

Digital laser distance meter user's manual

### User manual

We thank you for purchasing our product. Please read the user manual and safety manual before using this product. All users should be ensured to read and follow the manual by the person in charge.

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### Safety manual

Symbol used

Definition of the symbol used in this manual.

**Warning**  
Define potentially dangerous usage, if it isn't forbidden, it will cause serious damage to humankind.

**Caution**  
Define potentially dangerous usage, if it isn't forbidden, it will cause partly damage to humankind, material and environment.

**User introduction**, to help users operate the product correctly and efficiently.

Scope of application

Specified scope of application

- Distance measurement
- Area and volume measurement
- Indirect measurement
- Additional/Subtraction Measurement

Disable range

- Use this product without reading the manual
- Use this product beside the scope of application
- Destroy the security system, take off the introduction or dangerous symbol
- Open the product by tools such as screwdriver
- Modify the product
- Seal and use the product
- Use the accessories of other manufacturers that are not approved

Measure when climbing the ladder or the scaffold, measure the diling machine, measure near the unprotected equipment, and operate irresponsibly, such as aiming at the sun directly.

- Deliberately to shine on a third party
- Measure at places without safety facilities (e.g. on the road, etc.)

Restriction of usage

Refer to "Technical data"

This product is for use in the environment for human survival, is not for use in corrosive or explosive environment.

Scope of liability

Scope of the responsibility of the original manufacturer: Responsible for providing security products including manual and origin of the parts.

Responsibility of non original manufacturer

For accessories produced by non original manufacturers, the manufacturers shall be responsible for the development of their products and provide safe accessories. And responsible for the maintenance of its products and the safety of the products online.

Responsibility of instrument director

The person in charge of the instrument must ensure that the instrument is operated in accordance with the instructions. The person in charge also ensures that other users follow the instructions.

Instrument responsible officer has the following responsibilities:

- Must have knowledge of product safety instructions and manuals.
- Must be familiar with the local work safety rules.
- In case of any safety problem, contact the local dealer immediately

Possible hazards in use

**Caution**  
In the use of fault instrument, or instrument that was cast, and misused or modified instrument, incorrect measurement results may occur.

**Preventive measures:**  
Regular testing instrument, especially after the instrument abnormal use, or the important measurement before and after. Please pay attention to the optical lens, and the integrity of the body.

**Caution:**  
When measuring or positioning a dynamic target (such as: crane, construction machinery or platform), incorrect measurement results may be caused by unexpected conditions.

**Preventive measures:**  
Only use your instrument for measuring instrument, rather than the controlling instrument. Your system must be set: in error measurement, power failure or a sudden situation, still can take safety measures such as safety limit switch, without causing any damage.

**Warning:**  
Disused battery can't be dealt with living garbage. Please send waste batteries in accordance with the national or local regulations for recycling.

This product can not be together with household garbage recycling.


Please recycle the product according to the national or local regulations.

Avoid irrelevant personnel in contact with the product. Technical support also can consult your local dealer.

**Electromagnetic compatibility (EMC)**  
"Electromagnetic compatibility" is defined as follows: work steadily under the environment of electromagnetic radiation and electrostatic charge, and no other equipment caused by electromagnetic interference.

**Warning**  
Already meet relevant regulations and standards. But the electromagnetic radiation may interfere with other instruments.

**Caution:**  
Don't try to repair the product yourself. When there is a problem with the product, please contact your local agent.



A visible laser is launched from the front of the instrument. This product belongs to secondary laser products, according to the following criteria:

1. Class 2
2. Laser radiation safety products
3. Secondary laser products

Don't look straight into the laser beam, in the case of unnecessary don't aim for others. Eyes instinctively turn by visual or blink action to protect the eyes.

**Warning:**  
Look straight into the laser beam through the optical lens (such as: the eyepiece, telescope, etc.) will do harm to the eyes. prevention measures:  
Don't look straight into the laser beam through lenses.

