



450mm WaferSense® Auto Leveling System 2 (ALS2V450C)



Above: WaferSense ALS2V450C

WaferSense ALS2V moves through 450mm process equipment to take critical 2D 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, characterization and maintenance. This data can also be logged, so you can define your equipment's optimal setup.



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

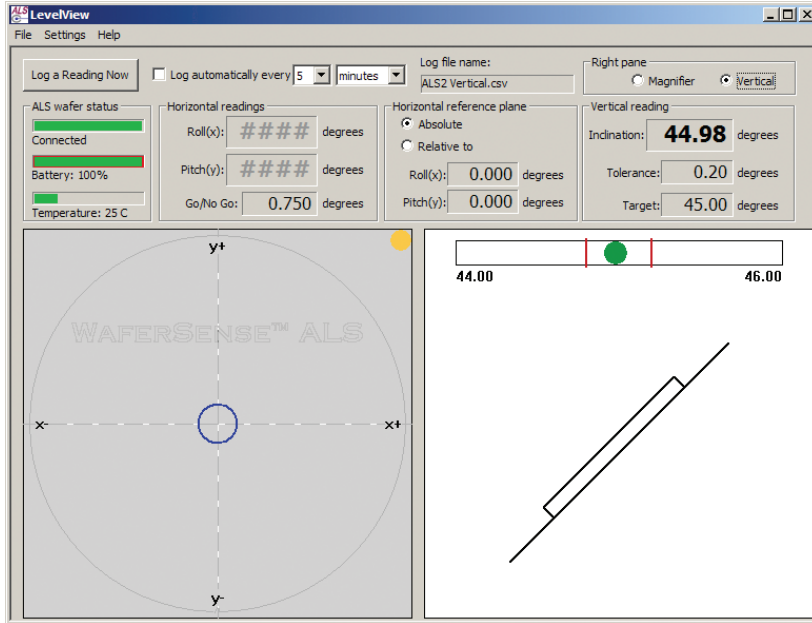
Wafer-like form factor optimizes equipment setup. Use the ALS2V leveling wafer to measure the inclination of cassettes, FOUPs, end effectors, aligners, load locks, transfer pins and process chamber pedestals to fully characterize your production equipment. ALS2V is vacuum compatible, so you won't need to expose process areas to the fab environment.

Objective and reproducible level adjustments enhance process uniformity. Take the human variable out of adjusting equipment with objective (numerical) measurements. Reviewing and storing the measurements taken with ALS2V 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. Now every technician can set the same level for better tool-to-tool process uniformity.

Wireless measurement reduces equipment maintenance time. 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 alignment and returning it to productive use faster.

Improved equipment setup increases yield. Wafer cassettes, boats and FOUPs must be parallel with robots to enable reliable and smooth wafer transfers. Transfer pins must be parallel with pedestals and end effectors to minimize particle generation. Accurate inclination optimizes plating and implantation processes.

WaferSense ALS2V Components

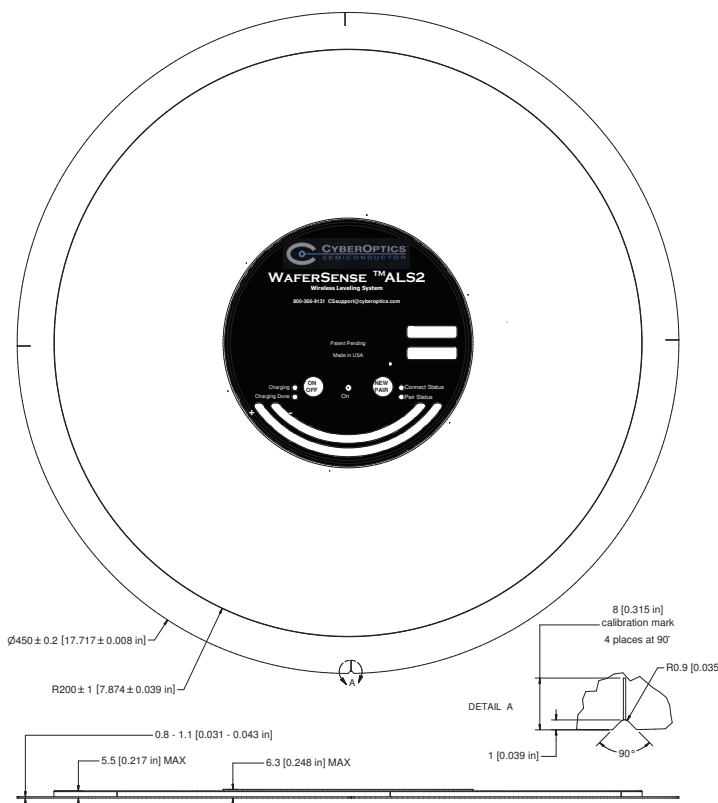


Above: LevelView's real-time display includes an easy-to-see graphical depiction as well as digital pitch and roll measurements.

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 (ALS2V450C)



ALS2V450C dimensional drawing. For ALS2V300CL, ALS2V200C and ALS2V200CF dimensional drawings, please contact tech support at CSsupport@cyberoptics.com.

Key Features

- **Wireless, wafer-like package.** Handles like a wafer.
- **Thin and light.** 6.3 mm tall; 450 gm.
- **Housing.** Carbon fiber composite.
- **Reports tilt in two dimensions.** Pitch and roll display allows quick, accurate adjustments. Tilt and polar display modes enhance ease of use.
- **Horizontal accuracy.** $\pm 0.03^\circ$ within $\pm 4^\circ$ from absolute.
- **Operating range.** ± 14 degrees from absolute.
- **Resolution.** $\pm 0.002^\circ$.
- **Vertical accuracy.** $\pm 0.05^\circ$ within $\pm 50^\circ$ from vertical.
- **Vacuum compatible.** Materials selected and processed for very low contamination, at pressures less than 10^{-6} Torr.
- **Operating temperature.** 20°C to 30°C .
- **Battery life.** Operates for 4 hours between recharging.
- **Bluetooth® communication.** 2.4 GHz.
- **USB1.1 communications link.** WaferSense Link dimensions 92 mm x 58 mm x 28 mm.
- **LevelView™ GUI.** Graphical user interface provides the user with real-time visual feedback and digital readout allows more precise adjustment.
- **LevelReview™ GUI.** Provides the user with digital review of actual measurement data.
- **Data logging.** All measurement information can be saved manually or automatically. Data can be imported into an Excel spreadsheet.
- **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, XP and Vista.
- **Product components.** Includes leveling wafer, communications link, application software (LevelView, LevelReview), charging clean box and carrying suitcase.
- **Calibration service.** Recommended annually.



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