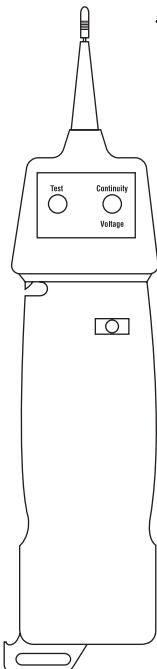




## INSTRUCTION MANUAL MANUAL DE INSTRUCCIONES MANUEL D'INSTRUCTIONS



# LT-100 LAMP TESTER PROBADOR DE BOMBILLAS ELÉCTRICAS VERIFICATEUR D'AMPOULE



**Read and understand** all of the instructions and safety information in this manual before operating or servicing this tool.



**Lea y entienda** todas las instrucciones y la información sobre seguridad que aparecen en este manual, antes de manejar estas herramientas o darles mantenimiento.

**Lire attentivement et bien comprendre** toutes les instructions et les informations sur la sécurité de ce manuel avant d'utiliser ou de procéder à l'entretien de cet outil.

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## Description

The Greenlee LT-100 Lamp Tester is a hand-held device intended to test fluorescent lamp ballasts, starters, capacitors, resistors and the following types of lamps:

- Fluorescent
- Low-pressure sodium
- High-pressure sodium
- Neon
- Mercury
- Metal halide

The unit can also locate energized conductors for AC voltages between 60 V and 240 V.

## Safety

Safety is essential in the use and maintenance of Greenlee tools and equipment. This instruction manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all of the safety information provided.



## Purpose

This instruction manual is intended to familiarize all personnel with the safe operation and maintenance procedures for the Greenlee LT-100 Lamp Tester.

Keep this manual available to all personnel.

Replacement manuals are available upon request at no charge.

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***KEEP THIS MANUAL***





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## Important Safety Information



### SAFETY ALERT SYMBOL

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

#### ⚠ DANGER

Immediate hazards which, if not avoided, WILL result in severe injury or death.

#### ⚠ WARNING

Hazards which, if not avoided, COULD result in severe injury or death.

#### ⚠ CAUTION

Hazards or unsafe practices which, if not avoided, MAY result in injury or property damage.



#### ⚠ WARNING

**Read and understand** this material before operating or servicing this equipment. Failure to understand how to safely operate this tool can result in an accident causing serious injury or death.

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## Important Safety Information



### ⚠ WARNING

Electric shock hazard:

Contact with live circuits can result in severe injury or death.

### ⚠ WARNING

Electric shock hazard:

- Do not use the unit if it is wet or damaged.

Failure to observe this warning can result in severe injury or death.

### ⚠ WARNING

Electric shock hazard:

- Do not apply more than the rated voltage between probe tip and earth ground.
- Do not contact the probe tip.

Failure to observe these warnings can result in severe injury or death.

### ⚠ WARNING

- Do not operate with the case open.

- Before opening the case, remove the probe from the circuit and shut off the unit.

Failure to observe these warnings can result in severe injury or death.





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## Important Safety Information

### ⚠ CAUTION

- Do not attempt to repair this unit. It contains no user-serviceable parts.
- Do not expose the unit to extremes in temperature or high humidity. See Specifications.

Failure to observe these precautions can result in injury and can damage the unit.

### IMPORTANT

Unless measuring voltage, shut off and lock out power. Make sure that all capacitors are discharged. Voltage must not be present.

### IMPORTANT

Using this unit near equipment that generates electromagnetic interference can result in unstable or inaccurate readings.





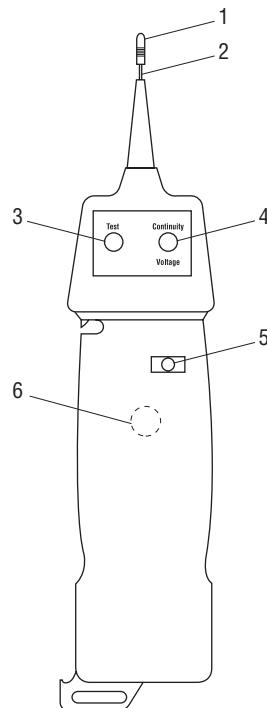
## Identification

1. Probe Tip Cover
2. Probe
3. Lamp Test LED
4. Continuity/Voltage LED
5. Lamp Test Button
6. Contact Electrode (on reverse side)

## Icons on the Unit

Read the instruction manual.

Double Insulation



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## Operation

1. See Typical Uses for illustrations.
2. Remove the probe tip cover.
3. Test the unit on a known functioning circuit or component.
  - If the unit does not function as expected, replace the battery.
  - If the unit still does not function as expected, send the unit to Greenlee for repair.
4. Take the reading from the unit to be tested, using the information provided under Lamp Tests and Other Tests.

