

TOLSEN

35155 3D LASER LEVEL

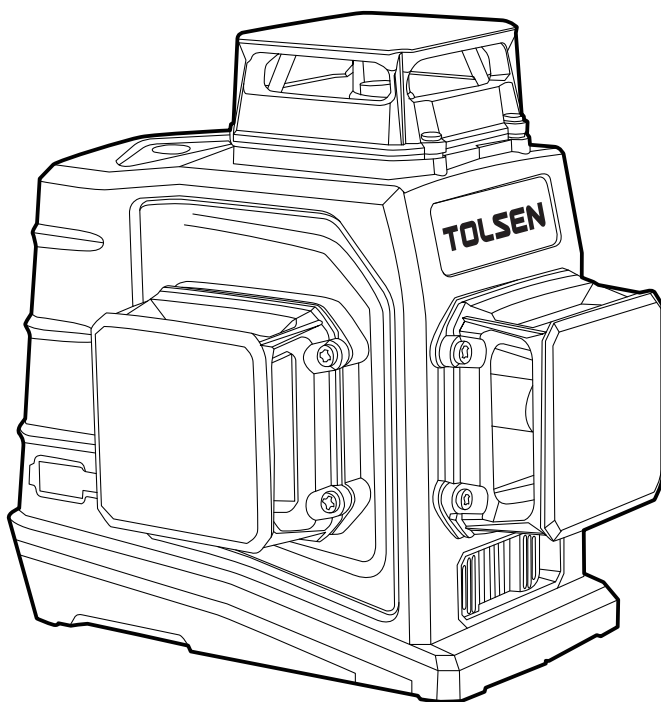
INSTRUCTION MANUAL



IEC 60825-1:2014



FC RoHS CE



SAVE THIS MANUAL !

You will need this manual for safety instructions, operating procedures and warranty.
Put it and the original sales receipt in a safe dry place for future reference.

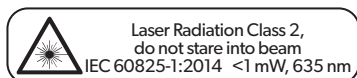
IMPORTANT SAFETY INFORMATION

Line laser



Working safely with the measuring tool is possible only when the operating and safety information are read Completely and the instructions contained therein are strictly followed. Never make warning labels on the measuring tool unrecognizable. **SAVE THESE INSTRUCTIONS**

1. Caution – The use of other operating or adjusting equipment or the application of other processing methods than those mentioned here, can lead to dangerous radiation exposure.
2. The measuring tool is provided with a warning label.



3. Do not direct the laser beam at persons or animals and do not stare into the laser beam yourself. This measuring tool produces laser class 2 laser radiation according to IEC 60825-1. This can lead to persons being blinded.
4. Do not use the laser viewing glasses as safety goggles. The laser viewing glasses are used for improved visualization of the laser beam, but they do not protect against laser radiation.
5. Do not use the laser viewing glasses as sun glasses or in traffic. The laser viewing glasses do not afford complete UV protection and reduce color perception.
6. Have the measuring tool repaired only through qualified specialists using original spare parts. This ensures that the safety of the measuring tool is maintained.
7. Do not allow children to use the laser measuring tool without supervision. They could unintentionally blind other persons or themselves.
8. Do not operate the measuring tool in explosive environments, such as in the presence of flammable liquids, gases or dusts. Sparks can be created in the measuring tool which may ignite the dust or fumes.

Laser target plate



Keep the laser target plate away from cardiac pacemakers. The magnets on the laser target plate generate a field that can impair the function of cardiac pace makers.

Keep the laser target plate away from magnetic data medium and magnetically sensitive equipment. The effect of the magnets on the laser target plate can lead to irreversible data loss.

PRODUCT DESCRIPTION AND SPECIFICATIONS

Please unfold the fold-out page with the representation of the measuring tool and leave it unfolded while reading the operating instructions.

