Leica DISTO™ E7100i

The original laser distance meter

- when it has to be **right**

Leica Geosystems

Introduction

The safety instructions and the user manual should be read through carefully before the product is used for the first time.

The person responsible for the product must ensure that all users understand these directions and adhere to them.

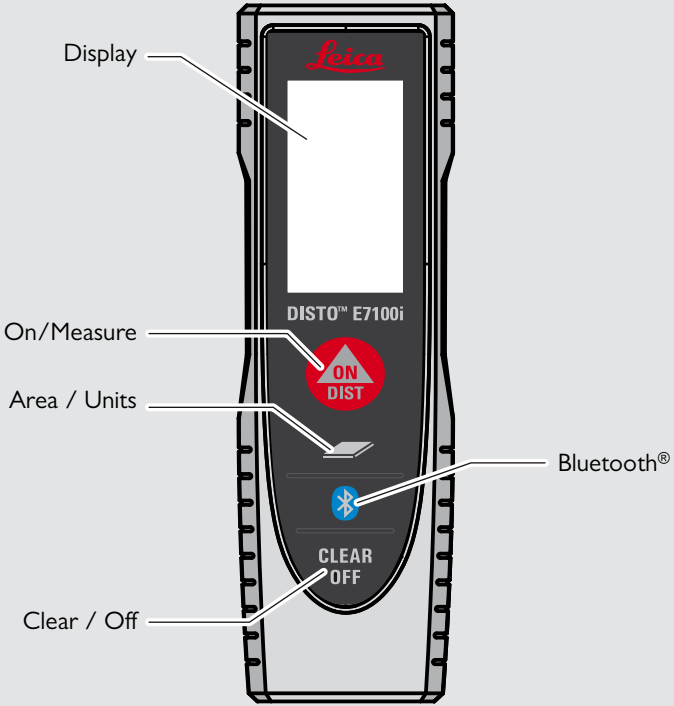
The symbols used have the following meanings:

WARNING
Indicates a potentially hazardous situation or an unintended use which, if not avoided, will result in death or serious injury.

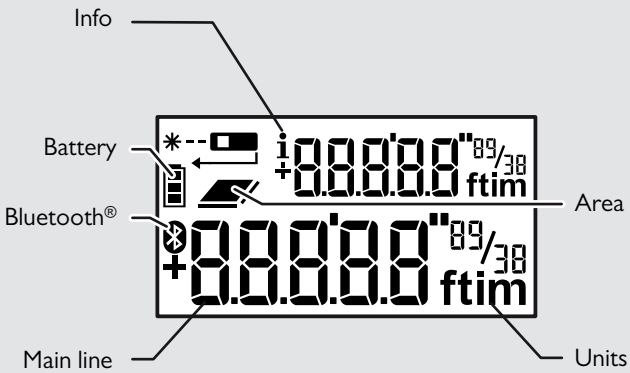
CAUTION
Indicates a potentially hazardous situation or an unintended use which, if not avoided, may result in minor injury and/or appreciable material, financial and environmental damage.

Important paragraphs which must be adhered to in practice as they enable the product to be used in a technically correct and efficient manner.

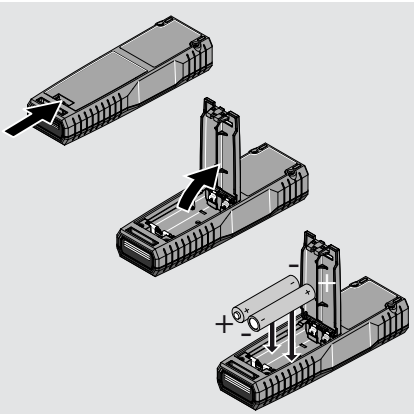
Overview



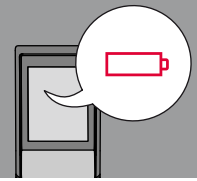
Display



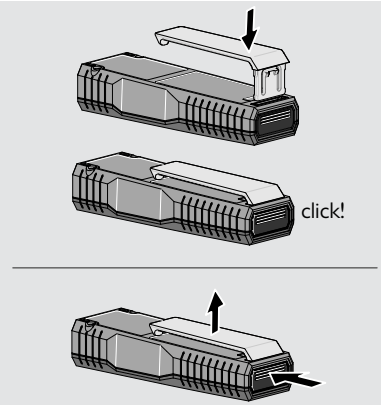
Insert batteries



To ensure a reliable use, do not use zinc-carbon batteries.
Change batteries when battery symbol is flashing.



Attach / Remove clip



Switching ON/OFF

Device is turned OFF.

Press ON button 2 sec to start continuous laser mode.

Clear

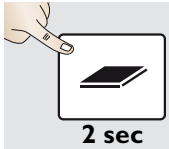
Undo last action.

Leave actual function, go to default operation mode.

