

# **Automatic Plumb Laser**

**Plumb-up Laser: LL-90L/LL-91L**

**Plumb-down Laser: LL-92L/LL-93L**



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# Automatic Plumb Laser

**plumbing quickly and safely means: inexpensive**

## Functional description

The automatic plumb laser LL-90L/-91L is a laser for plumbing up, the automatic plumb laser LL-92L/-93L is a laser for plumbing down, capable of electronic self-levelling over two axes. The plumb lasers of the 90 generation have a green laser beam which is much better visible, especially at daylight.

## Performance features

### ● LL-90L/-92L

Laser class 2, laser power < 1 mW.  
No special safety precautions necessary.  
The easy standard laser class.  
Laser power adjustable in two steps.

### ● LL-91L/93L

Laser class 3R, laser power < 5 mW, high-power version.  
Laser power adjustable in five steps.

### ● Fully automatic

Automatic levelling and cut-out in case of low battery or jerky movement.

### ● Automatic function can be switched off

Therefore inclination adjustment by points of reference is possible.

### ● Illuminated, clearly legible LCD display

Self-explanatory, for on/off, device data, company data, lock function, operating status, battery level and menu.

### ● Robust metal housing, 100 % watertight

Plastic-coated, swept and filled with nitrogen.

### ● Special laser beam quality

Diode laser with visible beam, high-powered lens, high life expectancy and low power consumption.

### ● Lithium ion rechargeable battery

Operation time to 50/34 hours with one charge.  
Rechargeable in max. 5 hours without having to take out the battery.

### ● Increased safety

Control indicators with blinking warning system for levelling, operating status and low battery.

### ● Uncompromisingly easy

All you have to do is switch on/off. The rest is done by the LL-90 automatically.

### ● Checking and adjustment

Easily possible at the building site as well. The device does not have to be opened for adjustment.

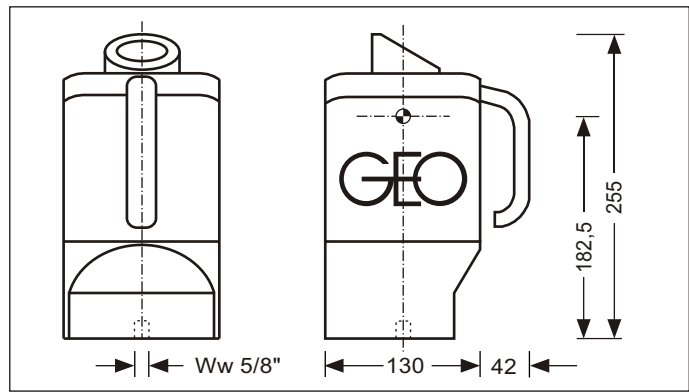
## GEO quality guarantee

The new generation of lasers is the result of years of experience in the research, development and production of laser devices for the construction industry.

## Technical specifications

Laser class LL-90L/-92L: . . . . . 2, < 1 mW  
Laser class LL-91L/-93L: . . . . . 3R, < 5 mW  
Laser: . . . . . diode laser, visible green, 520 nm  
Beam diameter: . . . . . 13 mm at laser  
Range LL-90L/-92L: . . . . . to 200 m  
Range LL-91L/-93L: . . . . . to 500 m  
Self-levelling range: . . . . . ± 5 %  
Permissible deviation: . . . . . ± 5 mm/100 m  
Operating time with 7.4 V DC Li Ion recharge. battery  
. . . . . LL-90L/-92L: to 50 hours  
. . . . . LL-91L/-93L: to 34 hours  
External power supply: . . . . . 11 to 14 V DC with cable 0117.02  
Low battery cut-out: . . . . . yes  
Watertight: . . . . . to 3.5 m  
Temperature range: . . . . . - 10° C to + 50° C  
Weight: . . . . . 3.4 kg  
Adjustment: possible in the field without having to open the device  
Guarantee: . . . . . 24 months

## Dimensional sketch



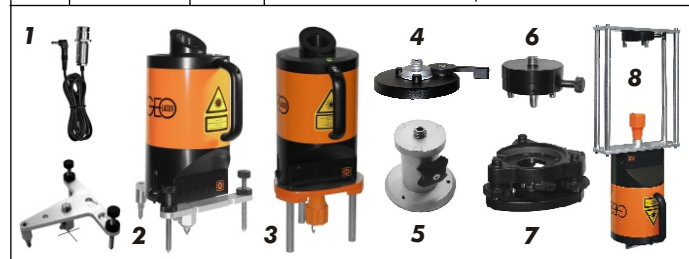
## Standard delivery package

No.	Order No.	Type	Description
1	0001.4xx	LL-8x	Plumb laser
2	0037.18	NE-80	Power supply/Battery charger
3	0077.36		Transport case
4	0094.00.1		5/8"-hexagon bolt with nut and washer
5	0002.003	LL-ZT	Target with coordinates grid
1-5	0001.407.1	LL-90L	with standard delivery package
or	0001.417.1	LL-91L	with standard delivery package
or	0001.427.1	LL-92L	with standard delivery package
or	0001.437.1	LL-93L	with standard delivery package
-	8675.11		Extra Charge, Deviation: ± 2.5 mm/100 m



## Optional accessories

No.	Order No.	Type	Description
1	0117.02		12 V cable, 1,8 m, laser <-> battery connect.
2	0061.07	ST-08	Plumb tripod
3	0061.15	BS-20	Ground tripod
4	0056.00.2		Quick-Fix base plate
5	0056.00.1		Standard tripod adapter with centre spigot
6	8803.06	KA-84	Claw adaptor, swivelling, system Leica/Wild
7	8869.00	DF-TZ	Tribrach, system Trimble/Zeiss
8	0033.13		Plumb-down laser adaption



## GEO - partner of the construction industry for 50 years

from:



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made in Germany

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