










# Productivity Is The Right Tool For The Job... From The Deepest Tool Box In The Laser Business.



Model	Horizontal Accuracy	Diameter Range	Application
<b>Laser Levels</b>			
<b>LL100</b> 	1/8 in @ 100 ft (3.0 mm @ 30 m)	1,000 ft (300 m)	<ul style="list-style-type: none"> <li>Forms, footings and foundations (residential jobs)</li> <li>Septic tank or swimming pool installations</li> <li>Estimating cut and fill</li> <li>Decks and terraces</li> </ul>
<b>LL300</b> 	3/32 in @ 100 ft (2.2 mm @ 30 m)	1,300 ft (400 m)	<ul style="list-style-type: none"> <li>Elevation control across small- and mid-size construction sites</li> <li>Excavations</li> <li>Basic slopes</li> <li>Leveling forms and footers</li> <li>Concrete pours</li> <li>1 m (4 ft) marks</li> </ul>
<b>LL400</b> 	1/16 in @ 100 ft (1.5 mm @ 30 m)	2,600 ft (800 m)	<ul style="list-style-type: none"> <li>Checking/setting elevations, concrete forms, footings, and foundations for large commercial jobs</li> <li>Basic slope work such as foundations for small-to-large site prep work</li> <li>Excavating for forms or footers with CR600 receiver</li> <li>Sub-base leveling with skid steer loaders and CR600 receiver</li> <li>Long range machine control applications</li> </ul>
<b>LL500</b> 	1/16 in @ 100 ft (1.5 mm @ 30 m)	1,600 ft (500 m)	<ul style="list-style-type: none"> <li>Checking elevations</li> <li>Setting concrete forms, footings, and foundations (small-to-large jobs)</li> <li>Ideal for larger pads</li> <li>Machine control compatible</li> </ul>
<b>Grade Lasers</b>			
<b>GL412/GL422</b> 	1/16 in @ 100 ft (1.5 mm @ 30 m)	2000 / 2600 ft (600 / 800 m)	<ul style="list-style-type: none"> <li>Leveling concrete forms and footers</li> <li>Vertical alignment and plumb such as anchor bolt and form alignment</li> <li>Single and dual slope grading and excavating applications</li> <li>Grading sports fields, tennis courts and driveways</li> </ul>
<b>GL512/GL522</b> 	1/16 in @ 100 ft (1.5 mm @ 30 m)	2000 / 2600 ft (600 / 800 m)	<ul style="list-style-type: none"> <li>Steep slope road embankments and ditch banks</li> <li>High accuracy grade work</li> <li>Wireless remote monitoring with HL750</li> <li>Single and dual slope grading and excavating applications</li> </ul>
<b>Horizontal/Vertical</b>			
<b>HV101</b> 	1/8 in @ 100 ft (3 mm @ 30 m)	Receiver: 1000 ft (300 m) Visible: 200 ft (60 m)	<ul style="list-style-type: none"> <li>Interior and exterior light commercial and residential construction</li> <li>Leveling and aligning of interior walls and ceilings</li> <li>Exterior elevation checking and interior finishing work</li> </ul>
<b>HV301/HV301G</b> 	3/32 in @ 100 ft (2.2 mm @ 30 m)	Receiver: 1300 ft (400 m) Visible: 330 ft (100 m) / 500 ft (150 m)	<ul style="list-style-type: none"> <li>Interior and exterior light to medium commercial and residential projects</li> <li>HV301G Green beam for extended ranges or bright light conditions</li> <li>Leveling and aligning walls, ceilings, and raised floors</li> <li>Interior finishing work</li> </ul>
<b>HV401</b> 	1/16 in @ 100 ft (1.5 mm @ 30 m)	Receiver: 2000 ft (600 m) Visible: 660 ft (200 m)	<ul style="list-style-type: none"> <li>Interior wall and drop ceiling installation</li> <li>Cut and fill measurements</li> <li>Layout and excavation lines</li> <li>As-built checks</li> <li>Interior and exterior small-to-large commercial and residential projects</li> </ul>

