

## TOOLCRAFT TO-4859223

# TOOLCRAFT LDM X40 Laser Distance Meter User Manual

Model: TO-4859223

## 1. INTRODUCTION

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Thank you for choosing the TOOLCRAFT LDM X40 Laser Distance Meter. This compact and robust device is designed for precise distance measurements, area, and volume calculations, as well as indirect measurements using the Pythagorean theorem. Its flat design makes it convenient for portability, and the integrated bubble level enhances measurement accuracy. This manual provides detailed instructions for safe and effective use of your device.



Figure 1: Front view of the TOOLCRAFT LDM X40 Laser Distance Meter, highlighting its display and button layout.

## 2. SAFETY INSTRUCTIONS

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

- **Laser Radiation:** This device emits Class 2 laser radiation. Do not stare into the laser beam or direct it at other people or animals. Avoid direct eye exposure.
- **Battery Safety:** Use only specified batteries (2 x AAA). Do not mix old and new batteries, or different types of batteries. Dispose of batteries properly according to local regulations. Remove batteries if the device will not be used for an extended period.

- **Operating Environment:** Do not operate the device in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- **Maintenance:** Do not attempt to disassemble or modify the device. Repairs should only be performed by qualified personnel.
- **Cleaning:** Clean the device with a soft, dry cloth. Do not use abrasive cleaners or solvents.

### 3. PRODUCT FEATURES

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The TOOLCRAFT LDM X40 is equipped with features designed for efficiency and accuracy:

- Measuring range from 0.05 m to 40.00 m.
- High accuracy of +/- 2 mm.
- Functions for surface and volume calculation.
- Indirect measurement (Pythagorean theorem) for inaccessible distances.
- Continuous measurement with minimum/maximum distance display.
- Addition and subtraction of measurement values.
- Integrated bubble level for optimal measurement results.
- Two measurement references (front and back of the device).
- Convenient data memory for the last 20 readings.
- Automatic shut-off after 3 minutes of inactivity to conserve battery life.
- Display backlight for visibility in low-light conditions.
- Soft anti-dust keys to prevent dust ingress.

### 4. PACKAGE CONTENTS

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Verify that all items are present in your package:

- TOOLCRAFT LDM X40 Laser Distance Meter
- Protective Pouch
- Wrist Strap
- 2 x AAA Batteries (pre-installed or included separately)
- User Manual (this document)



Figure 2: Contents of the TOOLCRAFT LDM X40 package, including the device, its protective pouch, and a wrist strap.

## 5. SETUP

### 5.1 Battery Installation

The TOOLCRAFT LDM X40 requires two AAA (LR03) batteries for operation.

1. Locate the battery compartment cover on the back of the device.
2. Slide the cover downwards to open the compartment.
3. Insert two AAA batteries, ensuring correct polarity (+/-) as indicated inside the compartment.
4. Close the battery compartment cover by sliding it upwards until it clicks into place.



Figure 3: Rear view of the device, illustrating the battery compartment location and the integrated kickstand.

## 5.2 Powering On/Off

- **To Power On:** Press the **Power** button (often marked with a circle and a vertical line). The display will light up.
- **To Power Off:** Press and hold the **Power** button for approximately 3 seconds. The device will also automatically shut off after 3 minutes of inactivity.

## 6. OPERATING INSTRUCTIONS

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### 6.1 Basic Measurement

1. Point the laser beam at the target.
2. Press the **MEAS** button. The measurement result will be displayed instantly.

## 6.2 Continuous Measurement (Tracking)

- Press and hold the **MEAS** button. The device will continuously measure, displaying the current, minimum, and maximum distances.
- Press **MEAS** again to stop continuous measurement.

## 6.3 Area Measurement

1. Press the **Function** button (often depicted as a square or multiple squares) until the area icon appears on the display.
2. Measure the first side (e.g., length) by pressing **MEAS**.
3. Measure the second side (e.g., width) by pressing **MEAS** again.
4. The calculated area will be displayed.

## 6.4 Volume Measurement

1. Press the **Function** button until the volume icon appears on the display.
2. Measure length, width, and height sequentially by pressing **MEAS** after each measurement.
3. The calculated volume will be displayed.

## 6.5 Indirect Measurement (Pythagorean Theorem)

This function allows you to measure inaccessible heights or distances.

1. Press the **Function** button until the desired Pythagorean icon appears (e.g., for single Pythagorean, double Pythagorean).
2. Follow the on-screen prompts to measure the required sides (e.g., hypotenuse, base).
3. The device will calculate and display the unknown distance.

## 6.6 Addition and Subtraction

- Perform a measurement.
- Press the **+/-** button to select addition or subtraction.
- Perform the next measurement. The result will be added to or subtracted from the previous value.

## 6.7 Changing Measurement Units

Press the **Unit** button to cycle through available measurement units (e.g., meters, feet, inches).

## 6.8 Measurement Reference Point

The device allows you to set the measurement reference point from either the front or the back of the device. Press the **Reference** button (often depicted as an arrow pointing from the device) to switch between reference points.



Figure 4: Angled view of the device, illustrating the laser emission point and the wrist strap attachment for secure handling.

## 7. MAINTENANCE

- **Cleaning:** Keep the device clean. Wipe off dust and dirt with a soft, damp cloth. Do not use strong cleaning agents or solvents. Pay special attention to the laser lens, keeping it free from dust and smudges.
- **Storage:** Store the device in its protective pouch in a cool, dry place when not in use. Avoid extreme temperatures and direct sunlight.
- **Battery Care:** Remove batteries if the device is not used for extended periods to prevent leakage and damage.

## 8. TROUBLESHOOTING



Problem	Possible Cause	Solution
Device does not power on.	Low or dead batteries; incorrect battery polarity.	Replace batteries with new AAA batteries. Check battery polarity.
Measurement error displayed.	Target surface too reflective/absorbent; laser beam obstructed; measurement range exceeded.	Measure to a different surface. Ensure clear line of sight. Check if target is within 0.05m - 40m range.
Inaccurate measurements.	Device not stable; laser lens dirty; extreme temperature changes.	Ensure device is stable during measurement. Clean laser lens. Allow device to acclimatize to ambient temperature.
Display is dim or flickering.	Low battery power.	Replace batteries.

## 9. TECHNICAL SPECIFICATIONS

Parameter	Value
Model	TOOLCRAFT LDM X40
Measuring Range	0.05 m - 40 m
Measurement Accuracy	±2 mm
Laser Class	Class 2
Laser Wavelength	650 nm
Automatic Shut-off (Laser)	30 seconds
Automatic Shut-off (Device)	3 minutes
Data Memory	Last 20 readings
Power Supply	2 x AAA (LR03) batteries
Product Dimensions (L x W x H)	115 x 32.5 x 52 mm
Weight (without batteries)	120 g
Material	Plastic
Colour	Black

## 10. WARRANTY AND SUPPORT

TOOLCRAFT products are manufactured to high quality standards. For warranty information or technical support, please refer to the warranty card included with your purchase or contact your retailer. Keep your purchase receipt as proof of purchase. For further assistance, please visit the official TOOLCRAFT website or contact their customer service department.



