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Elitech LDM-50D, MOT-270W

Elitech LDM-50D Laser Measure and MOT-270W Moisture Meter Instruction Manual

Comprehensive guide for accurate measurement and moisture detection.

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1. INTRODUCTION

Thank you for choosing the Elitech LDM-50D Laser Measure and MOT-270W Moisture Meter bundle. This comprehensive instruction manual provides detailed guidance on the safe and effective use of both devices. The LDM-50D offers precise distance, area, and volume measurements, while the MOT-270W accurately detects moisture levels in wood and building materials. Together, these tools enhance accuracy and efficiency for various home improvement, construction, and woodworking projects.

2. SAFETY INFORMATION

Please read and understand all safety instructions before operating these devices. Failure to follow these instructions may result in laser radiation exposure, electric shock, fire, or serious injury.

2.1 General Safety Precautions

- Keep the devices away from children and unauthorized personnel.
- Do not operate the devices in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- Store the devices in a dry, cool place when not in use.
- Do not attempt to modify or disassemble the devices. Repairs should only be performed by qualified service personnel.
- Use only specified batteries. Remove batteries if the device will not be used for an extended period.

2.2 Laser Safety (LDM-50D)

The Elitech LDM-50D is a Class 2 laser product. Observe the following precautions:

- **Do not stare directly into the laser beam.**

- **Do not aim the laser beam at people or animals.**
- Avoid direct eye exposure to the laser beam.
- Do not use optical instruments (e.g., binoculars, telescopes) to view the laser beam.
- Ensure the laser is not accidentally activated.

2.3 Moisture Meter Safety (MOT-270W)

- The probes are sharp. Handle with care to avoid injury.
- Do not use the moisture meter on live electrical circuits or materials.
- Keep the probe cover on when not in use to protect the probes and prevent injury.

3. LDM-50D LASER MEASURE OVERVIEW

The Elitech LDM-50D is a compact and precise laser distance meter designed for quick and accurate measurements.

3.1 Key Features

- Measurement Range: Up to 165 feet (50 meters)
- Accuracy: $\pm 2\text{mm}$ ($\pm 1/16$ inch)
- Measurement Functions: Single, Continuous, Area, Volume, Pythagorean (indirect)
- Display: Backlit LCD
- Data Storage: 99 measurements
- Durability: Dustproof & Drop-Resistant (IP54, 1m drop)
- Additional: Dual bubble levels for stability, Key sound feedback

3.2 Device Layout

Upgraded Red Laser Technology Stable Beam, Rapid Response

From DIY Home Projects to Professional Construction – Measure with Confidence. No Waiting, No Errors.

Advanced Accuracy



$\pm 1/16$
in (1.5mm)
Precision



0.5s

Instant Results for
Efficient Work



165Ft

(50m) Max
Measurement



Figure 1: Front view of the Elitech LDM-50D Laser Measure, showing the display, measurement buttons, and function keys.

Work Smarter, Not Harder- Built for Real-World Jobs

-  Backlight Display
-  Key Sound Feedback
-  99 Data Storage



Figure 2: Features of the LDM-50D, including its backlit display, key sound feedback, and capacity to store 99 data points.



Figure 3: Illustration of the LDM-50D's diverse measurement capabilities, including single, continuous, area, volume, angle & height, and Pythagorean theorem measurements.

4. MOT-270W MOISTURE METER OVERVIEW

The Elitech MOT-270W is a pin-type moisture meter designed for quick and accurate moisture content detection in various materials.

4.1 Key Features

- Measurement Principle: Electrical Resistance
- Accuracy: $\pm 2\%$ (Wood gear)
- Material Modes: 4 selectable wood types + building materials
- Functions: HOLD, Max/Min value tracking, Automatic calibration
- Display: Large anti-parallax display
- Power: Automatic shutdown after 10 minutes of inactivity
- Additional: Protective probe cover, Battery alert

4.2 Device Layout

Precision:±2% Wood gear!



Operating temperature:
0°C~40°C



Operating humidity:
20%RH~90%RH



Figure 4: The Elitech MOT-270W Moisture Meter in operation, displaying a moisture reading on wood, along with operating temperature and humidity ranges.