Message Codes

If the message "**InFo**" appears with a number, observe the instructions in "Message Codes" section.
Example:

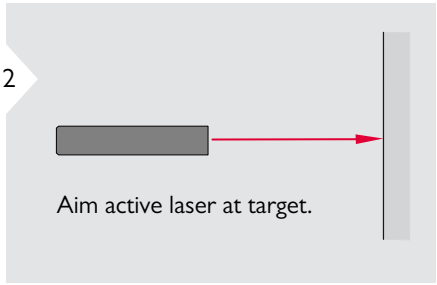
Unit setting



Switch between the following units:

0.000 m	0.00 ft
0.0000 m	0‘00“ 1/32
	0 in 1/32

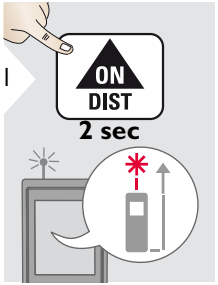
Measuring single distance

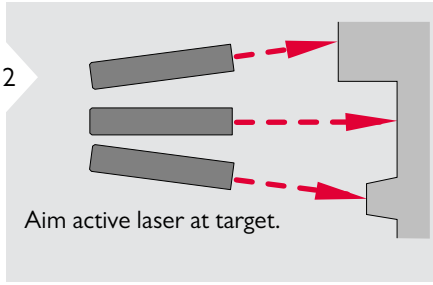


Aim active laser at target.

Target surfaces: Measuring errors can occur when measuring to colourless liquids, glass, styrofoam or permaeble surfaces or when aiming at high gloss surfaces. Against dark surfaces the measuring time increases.

Permanent measuring



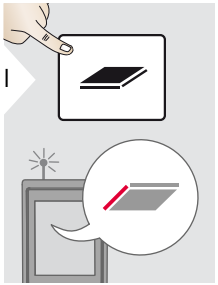


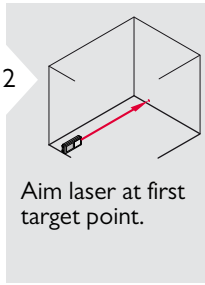
Aim active laser at target.

The last value measured is displayed.

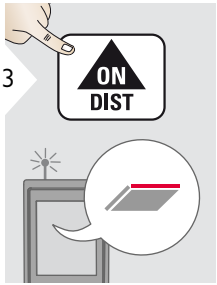
Stops permanent measuring.

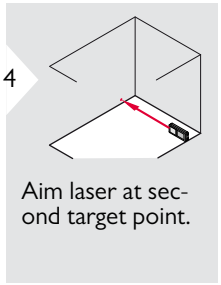
Area



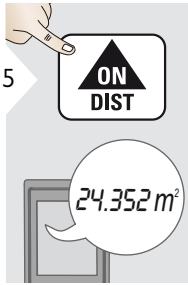


Aim laser at first target point.

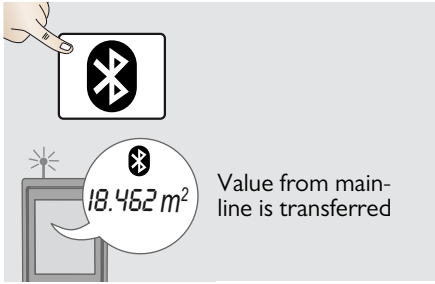




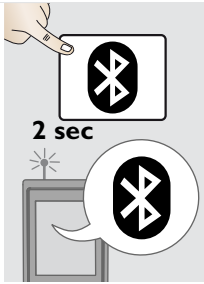
Aim laser at second target point.



Bluetooth® Smart



Value from main-line is transferred



Deactivate/Activate Bluetooth®

App Mode: Use this mode to transfer the data using an App.

Bluetooth® Smart is always active when the device is switched on. Connect the device with your smart-phone, tablet, laptop,… Measurement values will be transferred automatically right after a measurement. To tranfer a result from the main line, press the Bluetooth® key. Bluetooth® switches off as soon as the laser distance meter is switched off. The efficient and innovative Bluetooth® Smart module (with the new Bluetooth® standard V4.0) works together with all Bluetooth® Smart Ready devices. All other Bluetooth® devices do not support the energy saving Bluetooth® Smart Module, which is integrated in the device.
We provide no warranty for free DISTO™ software and offer no support for it. We accept no liability whatsoever arising from the use of the free software and we are not obliged to provide corrections nor to develop upgrades. A wide range of commercial software can be found on our homepage. Apps for Android® or iOS can be found in special internet shops.
For more details, see our homepage.

