit the positive and negative ends of the test leads continuously for about 5s to switch between automatic identification of polarity and non-automatic identification of polarity; in the automatic identification of polarity mode, when the backward impedance for the series circuit of multiple LED lamp beads is too large, which is similar to open circuit for the output of DC 300V, manually change the polarity of the test leads for testing).

2) 2mA/24V:
Tests a single LED lamp bead without automatic identification of LED polarity.

3) •)) :
Tests circuit continuity.

3. General Specifications

1) Application Standard
CAT II 300V

2) Working Environment
Operating temperature: 32°F~104°F (0°C~40°C)
Relative humidity: ≤80%RH
Altitude: ≤2000 meters

3) Storage Conditions
Storage temperature: 14°F~122°F (-10°C~50°C)
Relative humidity: ≤75% RH

4) Product Size
56mm*150mm*42mm

5) Product Weight
About 170g

6) Accessories
Power cord ---------- 1 pc
Test leads ---------- 1 pair
User manual ----------1 pc

V. Testing the TV Backlight, LED Lamp and Other Series Circuit of Multiple LED Lamp Beads (UT659A & UT659D)

1. Automatic Identification of Polarity

1) Place the toggle switch in the 30mA/300V position and plug in the power cord. The tester defaults to automatic identification of polarity and the “AUTO” symbol on the LCD lights up. Wait for 1 minute to ensure stable voltage output.
2) Connect the output test leads with both ends of the circuit under test respectively.
3) The tester automatically identifies the polarity of the circuit and adjusts the positive and negative poles of the output voltage. The multiple LED lamp beads are lit gradually. If a LED lamp bead is not lit, it is damaged.
4) When the positive and negative ends of the test leads are connected with both ends of the circuit under test in reverse and the backward impedance of the circuit is as large as approximately open circuit, the test output has no response. In this case, manually change the polarity of the test leads for testing.
5) If the test output still has no response after step 4), the circuit under test is broken.

2. Non-Automatic Identification of Polarity

1) In the automatic identification of polarity mode, short-circuit the positive and negative ends of the test leads continuously for about 5s, and the “AUTO” symbol on the LCD screen will go out, indicating switching to the non-automatic identification of polarity.
2) Connect the positive end of the test leads with the positive pole of the circuit under test, and negative end with the negative pole.
3) The multiple LED lamp beads are lit gradually. If a LED lamp bead is not lit, it is damaged.

⚠ Caution:

In the automatic identification of polarity mode, when the tested circuit is connected in parallel with a component or circuit with a lower forward voltage drop, the polarity judgment will be misled. At this time, switch to the non-automatic identification of polarity mode for testing.

VI. Single LED Lamp Bead Test (UT659D)

1. Place the toggle switch in the 2mA/24V position.
2. Connect the output test leads with both ends of the LED lamp bead under test respectively.
3. If the polarity connection is correct and the LED lamp bead is lit, the LED is normal.
4. If the LED lamp bead is not lit, change the polarity of the test leads for testing. If the LED lamp bead is still not lit, the LED is damaged; if the LED lamp bead is lit, the LED is normal (the previous polarity connection is incorrect).

VII. Continuity Test (UT659A)

1. Place the toggle switch in the •)) position.
2. Connect the output test leads with both ends of the circuit under test respectively.
3. When the circuit resistance is ≤100Ω, the LCD displays the resistance value, and when the resistance value is ≤30Ω, the buzzer beeps; when the circuit resistance is >100Ω, the LCD displays OL.

VIII. Maintenance and Repair

1. Cleaning the Casing

Clean the casing of the tester gently with a dry cloth. Do not use alcohol or solvent as it is corrosive to the casing, especially the LCD. Please prevent the tester from being wet.

2. Repair

Please contact your seller directly if the following issues occur.
1) The casing of the tester is broken or the tester is damaged.
2) The LCD displays abnormally.
3) Unexpected test data occur under normal use.
4) The toggle switch does not function normally.

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