	Laser Levels				Grade Lasers		Horizontal and Vertical Lasers		
	LL100	LL300	LL400	LL500	GL412/512	GL422/522	HV101	HV301/301G	HV401
<b>Laser type / classification</b>	650 nm visible, Class 2	635 - 670 nm visible, Class 3A/3R	650 nm visible, Class 2	670 nm, Class 2	650 nm, Class 2, 3 mW	650 nm, Class 3A/3R, <5 mW	635 nm, Class 3A/3R, <5 mW	635 nm / 532 nm Class 3A/3R, <5 mW	635 nm, Class 3A/3R, <5 mW
<b>Self-leveling range</b>	±5 degrees electronic servo self-leveling	±5 degrees electronic servo self-leveling	±5 degrees electronic servo self-leveling	±11 minutes wire hung compensator	±5 degrees electronic servo self-leveling	±5 degrees electronic servo self-leveling	±5 degrees electronic servo self-leveling	±5 degrees electronic servo self-leveling	±5 degrees electronic servo self-leveling
<b>Out-of-level indication</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Power source</b>	2 x D-cell Alkaline	4 x D-cell Alkaline standard, recharge optional	4 x D-cell Alkaline standard, NiMH optional	4 x D-cell Alkaline standard, recharge optional	4 x D-cell Alkaline or NiMH option	4 x D-cell Alkaline or NiMH option	2 x D-cell Alkaline	4 x D-cell recharge batteries, Alkaline backup	4 x D-cell NiMH standard, Alkaline backup
<b>Battery life</b>	80 hr Alkaline	90 hr Alkaline, 45 hr NiMH	90 hr Alkaline, 55 hr NiMH	175 hr Alkaline, 100 hr NiMH 75 hr Ni-Cad	90 hr Alkaline, 28 / 55 hr NiMH	90 hr Alkaline, 28 / 55 hr NiMH	50 hr Alkaline	90 / 45 hr Alk, 40 / 18 hr Rechargeable	90 hr Alkaline, 55 hr NiMH
<b>Grade Capability</b>	Manual - Single axis	Manual - Single axis	Manual - Single axis	No	Electronic -10 to +15% Single Axis	Electronic -10 to +15% Dual Axes	Manual - Single axis	Manual - Single axis	Manual - Single axis
<b>Warranty duration</b>	3 Years*	2 Years	2 Years	2 Years	2 Years	2 Years	3 Years*	2 Years	2 Years

Laser Pointers, Line Generator, and Handheld Distance Measuring Devices					
	LP Series	LG2	LG20	HD50	HD100
<b>Leveling method</b>	Self-leveling	N/A	Self-leveling	N/A	N/A
<b>Out of level indicator</b>	Yes	N/A	YES	N/A	N/A
<b>Working range</b>	100 ft (30 m) visual	50 ft (16 m) nominal up 100 ft (30 m) depending on light conditions	100 ft (30 m) visual, 250 ft (75 m) with the HR250 receiver	165 ft (50 m)	330 ft (100 m)
<b>Accuracy</b>	1/4 in @ 70 ft (6 mm @ 21 m) for up beam, 1/4 in @ 100 ft (6 mm @ 30 m) for level & square beams, 1/16 in @ 2.5 ft (1 mm @ 0.5 m) for down beam	1/4 in @ 50 ft (6 mm @ 15 m)	1/4 in @ 70 ft (6 mm @ 21 m) level and vertical beams	1/16 in (1.5 mm)	1/16 in (1.5 mm)
<b>Warranty</b>	*3 Years - 1 year parts and labor / 2 additional years of Service Protection Plan				3 Years

Optical Auto Levels				
	AL24A	AL24M	AL28A	AL28M / AL28M-G
<b>Magnification</b>	24x	24x	28x	28x
<b>Accuracy</b>	±2.0 mm (0.08 in)*	±2.0 mm (0.08 in)*	±1.5 mm (0.05 in)*	±1.5 mm (0.05 in)*
<b>Aperture</b>	30 mm (1.2 in)	30 mm (1.2 in)	30 mm (1.2 in)	30 mm (1.2 in)
<b>Shortest focus</b>	0.6 m (2 ft)	0.6 m (2 ft)	0.6 m (2 ft)	0.6 m (2 ft)
<b>Compensator</b>	Air dampened	Magnetic dampened	Air dampened	Magnetic dampened

\*Note: Standard deviation according to DIN 18723 on one kilometer of double leveling