General	
Typical Measuring Tolerance*	± 1.5 mm / ± 0.06 in ***
Maximum Measuring Tolerance**	± 3.0 mm / 0.12 in ***
Range at Leica target plate GZM26	70 m / 230 ft
Typical Range*	0.2-60 m / 0.6-200 ft
Range at unfavourable condition ****	30 m / 98 ft
Smallest unit displayed	0.1 mm / 1/32 in
Power Range Technology™	yes
Laser class	2
Laser type	635 nm, < 1 mW
Ø laser point at distances	6 /30 / 60 mm 10 / 50 / 100 m
Protection class	IP54 (dust- and splash water protected)
Autom. laser switch off	after 90 s
Autom. power switch-off	after 180 s
Bluetooth® Smart	Bluetooth v4.0
Range of Bluetooth®	10 m
Bluetooth®: - Power - Frequency	 0.7 mW 2402 - 2480 MHz
Battery durability (2 x AAA)	up to 5000 measure-ments
Dimension (H x D x W)	120 x 37 x 23 mm 4.72 x 1.46 x 0.91 in
Weight (with batteries)	92 g / 3.25 oz
Temperature range: - Storage - Operation	 -25 to 70 °C -13 to 158 °F -10 to 50 °C 14 to 122 °F

* applies for 100 % target reflectivity (white painted wall), low ambient light, 25 °C

** applies for 10 to 500 % target reflectivity, high ambient light, - 10 °C to + 50 °C

*** Tolerances apply from 0.2 m to 5 m with a confidence level of 95%. The maximum tolerance may deteriorate to 0.1 mm/m. At unfavorable conditions such as bright sunlight, targets with poor reflectivity, or high or low temperatures, the maximum tolerance may deteriorate to 0.15 mm/m above 5m.

**** applies for 100 % target reflectivity, background illumination of approximately 30'000 lux

Functions	
Distance measuring	yes
Permanent measuring	yes
Area	yes
Beep	yes
Bluetooth® Smart	yes
Illuminated display	yes

Message Codes

If the message **Error** does not disappear after switching on the device repeatedly, contact the dealer.

If the message **InFo** appears with a number, press the Clear button and observe the following instructions:

No.	Cause	Correction
204	Calculation error	Perform measurement again.
240	Data transfer error	Repeat procedure.
252	Temperature too high	Let device cool down.
253	Temperature too low	Warm device up.
254	Battery voltage too low for measurements	Change batteries.
255	Received signal too weak, measuring time too long	Change target surface (e.g. white paper).
256	Received signal too high	Change target surface (e.g. white paper).
257	Too much background light	Shadow target area.
258	Measurement outside of measuring range	Correct range.
260	Laser beam interrupted	Repeat measurement.

Care

- Clean the device with a damp, soft cloth.
- Never immerse the device in water.
- Never use aggressive cleaning agents or solvents.

Disposal

⚠ **CAUTION**

Flat batteries must not be disposed of with household waste. Care for the environment and take them to the collection points provided in accordance with national or local regulations.

The product must not be disposed with household waste.

Dispose of the product appropriately in accordance with the national regulations in force in your country.

Adhere to the national and country specific regulations.

Product specific treatment and waste management can be downloaded from our homepage.

Warranty

International Limited Warranty

The Leica DISTO™ comes with a two year warranty from Leica Geosystems AG. To receive an additional year warranty, the product must be registered on our website at http://myworld.leica-geosystems.com within eight weeks of the purchase date.

If the product is not registered, our two year warranty applies.

More detailed information about the International Limited Warranty can be found on the internet at: www.leica-geosystems.com/internationalwarranty.

The person responsible for the instrument must ensure that all users understand these directions and adhere to them.

Symbols used

The symbols used have the following meanings:

⚠ WARNING
Indicates a potentially hazardous situation or an unintended use which, if not avoided, will result in death or serious injury.

⚠ CAUTION
Indicates a potentially hazardous situation or an unintended use which, if not avoided, may result in minor injury and/or appreciable material, financial and environmental damage.

i Important paragraphs which must be adhered to in practice as they enable the product to be used in a technically correct and efficient manner.

Permitted use

- Measuring distances

Prohibited use

- Using the product without instruction
- Using outside the stated limits
- Deactivation of safety systems and removal of explanatory and hazard labels
- Opening of the equipment by using tools (screwdrivers, etc.)
- Carrying out modification or conversion of the product
- Use of accessories from other manufacturers without express approval
- Deliberate dazzling of third parties; also in the dark
- Inadequate safeguards at the surveying site (e.g. when measuring on roads, construction sites, etc.)
- Deliberate or irresponsible behaviour on scaffolding, when using ladders, when measuring near machines which are running or near parts of machines or installations which are unprotected
- Aiming directly in the sun

Hazards in use

⚠ WARNING
Watch out for erroneous measurements if the instrument is defective or if it has been dropped or has been misused or modified. Carry out periodic test measurements, particularly after the instrument has been subject to abnormal use, and before, during and after important measurements.

⚠ CAUTION
Never attempt to repair the product yourself. In case of damage, contact a local dealer.