### Start

The install/replace the battery

- 1 open the fixed damper at the end of the instrument.
- 2 Install the battery correctly according to the polarity.
- 3 Close cell lifted the lid. When the display screen shows a sign of battery, replace the battery in time.

Please use alkaline batteries.

When the instrument is not used for a long time, please take out the battery, in order to avoid corrosion of the battery.

USB charging

- 1 open the instrument on the right side of the USB silicone plug;
- 2 Connect the type-C charging wire to the instrument and power interface (such as USB socket, power bank and computer);
- 3 Do not operate the product when charging the instrument.

Only when using rechargeable lithium battery, the type-C charging line can be used to charge the product.

Keep away from children, fire and water sources when charging!

### Menu features

Set the distance measurement unit.

per long time press this button can switch on the demand of measuring unit, the selection of the following units, m (\*), ft (ft), in (inches), ft + / in (ft - in - 1/16).

**Buzzer**

long press this button, switch to enter the beep.

**Continuous laser ( )**

Click this button to open this function, until icon with hum continues to display in the screen. Click button again to measure. Long press button, shut down the instrument and continuous laser. In continuous laser mode, the instrument will automatically shut down the laser after 30 seconds.

### Operation

Open and closed

Double-click the key to open the instrument; Until the screen lights up.

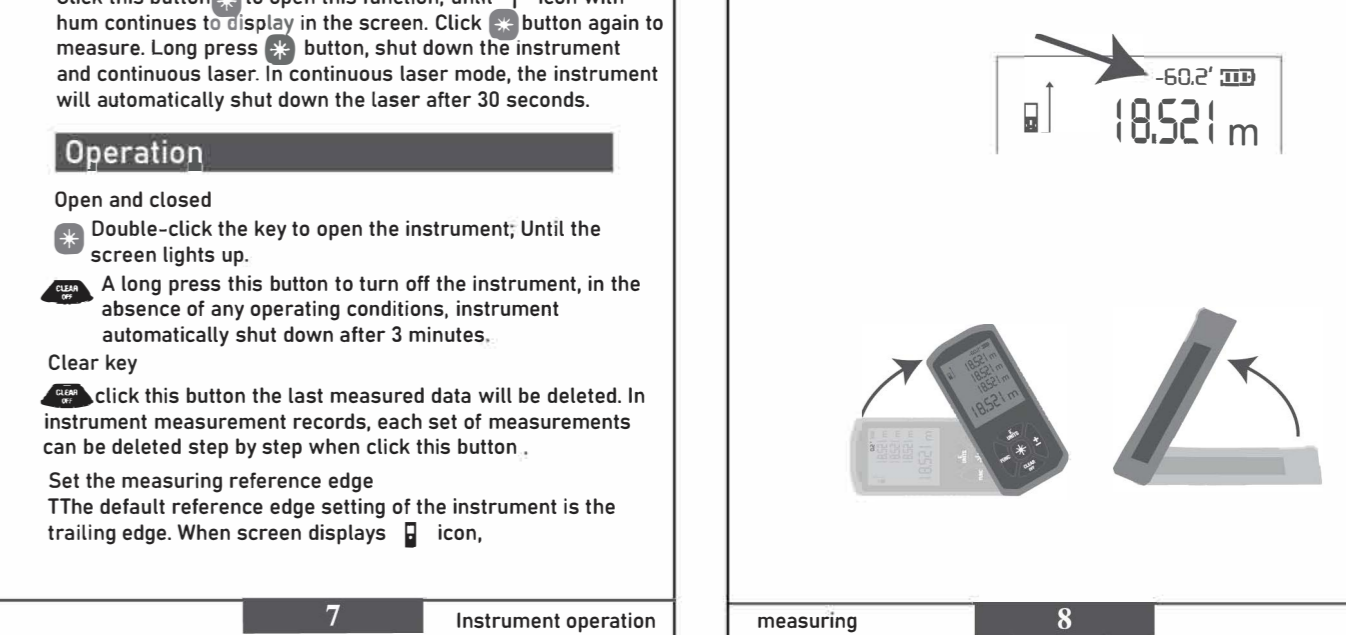
Long press this button to turn off the instrument, in the absence of any operating conditions, instrument automatically shut down after 3 minutes.