Analysis of Maximum / Minimum Moisture



Figure 5: The MOT-270W's analysis of maximum and minimum moisture values, demonstrating the HOLD MAX function on its display.

Upgraded sensor chip with non-destructive measurement



Figure 6: Key features of the MOT-270W, including its upgraded sensor chip for non-destructive measurement, automatic calibration, Max/Min value tracking, and automatic shutdown after 10 minutes.

5. SETUP

5.1 LDM-50D Laser Measure Battery Installation

1. Locate the battery compartment cover on the back of the device.
2. Slide the cover open.
3. Insert two AAA batteries (not included) according to the polarity markings (+/-).
4. Close the battery compartment cover securely.

5.2 MOT-270W Moisture Meter Battery Installation and Probe Preparation

1. Locate the battery compartment cover on the back of the device.
2. Slide the cover open.
3. Insert two AAA batteries (not included) according to the polarity markings (+/-).
4. Close the battery compartment cover securely.
5. Remove the protective probe cover before use. Replace it after each use to prevent damage and ensure safety.

6. OPERATING INSTRUCTIONS: LDM-50D LASER MEASURE

6.1 Power On/Off

- To power on: Press the **READ** button. The laser will activate.
- To power off: Press and hold the **OFF/CLEAR** button for a few seconds. The device will also auto-power off after 180 seconds of inactivity.

6.2 Unit Selection

Press the **UNIT** button to cycle through measurement units: meters (m), feet (ft), and inches (in).

6.3 Measurement Reference Point

Press the **Reference** button to switch the measurement reference point between the front edge and the rear edge of the device. An icon on the display will indicate the current reference point.

6.4 Single Distance Measurement

1. Point the laser at the target.
2. Press the **READ** button once to activate the laser.
3. Press the **READ** button again to take the measurement. The result will be displayed.

6.5 Continuous Measurement (Tracking)

1. Press the **Function** button until the continuous measurement icon appears.
2. Press the **READ** button. The device will continuously measure and display the current distance, as well as the maximum and minimum distances detected during the session.
3. Press **READ** again or **OFF/CLEAR** to stop continuous measurement.

6.6 Area Measurement

1. Press the **Function** button until the area measurement icon appears.
2. Measure the first side (e.g., length) by pressing **READ**.
3. Measure the second side (e.g., width) by pressing **READ**. The device will automatically calculate and display the area.

6.7 Volume Measurement

1. Press the **Function** button until the volume measurement icon appears.
2. Measure the length, width, and height sequentially by pressing **READ** after each measurement. The device will automatically calculate and display the volume.

6.8 Pythagorean Measurement (Indirect Measurement)

This function allows indirect measurement of height or distance using the Pythagorean theorem.

1. Press the **Function** button until the desired Pythagorean measurement icon appears (e.g., for height from two measurements, or height from three measurements).
2. Follow the on-screen prompts to take the required measurements (e.g., hypotenuse, base). Ensure the device is held stable and level for accurate results.
3. The calculated indirect measurement will be displayed.

6.9 Data Storage and Recall

The LDM-50D can store up to 99 measurements.

- Measurements are automatically saved.
- Press the **Memory** button to enter memory mode. Use the arrow buttons (if available, or repeated presses of Memory/Function) to scroll through stored data.
- Press **OFF/CLEAR** to exit memory mode.

7. OPERATING INSTRUCTIONS: MOT-270W MOISTURE METER

7.1 Power On/Off

- To power on: Press the **Power** button.
- To power off: Press and hold the **Power** button. The device will also auto-power off after 10 minutes of inactivity.

7.2 Material Selection

The MOT-270W has different modes for various materials to ensure accurate readings.

1. Press the **M (Mode)** button to cycle through the material groups (e.g., Wood Group A, B, C, D, Building Materials). Refer to the device's internal guide or a separate material chart for specific wood types corresponding to each group.
2. Select the appropriate group for the material you are testing.

7.3 Taking a Measurement

1. Ensure the correct material group is selected.
2. Carefully push the two measurement probes into the material surface. Ensure both probes penetrate the material for a stable reading.
3. The moisture content percentage will be displayed on the screen.
4. Remove the probes from the material.