Intended Use

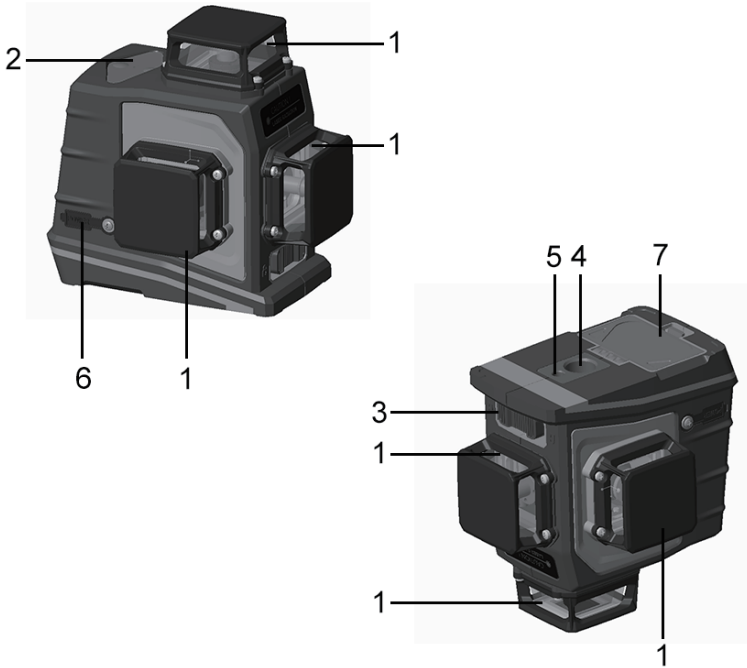
The measuring tool is intended for determining and checking horizontal and vertical lines.

Technical Data

Working range	360°
Standard	30m
With pulse function	20m
With laser receiver	5~100m
Levelling Accuracy	±0.3mm/m
Self-levelling range, typically	4°±1°
Levelling Time	≤3s
Operation temperature	-10°C...~ + 50°C
Storage temperature	-20°C...~ + 70°C
Relative air humidity Max.	90%
Laser class	2
Laser type	510nm
IP grade	IP54
Tripod mount	1/4", 5/8"
Battery	5200mAh Li-Ion battery

The working range can be decreased by unfavorable environmental conditions (e.g. direct sun irradiation).

FUNCTIONS





- 1. Window for 360° coverage beam
- 2. Keypad
- 3. Locking switch
- 4. 5/8" threaded mount
- 5. 1/4" threaded mount
- 6. Charging port
- 7. Battery cover

OPERATION

Initial Operation

1. Keep the measuring tool away from your eyes or other persons.
2. Protect the measuring tool against moisture and direct sun light.
3. Do not subject the measuring tool to extreme temperatures or variations in temperature. As an example, do not leave it in vehicles for long time. In case of large variations in temperature, allow the measuring tool to adjust to the ambient temperature before putting it into operation. In case of extreme temperatures or variations in temperature, the accuracy of the measuring tool can be impaired.
4. Avoid heavy impact or falling of the measuring tool. After heavy exterior impact on the measuring tool, an accuracy check should always be carried out before continuing to work.
5. Switch the measuring tool off during transport. When switching off, the levelling unit, which can be damaged in case of intense movement, is locked.

Switching On and Off

To switch on the measuring tool, slide the On/Off switch to the "  on" position (when working without automatic levelling) or to the "  on" position (when working with automatic levelling). Immediately after switching on, the measuring tool sends laser beams out of the exit openings .

Do not point the laser beam at persons or animals and do not look into the laser beam yourself, not even from a large distance.

To switch off the measuring tool, slide the On/Off switch to the "off" position, and long press " I ". When switching off, the levelling unit is locked.

OPERATING MODES

The measuring tool has several operating modes between which you can switch at any time. These are for:

- Generating a horizontal laser plane,
- Generating a vertical laser plane,
- Generating two vertical laser planes,
- Generating a horizontal laser plane as well as one vertical laser plane.
- Generating a horizontal laser plane as well as two vertical laser planes.

After switching on, the measuring tool generates a horizontal laser plane. To change the operating mode, press the operating mode button.

All operating modes can be selected both with and without automatic levelling.

Pulse Function

When working with the laser receiver, the pulse function must be activated, – independent of the selected operating mode.

In pulse function, the laser lines flash at very high frequency and thus become detectable by the laser receiver.

To switch on the pulse function, press button "P". When the pulse function is switched on

When the pulse function is switched on, the visibility of the laser lines is reduced for the human eye. Therefore, shut off the pulse function by pushing button again when working without laser receiver. When the pulse function is switched off, the visibility of the laser lines will be restored.

Automatic Levelling

Working with Automatic Levelling

Position the measuring tool on a level and firm support, attach it to the holder or to the tripod.

When working with automatic levelling, push the On/Off switch to the "On" position.

After switching on, the levelling function automatically compensates irregularities within the self-levelling range of $\pm 4^\circ$.

The levelling is finished as soon as the laser beams do not move any more.

If automatic levelling is not possible, e.g. because the surface on which the measuring tool stands deviates by more than 4° from the horizontal plane, the laser lines begin to flash rapidly.

Set up the measuring tool in level position and wait for the selflevelling to take place. As soon as the measuring tool is within the self-levelling range of $\pm 4^\circ$, all laser beams light up continuously and the audio signal is switched off.