⚠ WARNING
Changes or modifications not expressly approved by Leica Geosystems for compliance could void the user's authority to operate the equipment.

Limits of use

i Refer to section "Technical data".
The device is designed for use in areas permanently habitable by humans. Do not use the product in explosion hazardous areas or in aggressive environments.

Areas of responsibility

Responsibilities of the manufacturer of the original equipment:

Leica Geosystems AG

Heinrich-Wild-Strasse

CH-9435 Heerbrugg

Internet: www.disto.com

The company above is responsible for supplying the product, including the User Manual in a completely safe condition.

The company above is not responsible for third party accessories.

Responsibilities of the person in charge of the instrument:

- To understand the safety instructions on the product and the instructions in the User Manual.
- To be familiar with local safety regulations relating to accident prevention.
- Always prevent access to the product by unauthorised personnel.

Electromagnetic Compatibility (EMC)

⚠ **WARNING**

The device conforms to the most stringent requirements of the relevant standards and regulations.

However, the possibility of causing interference in other devices cannot be totally excluded.

FCC statement (applicable in U.S.)

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.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- This device may not cause interference and
- this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme à la section 15 des règlements FCC. Son fonctionnement est soumis aux deux conditions suivantes :

- cet appareil ne doit pas causer d'interférences nuisibles, et
- cet appareil doit accepter toute autre interférence reçue, y compris les inter-

férences pouvant entraîner un fonctionnement non désiré.

Ce dispositif est conforme à la norme RSS-210 d'Industrie Canada. L'utilisation est sujette aux deux conditions suivantes :

- ce dispositif ne pas doit pas être la source d'interférences nuisibles, et
- ce dispositif doit accepter toutes les interférences, y compris les interférences pouvant induire des opérations non souhaitées.

Use of the product with Bluetooth®

⚠ WARNING

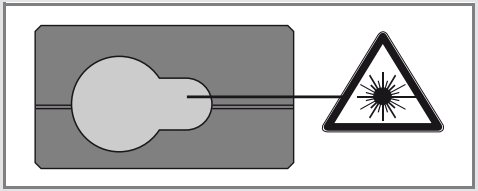
Electromagnetic radiation can cause disturbances in other equipment, in installations (e.g. medical ones such as pacemakers or hearing aids) and in aircraft. It can also affect humans and animals.

Precautions:

Athough this product conforms to the most stringent standards and regulations, the possibility of harm to people and animals cannot totally excluded.

- Do not use the product near petrol stations, chemical plants, in areas with a potentially explosive atmosphere and where blasting takes place.
- Do not use the product near medical equipment.
- Do not use the product in airplanes.
- Do not use the product near your body for extended periods.

Laser classification



The device produces visible laser beams, which are emitted from the instrument:

It is a Class 2 laser product in accordance with:

- IEC60825-1 : 2014 „Radiation safety of laser products"

Laser Class 2 products:

Do not stare into the laser beam or direct it towards other people unnecessarily. Eye protection is normally afforded by aversion responses including the blink reflex.

⚠ WARNING

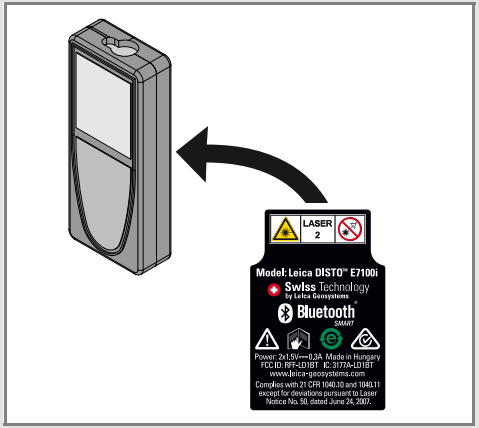
Looking directly into the beam with optical aids (e.g. binoculars, telescopes) can be hazardous.

⚠ CAUTION

Looking into the laser beam may be hazardous to the eyes.

Description	Value
Wavelength	620 - 690 nm
Maximum radiant output power for classification	< 1mW
Pulse repetition frequency	320 MHz
Pulse duration	> 400 ps
Beam divergence	0.16 x 0.6 mrad

Labelling



Subject to change (drawings, descriptions and technical data) without prior notice.

Leica Geosystems AG, Heerbrugg, Switzerland has been certified as being equipped with a quality system which meets the International Standards of Quality Management and Quality Systems (ISO standard 9001) and Environmental Management Systems (ISO standard 14001).

Total Quality Management - Our commitment to total customer satisfaction. Ask your local Leica Geosystems agent for more information about our TQM program.

Original text (812795d EN)

Pat. No.: WO 9427164, WO 9818019, WO 0244754, WO 0216964, US 5949531, EP 1195617, US 7030969, WO 03104748, EP2589980

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www.disto.com

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