**Clear key**

click this button the last measured data will be deleted. In instrument measurement records, each set of measurements can be deleted step by step when click this button.

Set the measuring reference edge


The default reference edge setting of the instrument is the trailing edge. When screen displays icon,



Press and set the measurement reference edge to leading edge. The screen will display icon, press key again, return the setting of the trailing edge as the base edge.

**Electronic level**

The product comes with electronic horizontal function, and the angle value of the instrument will change with the swing of the instrument in standby mode. The angle range is 0-360 degrees.



### Measurement

A single distance measurement

start laser. Press button again, trigger measurements. Measurement results displayed immediately on the screen.

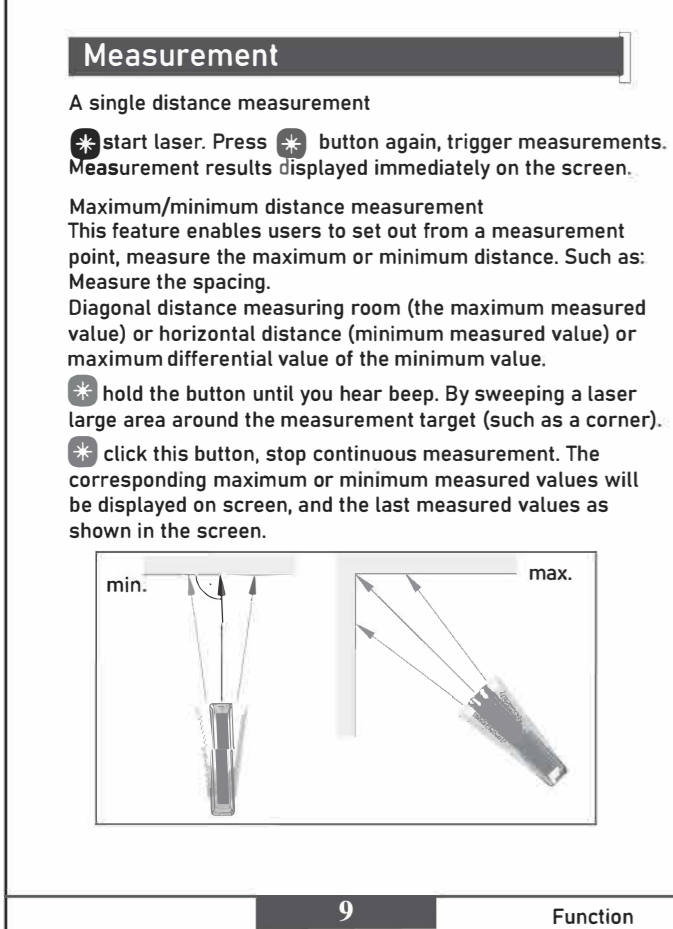
Maximum/minimum distance measurement

This feature enables users to set out from a measurement point, measure the maximum or minimum distance. Such as: Measure the spacing.

Diagonal distance measuring room (the maximum measured value) or horizontal distance (minimum measured value) or maximum differential value of the minimum value.

hold the button until you hear beep. By sweeping a laser large area around the measurement target (such as a corner).

click this button, stop continuous measurement. The corresponding maximum or minimum measured values will be displayed on screen, and the last measured values as shown in the screen.



### Function

Addition/Subtraction

Distance measurement

Short press the " " , the previous measurement plus the next measurement.

Once again a short press " " , the previous measurement minus the next measurement.

The whole process is repeated as needed, and the measurement result will be displayed in the main display screen, while the previous measurement result will be displayed in the second line.

the last step will be restored. This function can also be applied to area and volume.

**area**

- press the key once. Icon will be displayed on screen.
- click this button for the first length (such as: long).
- click this button again for the second (length such as: wide). Measurement results will be displayed on the main screen.
- the last step will be restored. This function can also be applied to area and volume.