In case of ground vibrations or position changes during operation, the measuring tool is automatically levelled in again. To avoid errors, check the position of the horizontal and vertical laser line with regard to the reference points upon re-levelling.

Working without Automatic Levelling

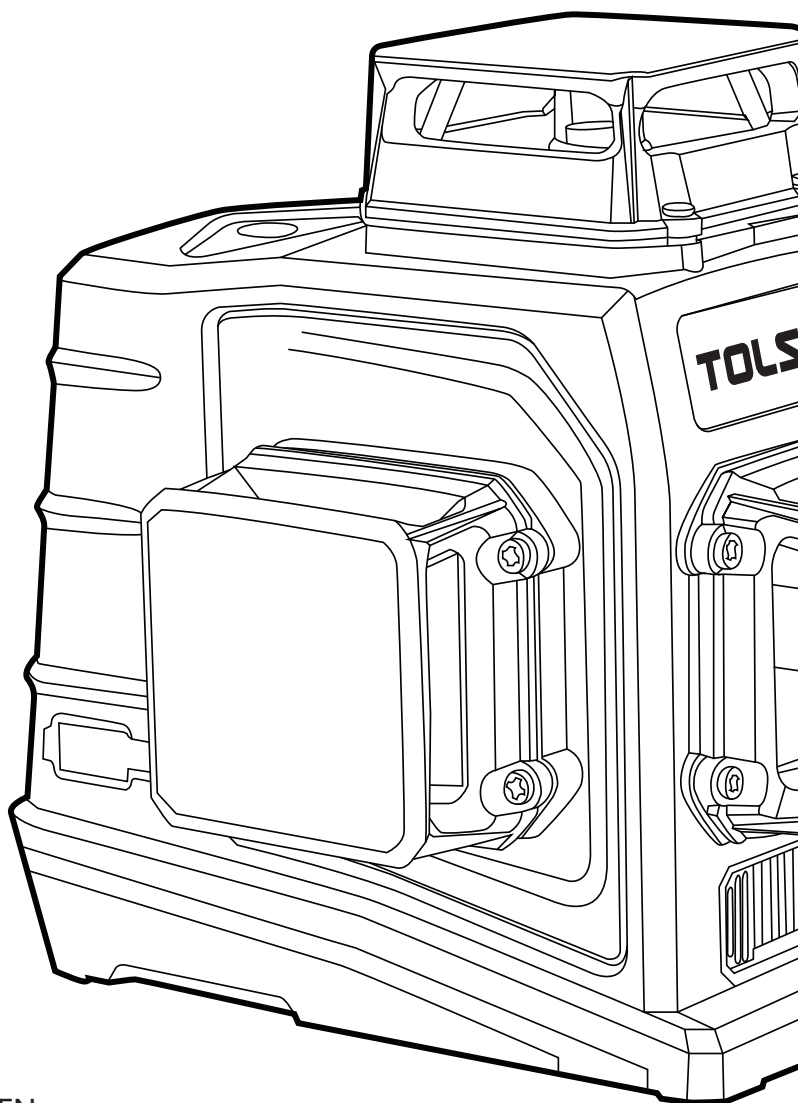
For working without automatic levelling, slide the On/Off switch to the "Off" position. When automatic levelling is switched off, the laser beam will flash every 5 seconds. When automatic levelling is switched off, you can hold the measuring tool freely in your hand or place it on an inclined surface. The laser lines no longer necessarily run vertical to each other.

WARRANTY

We are confident of the quality of our products and offer outstanding guarantee for professional users of the products. This statement is in addition to and in no way prejudices your contractual rights as a professional user or your statutory rights as a private non-professional user. We warrant our laser level(s) against faults in materials and/or workmanship for one year from date of purchase provided that:

- Proof of purchase is produced.
- Service/repairs have not been attempted by unauthorized persons;
- The product has been subject to fair wear and tear;
- The product has not been misused;
- Defective products will be repaired or replaced, free of charge or at our discretion, if sent together with proof of purchase to our authorized distributor(s).
- This Warranty does not cover faults caused by accidental damage, unfair wear and tear, and use other than in accordance with the manufacturers' instructions or repair or alteration of this product not authorized by us.
- Repair or replacement under this Warranty does not affect the expiry date of the Warranty.
- To the extent permitted by law, we shall not be liable under this Warranty for indirect or consequential loss resulting from faults in this product. This Warranty may not be varied without our authorization. Calibration and care are not covered by warranty.

NOTE: The customer is responsible for the correct use and care of the tool. Moreover, the customer is completely responsible for periodically checking the accuracy of the laser, and therefore for the calibration of the tool.



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