### Lamp Tests

For all lamp tests, press the probe tip to the glass body or the lamp base. Press and hold the Lamp Test button. Touching the base of the lamp during the test can cause incorrect test results.

Lamp type	Tube is defective if ...
Fluorescent	tube does not illuminate*
Low-pressure sodium	inner tube does not illuminate**
High-pressure sodium	illumination in inner tube is not a clean, blue line
Neon	tube does not illuminate
Mercury***	tube does not illuminate evenly
Metal halide***	tube does not illuminate evenly

\* If lamp illuminates with lamp tester but not when installed in an energized fixture, the filaments or ballast may be defective. The filaments and ballast may be checked with the continuity function.

\*\* If only half of the lamp illuminates, touch the probe tip to the second pin. If the other half does not illuminate, the lamp is defective.

\*\*\* Intermittent or unstable illumination while in the fixture may indicate a faulty ballast.



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## Operation (cont'd)

### Other Tests

*Note: The Lamp Test button is not used for these tests.*

To test/verify	Instructions	Indications
Continuity*	Touch one end of the circuit or component with probe tip. Touch the other end with free hand. Touch the contact electrode to complete the circuit.	Tone and Continuity/Voltage LED
Diode (forward bias)	Touch the cathode with probe tip. Touch the anode with free hand. Touch the contact electrode to complete the circuit.	Tone and Continuity/Voltage LED. Other results indicate a faulty diode.
Diode (reverse bias)	Touch the anode with probe tip. Touch the other cathode with free hand. Touch the contact electrode to complete the circuit.	No indication. Tone and Continuity/Voltage LED indicate a faulty diode.
Energized Conductor	Touch unit to be tested with probe tip. Touch the contact electrode to complete the circuit.	Tone and Continuity/Voltage LED if AC voltage is 60 to 250 V at 40 to 60 Hz

\* Tone and Continuity LED indicate resistance from 0 to 5 MΩ (approximately).

Louder tone and brighter LED indicate lower resistance.

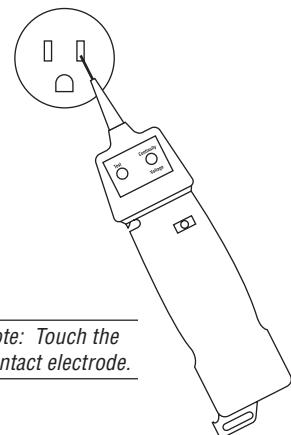




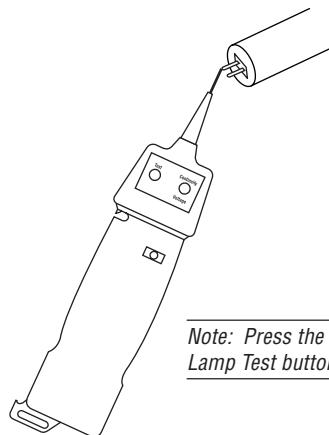
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## Typical Uses

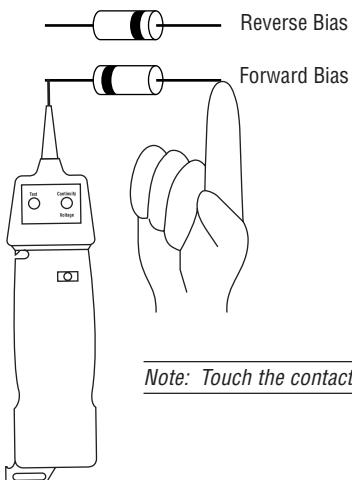
Locating an Energized Conductor



Testing a Lamp



Checking a Diode



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## Specifications

Temperature Range: -10 °C to 50 °C (14 °F to 122 °F)

Relative Humidity: 0% to 70% (noncondensing)

Storage Conditions: Remove battery

Battery: 9-Volt (NEDA 1604, JIS 006P or IEC 6LR61)

Protection Category: IP 40

### Low Battery Indicators

- Continuous tone is absent when performing a continuity test on known good wire
- Continuity/Voltage light no longer glows brightly
- Lamp tester does not work on a known functioning tube

### Voltage Tester

Test Range: 60 to 250 V AC

Frequency: 40 to 60 Hz



### Continuity Verification



Oversupply Protection: 250 V AC/DC

Test Range: 0 to 5 MΩ (approximately)

Test Current: < 7 mA

### Lamp Tester

Test Voltage: Approximately 3 kV/160 kHz

Test Current: < 200 µA





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## Battery Replacement

### ⚠️ WARNING

Before opening the case, remove the probe tip from the circuit.

Failure to observe this warning can result in severe injury or death.

1. Remove the probe tip from the circuit.
2. Using a small screwdriver, remove the battery case (located on the under side of the tester) from the unit.
3. Remove the battery from the battery case.
4. Replace the battery (observe polarity) and return it to the battery case.
5. Replace the battery case to its original position.



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