## AN ENTIRE INDUSTRY. INVENTED HERE.

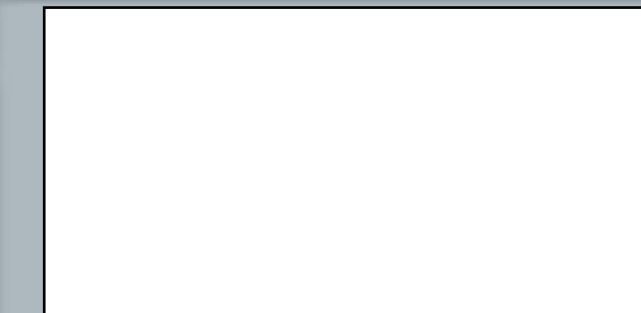
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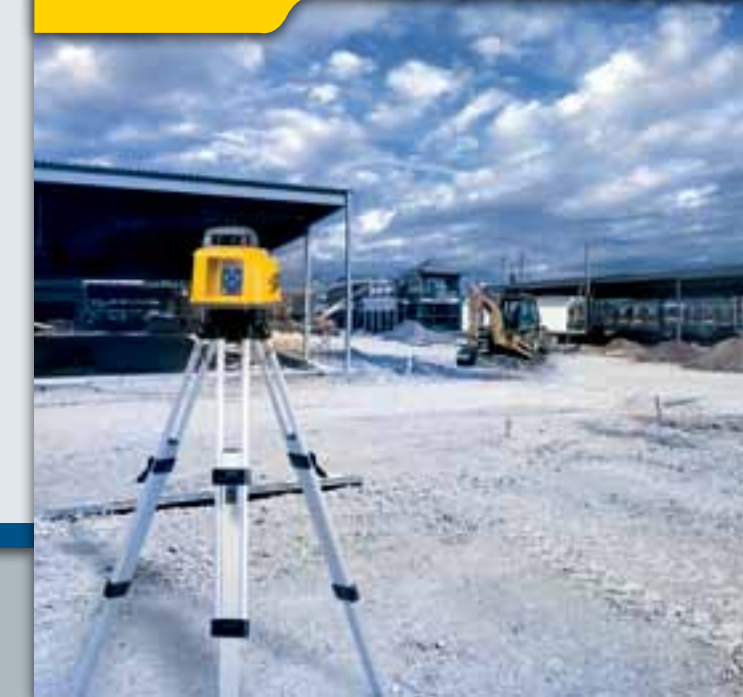
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Reorder PN 022485-175J (11/09)

## CONSTRUCTION LASERS AND RECEIVERS



## THE BROADEST LINE FROM THE STRONGEST NAME IN LASERS



TOUGHEST ON EARTH • STRONGEST WARRANTY • EASIEST TO USE

**Laser Levels**

**LL100**

**Complete system in one case—includes laser, HR320 receiver, rod, and tripod**


- » Convenient storage and transportation.

**Compensated self-leveling, maintains level automatically**

- » Maintains accuracy over the entire work area, and minimizes errors.

**Robust design**

- » 3 year no downtime warranty keeps productivity high and operating costs low.



**LL300**

**Rugged design with "hard hat" rotor protection**

- » Superior drop and weather protection.

**Fully automatic self-leveling**

- » Provides fast and accurate set-up.

**Extremely versatile with single-axis manual slope**

- » Cross-axis self-leveling allows for grade matching on the job site.



**LL400**

**Fast setup and automatic self-leveling**

- » Minimizes operating costs and boosts productivity.

**Highly rugged design and patented lighthouse seal**

- » Superior drop and weather protection.

**Single-axis slope mode**

- » Provides grade matching with self-leveling cross axis.



**LL500**

**500 m (1,600 ft) working diameter**


- » Long-range accurate laser increases productivity by reducing the need for multiple setups on large job sites.

**Built-in leveling system with out-of-level shut off**

- » Maintains accuracy over the entire work area and minimizes errors.

**High accuracy laser, 1.5 mm per 30 m (1/16 per 100 ft) with temperature compensation**

- » Highly stable and repeatable accuracy even under large temperature changes.



**LR30, LR50, LR60**


**Machine Receivers**

**Increase machine and operator productivity**

- » Check grade from the machine cab.
- » Saves labor, time, and fuel.
- » Use on backhoes, excavators, dozers, box blades, trenchers, and skid steer attachments.

**All LR receivers feature**

- » Versatile 360 degree reception.
- » Works with all types of rotating lasers.
- » Multiple accuracy selections.
- » Power options and long battery life.
- » Ultra-bright LED's with green on-grade.