7.4 HOLD Function

Press the **HOLD** button to freeze the current reading on the display. Press **HOLD** again to release it and resume live readings.

7.5 Max/Min Value Tracking

The MOT-270W can track the maximum and minimum moisture values detected during a measurement session.

- While taking measurements, press the **SET** button to cycle through normal reading, MAX, and MIN display modes.
- In MAX mode, the highest moisture reading recorded will be shown. In MIN mode, the lowest reading will be shown.

7.6 Automatic Calibration

The MOT-270W features automatic calibration for reliable readings. To perform a quick check:

1. Ensure the probes are not touching any material.
2. Power on the device. It should display a low, stable reading (e.g., 0.0%). If not, ensure the probes are clean and undamaged.

8. MAINTENANCE

8.1 Cleaning

- Wipe the device surfaces with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- For the MOT-270W, ensure the probes are clean and free of debris after each use.

8.2 Battery Replacement

- When the low battery indicator appears on the display, replace the batteries promptly.
- Refer to the "Setup" section for battery installation instructions.
- Dispose of old batteries according to local regulations.

8.3 Storage

- Store both devices in a dry, cool environment, away from direct sunlight and extreme temperatures.
- For the MOT-270W, always replace the protective probe cover before storage.
- If storing for an extended period, remove the batteries from both devices to prevent leakage.

9. TROUBLESHOOTING

Problem	Possible Cause	Solution
LDM-50D: Device does not power on.	Dead or incorrectly installed batteries.	Replace batteries, ensuring correct polarity.
LDM-50D: Inaccurate or inconsistent readings.	Unstable measurement, obstructed laser, incorrect reference point, reflective surface.	Ensure stable positioning, clear laser path, verify reference point, use a target plate for reflective surfaces.
LDM-50D: "Error" message on display.	Measurement out of range, strong interference.	Measure within specified range, avoid strong light sources or electromagnetic interference.
MOT-270W: Device does not power on.	Dead or incorrectly installed batteries.	Replace batteries, ensuring correct polarity.
MOT-270W: Inconsistent or zero readings.	Probes not fully inserted, damaged probes, incorrect material mode, probes touching metal.	Ensure probes are fully inserted, check probes for damage, select correct material mode, avoid metal objects.
MOT-270W: Display shows "Lo" or "Hi".	Moisture content is outside the measurable range.	The material is either extremely dry or extremely wet, beyond the device's limits.

10. SPECIFICATIONS

10.1 Elitech LDM-50D Laser Measure

Parameter	Value
Measurement Range	0.05m - 50m (0.16ft - 165ft)
Measurement Accuracy	±2mm (±1/16 inch)

Parameter	Value
Measurement Units	m / ft / in
Laser Class	Class 2, < 1mW
Laser Type	635nm
Data Storage	99 groups
Auto Laser Off	30 seconds
Auto Instrument Off	180 seconds
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-20°C to 60°C (-4°F to 140°F)
Power Supply	2 x AAA batteries (1.5V)
Dimensions	(Refer to product for exact dimensions, typically compact)
Weight	(Refer to product for exact weight, typically lightweight)

10.2 Elitech MOT-270W Moisture Meter

Parameter	Value
Measurement Principle	Electrical Resistance
Measurement Accuracy	±2% (Wood gear)
Operating Temperature	0°C to 40°C (32°F to 104°F)
Operating Humidity	20%RH to 90%RH
Auto Instrument Off	10 minutes
Power Supply	2 x AAA batteries (1.5V)
Material Groups	4 Wood Groups + Building Materials

11. WARRANTY AND SUPPORT

11.1 Warranty Information

Elitech products are designed and manufactured to high-quality standards. For detailed warranty information, including coverage period and terms, please refer to the warranty card included with your product or visit the official Elitech website. Keep your purchase receipt as proof of purchase for warranty claims.

11.2 Customer Support

If you encounter any issues or have questions regarding the Elitech LDM-50D Laser Measure or MOT-270W Moisture Meter, please contact Elitech customer support. You can typically find contact information (phone, email, or support portal) on the official Elitech website or in the product packaging. For further assistance, visit the [Elitech Store on Amazon](#).