**volume**

- Press the key twice in succession, icon will be displayed on screen.
- click this button for the first length measurement (such as: long).
- click this button again for the third length measurement (such as: high). The volume will be displayed on the main display.

Storage

Press the key five times in succession, enter the measurement record. Press can inquire history.

Indirect measurement

This instrument can calculate distance automatically by using Pythagorean Law.

This feature is especially designed for measuring the place which is not easy to reach.

please comply strictly with the following:

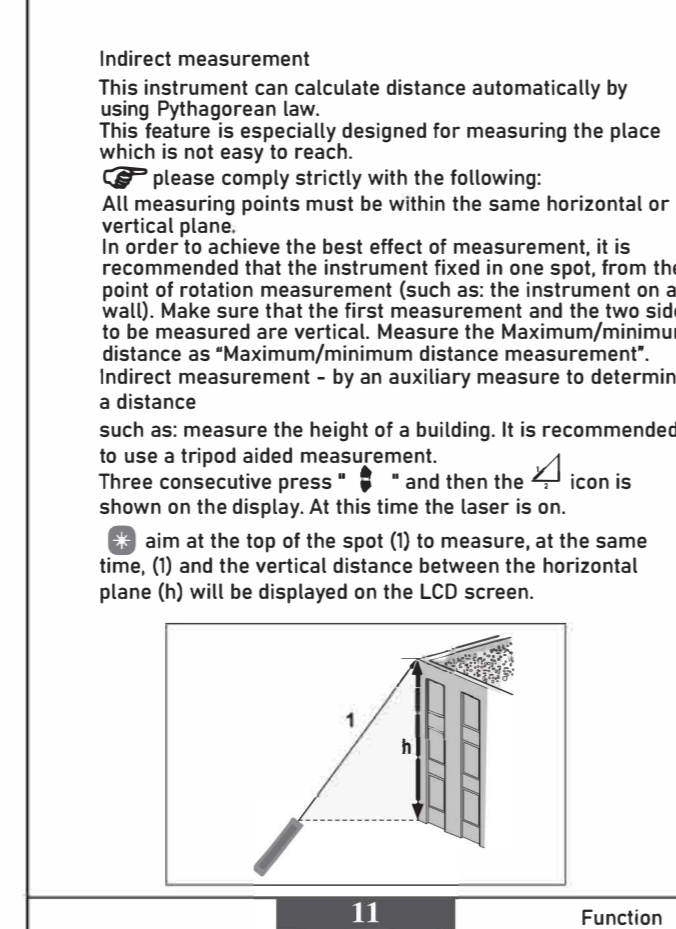
All measuring points must be within the same horizontal or vertical plane.

In order to achieve the best effect of measurement, it is recommended that the instrument fixed in one spot. From the point of rotation measurement (such as: the instrument on a wall). Make sure that the first measurement and the two sides to be measured are vertical. Measure the Maximum/minimum distance as "Maximum/minimum distance measurement".

Indirect measurement - by an auxiliary measure to determine a distance such as: measure the height of a building. It is recommended to use a tripod aided measurement.

Three consecutive press " " and then the icon is shown on the display. At this time the laser is on.

aim at the top of the spot (1) to measure, at the same time, (1) and the vertical distance between the horizontal plane (h) will be displayed on the LCD screen.

