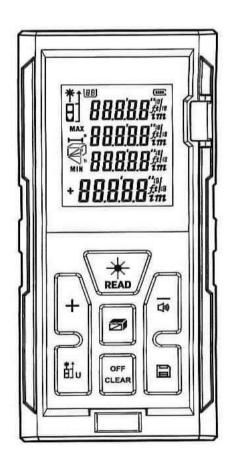


User Manual

Laser Distance Meter

DL4168/DL4169/DL4170/DL4171









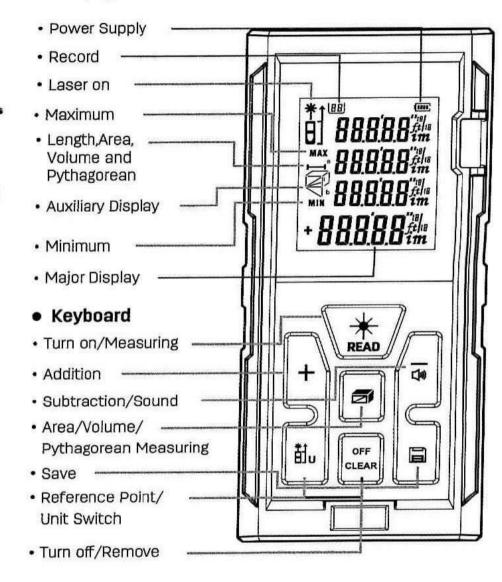


Safety regulations

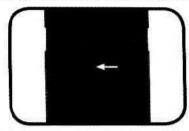
Please read the safety regulations and operation guide carefully before operating.

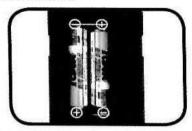
- Please read all of the operational guide and safety regulations in this manual before operation. Improper operations without complying with this manual guided could cause damage to the device, influence on measurement result or bodily injury to the user.
- ⚠ The instrument is not allowed to disassemble or repairin any ways. It is forbidden to do any illegal modification or performance change for laser emitter. Please keep it out of reach of children and avoid using by any irrelevant personnel.
- ⚠ It is strictly prohibited to shoot eyes or other parts of body with the laser; it is not allowed take the laser to shoot any objects' surface with strong reflecting.
- ⚠ Due to electromagnetic radiation interference to other equipment and devices, please don't use the meter in the plane or around medical equipment, don't use it in inflammable, explosive environment.
- Discarded batteries or meter device shall not processed just like household garbage, please handle them in line with related law and regulations.
- Any quality issues or any questions on the meter, please contact local distributors or manufacturer in time, we are ready to offer solutions for you.

Display



Battery Installation and Replacement





- Discharge the battery door on the back of device, and place battery according to correct polarity, then cover the battery door.
- 2. Only 1.5 V AAA alkaline battery is applied to the meter.
- 3. If not used for a long time, please take out the battery to avoid battery corrosion to meter body.

Start the instrument/Menu Setting

1. Turn on/off the Instrument Under off status, press button 🛣 , device and laser get starting simultaneously and stand by for measurement.

Under on status, long press button for 3 seconds to turn the device off. The device can also be shut off without any operation for 150 seconds.

2. Unit setting

Long press button [40], reset current measurement unit, the default unit is: 0.000m.

There are 6 units for selection

Units:

Length Area		Volume		
0.000m	0.000m ²	0.000m ³		
0.00m	0.00m ² 0.00m ³			
0.0in	0.00ft ²	0.00ft ³		
0:00ft	0.00ft ²	0.00ft ³		
0 1/16 in	0.00ft ² 0.00ft ³			
0'00"1/16	0.00ft ²	0.00ft ³		

Changing Reference Point

Press we key to change the reference point. The device reference point by default is rear.

Back Light On/Off

The back light is set to turn on and off automatically. The back light can be on for 15s while operating, and it will be shut off automatically in 15s when there is no operation to the device.

Sound On/Off

Long press a button to turn on or off the buzzer.

Self-Calibration

This function can keep the precision of the device. Instruction: Power off, Long press button , and then press . Release the button , then "CAL" and a figure shows on the screen. User can adjust the figure with button + according to the accuracy of the meter. Adjusting range: -9 to 9mm, then, long press button to save the calibration result.

Length Measurement & Calculation

- 1. Single Distance Measuring: Turn on the laser beam by short press of the button ** under measuring mode, press the button ** again for single measurement of length, then the measured results displayed in the major display area.
- 2. Continuous Measuring: Long press button with under measuring mode and enter into continuous measuring mode Maximum measuring result displays in auxiliary display area, present result displays in major display area. Short press button or continuous measuring mode.
- Area Measurement: Press button , ___ shows on the screen.

One of the side of rectangle blinking on the display, please follow the below instructions for area measuring:

Press ** once for length

Press again for width

The device calculates and shows the result in the major display area.

The device calculates and shows the result in the major display area.

The resent measuring result of length is showed in the auxiliary display area. Press , clear off the result and measuring again if necessary.

Press again to exit the mode.

4. Volume Measurement: Press button twice to enter volume measurement mode. A will shows on the top of screen. Please follow the below instruction for volume measuring:

Press 🛣 for Length

Press 📸 again for Width

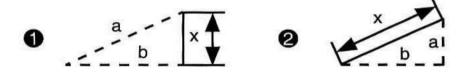
Press thirdly for height

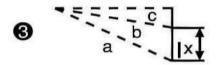
The device calculates and shows the result in the major display area.

