Indirect Measurement - Determining a Distance Using 3 Measurements (See"Figure I")

Press this button twice; the display shows the following symbol, the display shows. The distance to be measured flashes in the symbol.

MEAS Aim at the lower point (1) and trigger the measurement. After the first measurement the value is adopted. Keep the instrument as horizontal as possible.

MEAS Press to measurement the distance result of the horizontal point (2).

MEAS Press to measurement the distance result of the upper point (3).

The result of the function is displayed in the summary line.

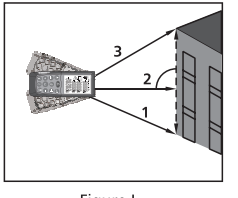


Figure I

Indirect Measurement - Determining a Distance Using 3 Measurements (See"Figure J")

Press this button three times; the display shows the following symbol, the display shows. The distance to be measured flashes in the symbol.

MEAS keep instrument as horizontal as possible, aim at the point (1) and trigger the measurement.

MEAS Press to measurement the distance result of the middle point (2).

MEAS Press to measurement the distance result of the upper point (3).

The result of the function is displayed in the summary line.

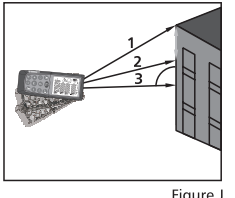


Figure J

Historical Storage

the previous 20 records (measurements or calculated results) are shown in the reverse order. Use the + − buttons to navigate through these records.

You can clear all records by press Storage button and Clear button simultaneously in historical storage mode..

Timer (self-triggering)

Timer Press this button to set a 5-second time delay.

or

Timer Press and hold down this button until the desired time delay is reached (max. 60 seconds).

Or you can use + − button to change time delay.

MEAS Press this button, remaining seconds until measurement (e.g. 59, 58, 57...) are displayed in a countdown. The last 2 seconds will flash and beep faster. After the last beep the measurement is taken and the value is displayed.

Bluetooth

Switching on BLUETOOTH / sending measurements

Timer Press and hold until the Bluetooth symbol appears in the display. Then you can use our Meterbox APP installed on your phone to connect with this instrument.

Whilst the first connection between the Phone/PC and the Laser distance meter is being established, a prompt for the Pin-code of the instrument may be displayed. In this case, enter the code 0000 into your Phone/PC.

Switching off BLUETOOTH

Timer Press and hold until the Bluetooth symbol disappears in the display.

The BLUETOOTH switches off as soon as the instrument is switched off.

Stake out function (See"Figure K")

Two different distances (a and b) can be entered into the instrument and can then be used to mark off defined measured lengths, e.g. in the construction of wooden frames.

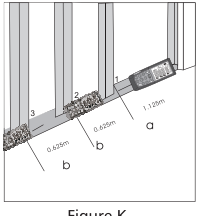


Figure K

Entering stake out distances:

Press this button longer and the stake out function symbol appears in the display .The value (a) and the corresponding intermediate line flash. By using and , you can adjust the values (first a and then b) to suit the desired stake out distances. Holding the buttons down increases the rate of change of the values.

Once the desired value (a) has been reached it can be confirmed with the button . The value (b) and the intermediate line flashes (the defined value (a) is automatically adopted). Value (b) can be entered using and .

The defined value (b) is confirmed with the button.

Pressing the button starts the laser measurement. The display shows current measuring distance in the summary line.Then moved slowly along the stake out line the displayed distance decreases. The instrument starts to beep at a distance of 0.1m from the next stake out point.

The arrows in the display indicate in which direction the instrument needs to be moved in order to achieve the defined distance (either a or b). As soon as the stake out point is reached the beep changes and the intermediate line starts to flash.

The function can be stopped at any time by pressing MEAS CLR the button.

Tilt measurement (See"Figure L")

The inclination sensor measures tilts between ± 65°.

During tilt measurement the instrument should be hold without a transverse tilt (± 10°).

Press this button once to activate the tilt sensor. The symbol appears in the display. The tilt value is displayed in the intermediate line 1.

Press to measure the inclination and the distance.

The distance (L) shows in the summary line, and the distance (A) (B) calculated by α and L shows in the intermediate line 2, 3.