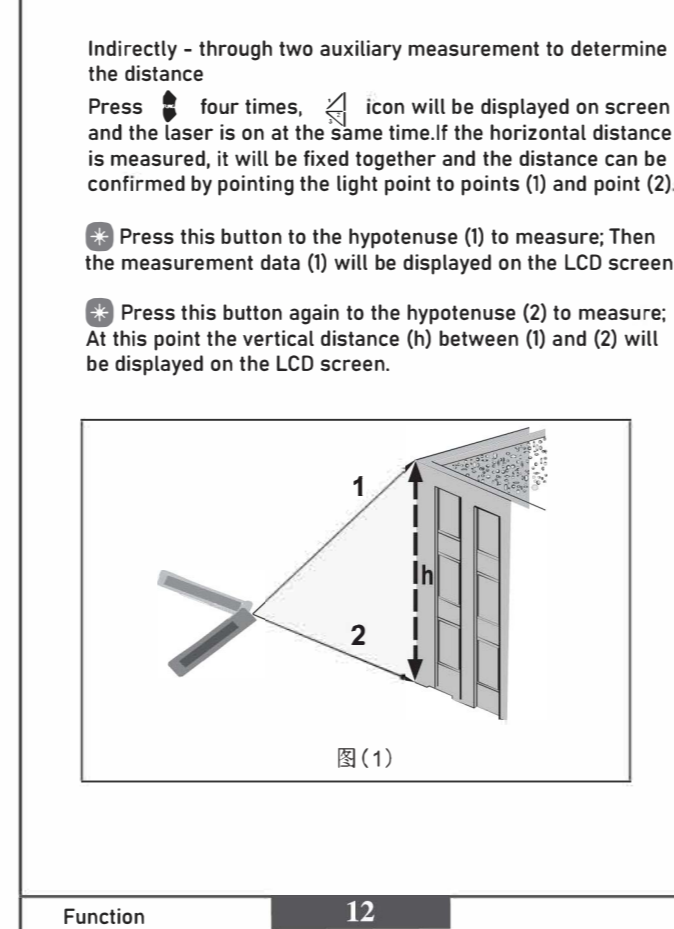


Indirectly - through two auxiliary measurement to determine the distance

Press four times. Icon will be displayed on screen and the laser is on at the same time. If the horizontal distance is measured, it will be fixed together and the distance can be confirmed by pointing the light point to points (1) and point (2).

Press this button to the hypotenuse (1) to measure. Then the measurement data (1) will be displayed on the LCD screen.

Press this button again to the hypotenuse (2) to measure. At this point the vertical distance (h) between (1) and (2) will be displayed on the LCD screen.



### Technical data

Item	M40	M50	M70	M100
Measuring range	0.05-40m	0.05-50m	0.05-70m	0.05-100m
Measuring accuracy	±2mm			
Display accuracy	1mm			
Laser class	Class 2			
Laser type	670-690nm < 1mW			
Area volume measurement	●			
Signal tone warning	●			
Additional/Subtraction	●			
Storage	●			
Bluetooth	○			
Tilt sensor	●			
Continuous Measurement	●			
Min/Max Measurement	●			
Multi-line Display	●			
Buzzer display	●			
USB charging	Support type-c charging			
Ingress Protection	IP54			
Operating temperature	0°C ~40°C			
Storage temperature	-20°C ~70°C			
Battery Life	5000 to 8000 times measurements			
Battery type	AA LR6 2x1.5V 3.7 1000mAh Li-ion			
Laser Auto Off	After 30 seconds			
Power Auto Off	After 180 seconds			
Dimensions	1215x62x28mm			
Net Weight	155g			

Sun glance or goal is bad, please use goods board!  
Under favorable working environment, the measurement error is about ±2mm. If the working environment is not ideal (strong sunlight, excessive temperature difference, or large surface reflection of the measured object), the maximum measurement error of the equipment will increase.

Measuring distance

M50 model maximum distance is 50 meters; The M70 model maximum distance is 70 meters; The M100 model maximum distance is 100 meters. In the evening, dusk or in the shadow of the target, the range will be increased if the target is not suitable. Please use the target when the sunlight or target reflection is not good.

The surface of the measured object

When the measured object is a colorless liquid (such as: water), clean glass, such as the characteristics of surface has a transparent object, may occur error of measurement. When the measured object has a very strong reflective, laser can be reflected off, thus leads to errors of measurement. Measuring surface without reflection or very dark, can increase the measuring time.

Maintenance

Instrument can not be submerged in the water. Wipe dust with a soft damp cloth. Do not use corrosion and volatile substances for cleaning up the instrument. Treat this instrument as well as a telescope or camera.