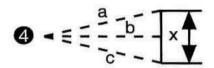
Press , clear off the result and measuring again if necessary.

Press again to exit the mode.

Pythagoras







There are four Pythagoras modes in case that user gets hard to reach the target.

1. Calculate the second leg by measuring the hypotenuse and another leg.

Short press three times to enter Pythagoras mode, the hypotenuse of blinking.

Press 🗼 , measure the length of hypotenuse (a)

Press * , measure the length of one leg (b)

Device calculates the length of another leg (x)

2. Calculate the hypotenuse by measuring the length of two legs.

Short press four times, when one leg of blinking,

Press 🚠 , measure the length of one leg (a)

Press _____, measure the length of another leg (b)

Device calculates the length of hypotenuse (x)

3. Press five times till the one side of hinking on the screen.

Press ____ , measure the length of one side (a)

Press , measure the length of the median line (b)

Press 🚠 , measure the length of another side (c)

Device calculates the length of the leg in full line (x)

4. Press six times till the hypotenuse of dblinking on the screen.

Press 🗼 , measure the length of one hypotenuse (a)

Press , measure the length of another hypotenuse (b)

Press , measure the length of one leg (c)

Device calculates the length of the leg in full line (x)

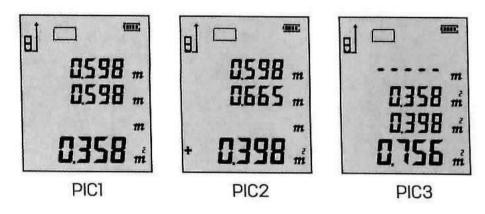
Addition / subtraction

The device can be used for length addition and subtraction. Press + a to select the function once get the length measuring result.

Short press + ,"+" shows in the major display area, entering cumulation mode. Value of last measurement and the result of cumulation will be showed on the screen.

Short press , "-" shows in the major display area, entering regressive mode. Value of last measurement and the result of cumulation will be showed on the screen.

Not only length can be caiculated in addition and subtraction, but area and volume can do the calculation as well. Take area as sample: Area cumulative function: Measure the first area as showing in PIC1. Then press button +, and measure the second area as showing in PIC2, there is a "+" in the left bottom. At last, press button to get the summation result of these two areas which is showing in PIC3.



Record Function

Long press button for 3s to record your measuring result under measuring mode. It can also record the result under Area, Volume and Pythagoras mode. All the calculating records can be saved by the device.

● Read / Delete the Record:

Short press button □ , read the records by press button + □ . Short press □ to delete recent record and long press □ to clear up all the records. Press □ or ★ to exit record mode.

TipsYou may get some warning information as below:

Info message	Cause	Solution Use the device within the range		
Err	Out of distance measurement range			
Err1	Signal is too weak	Chose the surface with stronger reflectance. Use the reflecting plate.		
Err2	Signal is too strong	Chose the surface with weaker reflectance. Use the reflecting plate.		
Err3	Low battery voltage	Change the power supply.		
Err4	The working temperature is out of working range	Use the device in the specified temperature.		
Err5 Pythagoras measuring error.		Re-measure and ensure that Hypotenuse is bigger than Cathetus.		

Technology specifications:

ITEM	DL4168	DL4169	DL4170	DL4171		
Working Range	0.05-40m	0.05-60m	0.05-80m	0.05-100m		
Distance measurement precision	±(3+5x10 ⁻⁵ D)mm					
Mea surement unit options	m/in/ft					
Continuous measurement function	yes					
Outdoor target reflection board	no					
Area measurement function	yes					
Volume measurement function	yes					
Pythagorean proposition measurement function	Full mode					
Add and subtract measurement function	yes					
Min/Max value	yes					
Max storage	30 units					
Automatic backlight	yes					
Buttons/Keys sound	yes					
Laser level	II					
Laser type	635nm, <lmw< td=""></lmw<>					
Automatically cut off laser	20s					
Automatic shutdown	150s					
Storage temperature	-20℃-60℃					
Working temperature	0℃-40℃					
Storage humidity	20%-80%RH					
Battery	1.5V 2*AAA					
Battery life	8000 times for single measurement					
Weight (including battery)	90g					
Dimension	112*50*27.5mm					

Note: Use a target plate to increase the measurement range during. daylight or if the target has poor reflection properties.

Typical Tolerance: ±2mm, when reflectivity 100% (white surface), environment light <2000 LUX. 25 °C Tolerance is usually affected by the distance, reflectivity, and environment light etc. It probably gets tolerance around ± (2mm+0.2mm/m).

Instrument Maintenance:

The meter should not be stored in high temperature and strong humidity environment for long time; if it is not used very often, please take out the battery and place the meter in the allocated potable bag and store in cool and dry place.

Please keep the device surface cleaning. Wet soft cloth is applied to clean dust, but erosion liquid is never allowed to use for the meter maintenance. Laser output window and its focus lens can be maintained according to maintenance procedures for optical device.

Delivery Package

Please check if the accessories are completed according to the below list.

Laser distance meter XI
User's manual XI
Portable bag XI
Hand strap XI
Giftbox XI

Note: Battery 1.5V AAA*2pcs for option.

Product Certificate

Inspector:

01

Date of manufacture:

NINGBO DELI TOOLS CO., LTD.

No. 128 Chezhan West Road, Huangtan Town,
Ninghai County, Ningbo, Zhejiang, China
info@nbdeli.com www.deliworld.com +86 574 87562689 MADE IN CHINA

Reserved for future use

Version: 1.0

Date: January, 2022