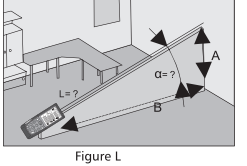


Figure L

6.Technical Data

Technical Specifications	Model: iLDM-150
Range (use target plate from about 50m)	0.05 to 70 m*(0.2 in to 229 ft*)
Measuring accuracy up to 10m	Typically: ±1.5 mm**
(2σ, standard deviation)	(± 1/16 in**)
Measuring units	m,in,ft
Laser Class	Class 2
Laser Type	635 nm, <1mW
Smallest unit displayed	1mm
Tilt measurements:	
Tilt sensor:	± 65°
Measuring range	
Accuracy(2 σ, standard deviation)	
- to laser beam	±0.5°
- to the housing	±0.5°
Area, Volume Calculations	√
Indirect measurement using Pythagoras	√

Indirect measurement using tilt sensor (direct horizontal distance)	√
Angle measurement using tilt sensor(± 65°)	√
Addition/Subtraction	√
Continuous Measurement	√
Min/Max Distance Tracking	√
Timer (self-triggering)	√
Laser continuous	√
Stake out function	√
Display illumination and multi-line display	√
Multifunctional endpiece	√
Tripod thread	√
Beep indication	√
BLUETOOTH® 3.0 EDR	√
Range of BLUETOOTH®	10m
BLUETOOTH® with Apple ipod/iphone support	√
BLUETOOTH® with SPP support	√

Dust Protect/Splash proof	IP 54
History measurement records	20
Keyboard Type	Super Soft-Touch (Long life)
Operating Temperature	0°C to 40°C(32°F to 104°F)
Storage Temperature	-10°C to 60°C(14°F to 140°F)
Batteries	Type AA 2 x 1.5V
Battery Life	up to 8,000 measurements
Auto laser switch-off	after 30 seconds
Auto instrument switch-off	after 3 min
Dimension	135 x 53 x 30 mm
Weight	160g

* Use a target plate to increase the measurement range during daylight or if the target has poor reflection properties
** in favourable conditions (good target surface properties, room temperature) up to 10 m (33 ft). In unfavourable ure variations, the deviatio conditions, such as intense sunshine, poorly reflecting target surface or high temperat over distances above 10 m (33 ft) can increase by ± 0.15 mm/m (± 0.0018 in/ft).

7.Troubleshooting – Causes and Corrective Measures

Code	Cause	Corrective measure
204	Calculation error	Repeat procedure
208	Received signal too weak, measurement time too long. Distance >50m	Use target plate
209	Received signal too strong	Target too reflective(use target plate)
252	Temperature too high	Cool down instrument
253	Temperature too low	Warm up instrument
255	Hardware error	Switch on/off the device several times, If the symbol still appears, please contact your dealer for assistance.

8.Measuring Sonditions

Measuring Range

The range is limited to 70m.

At night or dusk and if the target is in shadow the measuring range without target plate is increased. Use a target plate to increase the measurement range during daylight or if the target has poor reflection properties.

Target Surfaces

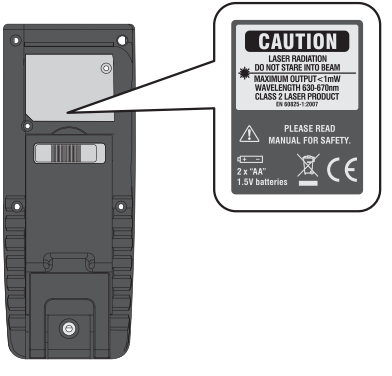
Measuring errors can occur when measuring toward colorless liquids (e.g. water) or dust free glass, Styrofoam or similar semi-permeable surfaces. Aiming at high gloss surfaces may deflect the laser beam and lead to measurement errors.

Against non-reflective and dark surfaces the measuring time may increase.

Care

Do not immerse the instrument in water. Wipe off dirt with a damp, soft cloth. Do not use aggressive cleaning agents or solutions. Handle the instrument as you would a telescope or camera.

9.Labelling


CAUTION
LASER RADIATION
DO NOT STARE INTO BEAM
MAXIMUM OUTPUT <1mW
WAVELENGTH 630-670nm
CLASS 2 LASER PRODUCT
EN 60825-1:2007
PLEASE READ
MANUAL FOR SAFETY.
2 x "AA"
1.5V batteries
CE

FCC Statement:
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

-Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

-"This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

RSS-Gen & RSS-210 statement:
This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RSS-102 Statement:

This equipment complies with Industry Canada radiation exposure limits set forth for an uncontrolled environment.

Cet équipement est conforme à l'exposition aux rayonnements Industry Canada limites établies pour un environnement non contrôlé.

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