Quality assurance

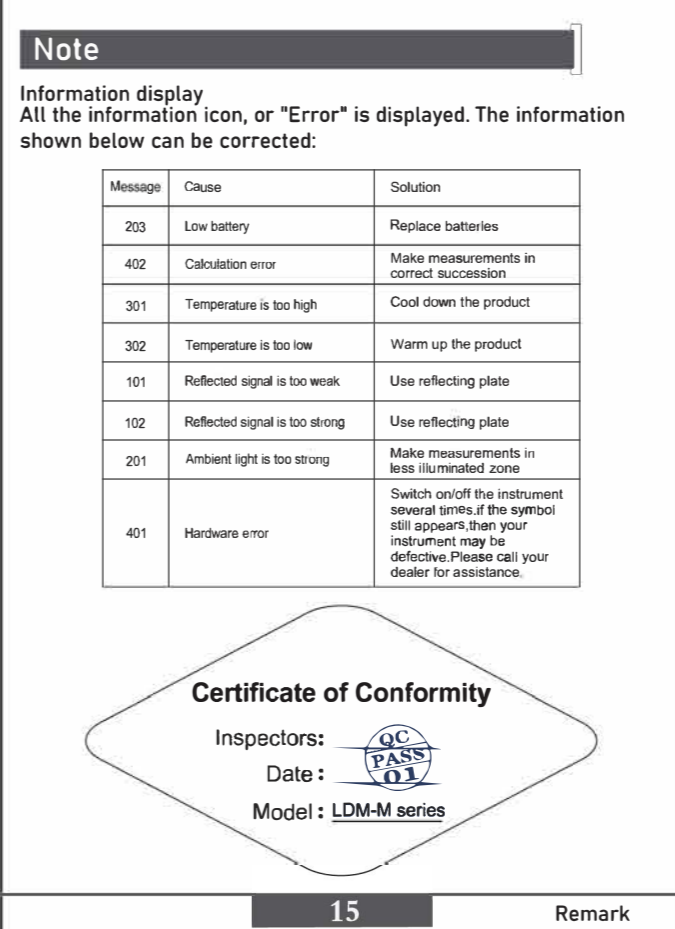
We provide users with free warranty within one year from the purchase date. The effective condition of this warranty service is: operate, handle, clean and maintain the tool correctly according to the company's operating instructions, and maintain the tool in good technical condition. This means that defective parts are repaired or replaced free of charge throughout the expected life of the tool. If the parts need to be repaired or replaced due to normal wear and tear, they are not covered by this warranty.

### Note

Information display

All the information icon, or "Error" is displayed. The information shown below can be corrected:

Message	Cause	Solution
203	Low battery	Replace batteries
402	Calibration error	Make measurements in correct succession
301	Temperature is too high	Cool down the product
302	Temperature is too low	Warm up the product
101	Reflected signal is too weak	Use reflecting plate
102	Reflected signal is too strong	Use reflecting plate
201	Ambient light is too strong	Make measurements in less illuminated zone
401	Hardware error	Switch on/off the instrument several times. If the warning still appears, then your instrument may be defective. Please call your dealer for assistance.



### Warranty Card

Serial number: \_\_\_\_\_ Product name: Laser distance meter

Product type: \_\_\_\_\_ Date of purchase: \_\_\_\_\_

Name of purchaser: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_ Zip code: \_\_\_\_\_

Distribution name: \_\_\_\_\_ Dealer seal: \_\_\_\_\_

**Free repair services:**

The whole of laser distance meter.  
Batteries, target board, hand strap, soft package, packaging and other auxiliary equipments are not in the free maintenance range.

### Maintenance

Date of maintenance	Maintenance content	Replacement parts

Note: expiration of purchasing date on the warranty card, the free maintenance service of this machine will be from the date of manufacture.

图纸名称	LDM-M系列	英文说明书	比例	1 : 1	尺寸	90X130mm	适用机型	LDM-M系列	日期: 2020/09/24 受控 (A0)
材质	105g双铜纸+单色印刷+骑马钉		日期	2020-09-24	图纸编号				
印刷颜色	四色	单色	专色	备注					
	上海山创仪器仪表有限公司		确认人				版本	A0	