- » LR30 for general grading
- » LR50 for excavating and grading
- » LR60 for excavating
- » 3 selectable accuracies
- » Built in blade tilt and plumb indication
- » Plumb indication and unique angle compensation

**Horizontal & Vertical Lasers**

**HV101**

**Bright beam, scanning and variable speed control**

- » Suitable for shorter range interior jobs.

**Automatic self-leveling in both horizontal and vertical**

- » Simple controls provide one touch setups.
- » Simultaneous 90-degree split beam.
- » Ideal for layout of walls and framing.

**Available in GC Package**

- » Complete system in a case for interior and exterior applications.



**HV301**

**Temperature compensation**

- » Maintains accuracy regardless of season.

**Composite material housing is rugged, lightweight and weatherproof**

- » Easy for contractor to carry and use in demanding jobsite conditions, less downtime for repair.

**Fully automatic self-leveling in both horizontal and vertical**

- » Provides fast and accurate setup in horizontal and vertical.



**HV301G**

**Green beam provides superior beam visibility**


- » Four times more visible than red beams.
- » For use over longer ranges or bright conditions.

**Long range remote control**

- » Adjust rotation speeds or scanning zones from anywhere on the job site.

**Flexible power options**

- » Efficient Nickel-Metal Hydride rechargeable batteries are standard. Alkaline batteries can provide power backup.



**HV401**

**Fast setup and automatic self-leveling**


- » Minimizes operating costs and boosts productivity.

**Powerful, bright visible beam for large projects**

- » Provides permanent, hands-free reference for multiple users.

**Temperature calibrated accuracy**

- » Consistent performance over the entire job site.



**DG511/DG711**

**Pipe Lasers**

**Largest self-leveling range**


- » Fast, easy setups.
- » No rough leveling required.

**Wireless remotes**

- » included standard.

**Construction tough**

- » Stands up to the demanding underground conditions.
- » Proven rugged dependability.



**DET-2 / AL2X-A/M Series**


**Optical Instruments**

**Digital Electronic Theodolite**

- » 2 second accuracy for all construction applications.
- » Dual sided LCD with large easy to read characters.
- » Rechargeable and alkaline battery packs included.

**Spectra Precision Auto Levels**

- » 24 or 28 power magnification.
- » Choice of air damped or magnetic damped.



**GL412/GL422**

**Fully automatic self-leveling performs three jobs cost effectively**

- » Level, -10 to +15% grade, and vertical alignment with plumb.

**Full function remote control does everything you can do at the laser keypad**

- » Make grade changes from anywhere on the job reducing setup times.

**Automatic temperature and grade compensation**

- » High accuracy in any weather.



**GL512/GL522**

**2-way full function radio remote control**

- » Perform all functions that you can do at the laser keypad anywhere on the job site.

**Wireless communication with the HL750 Laserometer**

- » Grade Matching - easily measure unknown grade between two points.
- » PlaneLok - locks the beam to a fixed elevation or vertical alignment point for maximum stability and accuracy.
- » Remote grade checking and wireless monitoring capabilities.




**HR's, HL's, & CR600**

**Laser Receivers**


**Traditional laser receivers**

- » HR150, HR320, HR350.
- » Ideal for general exterior and interior applications.
- » Models with LED's and/or LCD's.




**Laserometers**

- » HL450, HL700, HL750.
- » Digital readout of elevation.
- » Exceptional durability and warranty.
- » Advanced features including radio comm.



**Specialty receivers**

- » Machine or rod mounted - CR600.
- » Universal receivers detect red, infrared and green beams - HR750U, HR150U.
- » Line generator receiver - HR250.




**Rod clamps are standard on all receivers**

**LG's, LP's, & HD's**

**Portable Tools**

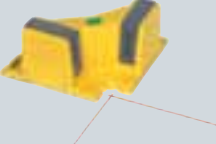
**LG20 Self-leveling horizontal & vertical Crossbeam Generator**

- » Ideal for interior walls layout; level and plumb alignment of doors, windows, cabinets, and chair rails, etc. The laser is also used for short range exterior leveling and alignment with the HR250 receiver.




**LG2**

- » 90 degree lines for layout and squaring.



**Four or two beam pocket laser**

- » Plumb up, down, level and square beams that are self-leveling making easy to set up and use.



**Unmatched durability**

- » Can take up to a 1 m (3 ft) drop onto concrete and still provide precise jobsite accuracy.
- » Available with accessory pack that includes universal clamp, target, and case.

**Distance measurement lasers**

- » Fast and accurate distance measurement with handheld convenience.

