



WaferSense™ Auto Leveling System (ALS)



Above: WaferSense ALS300
Above Right: ALS200 (anodized)
Right: ALS150

WaferSense™ ALS moves through your semiconductor process equipment to take critical level measurements. Wafer-like, it is compatible with your existing automation, while its wireless communication provides real-time, accurate data to speed your tool setup and maintenance. This data can also be logged, so you can define your equipment's optimal setup.



Wireless, wafer-like leveling tool for real-time, accurate measurements previously out of reach.

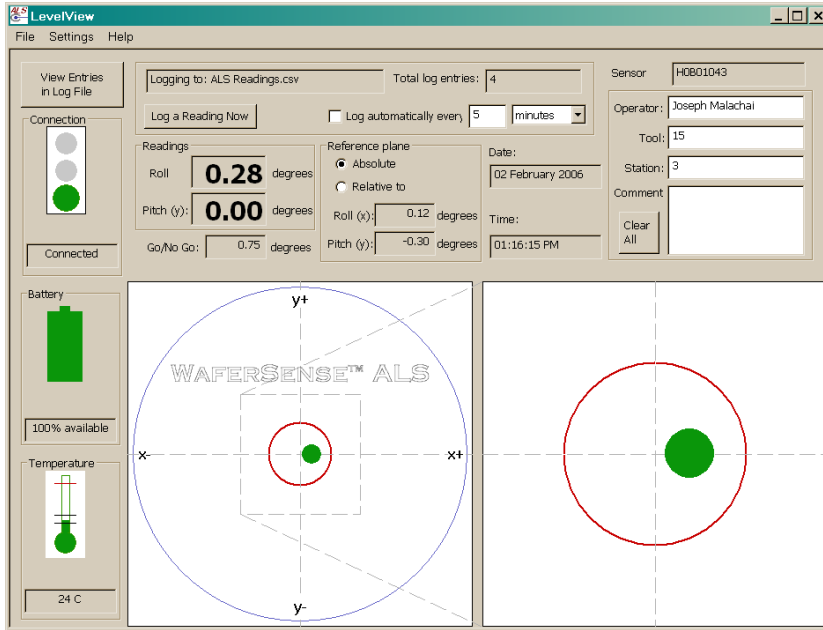
Wafer-like form factor facilitates access to all stations for optimal equipment setup. The wafer-like shape allows you to move ALS through your equipment just like a wafer. Use the leveling wafer in cassettes, FOUPs, on end effectors, aligners, in load locks and process chambers to fully characterize your production equipment inclination. And because it is vacuum compatible (to 10^{-6} Torr), you won't need to expose process areas to the fab environment.

Objective and reproducible level adjustments result in better tool-to-tool process uniformity. Take the human variable out of adjusting your equipment with objective (numerical) measurements. Reviewing and storing the measurements taken with ALS (accurate to $\pm 0.03^\circ$) is fast and easy with LevelView™, the graphical user interface included with the product. Numerical and graphical displays make it easy for you to make the right adjustments time after time. That not only lets you set the right inclination, it lets anyone else set the same level across all of your tools for better tool-to-tool process uniformity.

Reduce equipment calibration time through live feedback. Using the leveling wafer and LevelView to collect and display inclination data wirelessly lets you see the effect of your adjustments in real time, speeding equipment fine-tuning and returning it to productive use faster.

Improve control of your equipment's setup for better performance. Unlike most leveling devices currently available, ALS allows you to zero measurements to a reference surface and adjust other stations in relation to it. Checking that all your stations are within tolerance is so easy with the intuitive "bubble" display that you can change tolerances on the fly and still make a go/no go decision at a glance.

WaferSense ALS Components

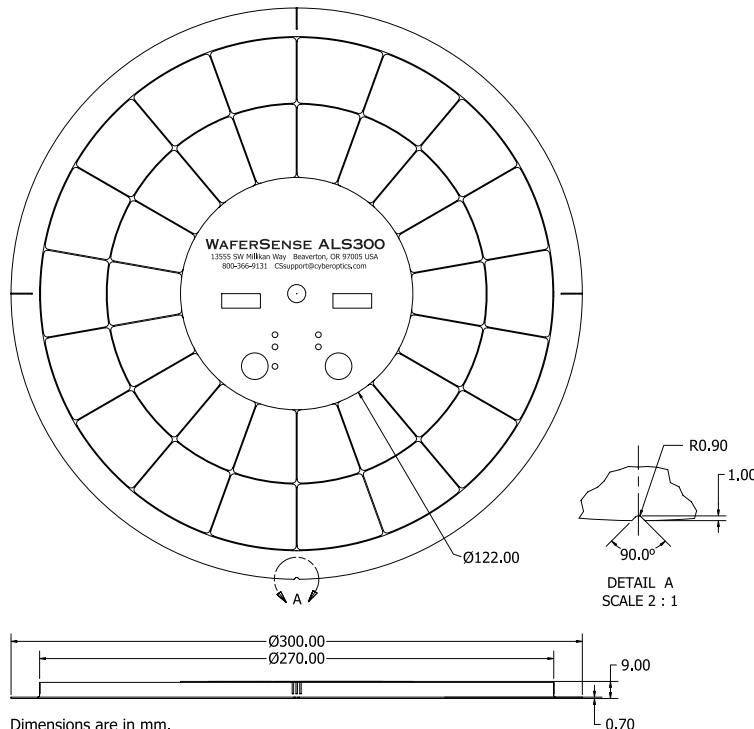


Above: LevelView's real-time display includes an easy-to-see graphical depiction as well as digital pitch and roll measurements.

Right: WaferSense link is a compact (92mm x 58mm x 28mm) USB 1.1 compliant device enabling wireless communications with the sensor via Bluetooth®.



Dimensions (ALS300)



Dimensions are in mm.

ALS300 dimensional drawing. For ALS150 and ALS200 dimensional drawings, please contact tech support at CSsupport@cyberoptics.com.

Key Features

Wireless, wafer-like package. Handles exactly like a wafer and can be placed anywhere a wafer can.

Form factors. SEMI 150mm (ALS150), 200mm notch or flat (ALS200) or 300mm (ALS300).

Thin and light. 9mm tall; 150mm, 110g; 200mm, 135g; 300mm, 220g.

Housing. Black anodized or electroless nickel plated.

Reports tilt in two dimensions. Pitch and roll display allows quick, accurate leveling adjustments during tool setup and maintenance.

Operating range. ±4 degrees from absolute.

Accuracy. ±0.03 degrees at optimum temperature.

Vacuum compatible. Materials selected and processed for very low outgassing, particulate and metallic contamination, at pressures as low as 10⁻⁶Torr.

Operating temperature. 20°C - 70°C, optimum 20°C - 30°C.

Battery life. Operates for 4.5 hours without recharging.

Bluetooth® communications. 2.4 GHz.

USB 1.1 communications link. Link dimensions 92mm x 58mm x 28mm.

LevelView™ GUI. Graphical user interface provides the user with real-time visual feedback, and digital readout allows more precise adjustment.

Data logging. All measurement information can be saved manually or automatically. Data can be imported into an Excel spreadsheet or displayed in LevelView.

Relative measurements. Zero position may be set to any reference plane within the system's operating range for easy relative measurements.

Operating systems. For use with Windows® 2000 and XP.

Product components. Includes leveling wafer, communications link, application software (LevelView), charging clean box and carrying suitcase.

Calibration service. Recommended annually.



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