

ELECTROGLAS, INC. BACKGROUND

COMPANY For more than four decades, Electroglas, Inc., has been perfecting wafer prober technologies to deliver probers, prober-based test handlers and test floor management software that help customers improve the overall efficiency of their wafer and device testing processes.

Leveraging its early start and commitment to research and development, Electroglas has established itself as a leading provider of automated probing technologies and shipped more than 15,000 systems. That technology focus has carried Electroglas through four fast-paced decades and finds the company poised to meet emerging semiconductor testing needs from a tradition of proven excellence.

MARKETS Historically known as a leading provider of automatic wafer probing technologies, Electroglas' continuing innovation has allowed the company to deliver prober-based solutions for both sort floor and final test applications that help customers find faster answers to questions about device quality, manufacturing performance and corrective action needed.

In the automatic wafer probing market, Electroglas was the first company to introduce a production-worthy automated wafer prober, and remains a leading provider of systems that deliver highly accurate test results that help to reduce manufacturing costs.

The ability to test at the end of the production process has become increasingly important as new, more expensive packaging technologies gain popularity, making it critical to avoid packaging defective chips. Electroglas' prober-based test handlers provide a breakthrough in terms of speed and accuracy for testing today's latest packaging technologies. By combining the placement accuracy and machine vision of the company's probing technology with proprietary high-speed precision handling, Electroglas test handlers give chipmakers a fast, flexible handling solution for final test.

Test floor management software, the third market addressed by Electroglas, also plays a prominent role in the ultimate financial success of semiconductor manufacturers. From the sort floor to final test, Electroglas' software enables chipmakers to collect, share, analyze and act on essential data – saving significant time, increasing yields and improving profitability.

PRODUCTS Electroglas' wafer probers, prober-based test handlers and test floor management solutions allow chipmakers to improve overall test efficiency by attaining answers to their most pressing manufacturing questions, when and where they need them.

Whether on the sort floor or during final test, Electroglas' systems and software work within the broader test infrastructure to deliver detailed information about device quality, manufacturing performance and the need for corrective action. This allows manufacturers to adjust their process as needed to improve throughput and maximize yields, and it is all based on the proven, reliable prober technology that Electroglas has been perfecting over the past 40 years, and continues to innovate today.

WAFER PROBERS

Electroglas was the first company to release many prober innovations that are considered common today, including non-contact edge sensing, machine vision and network interfaces. Our range of 200mm and 300mm probers continues this tradition with such breakthroughs as frictionless motion systems and Fiducial Alignment.

300mm Wafer Probers

The EG6000, introduced in 2005, fuses advanced automation with the highest caliber of prober technology. Representing a major advancement in prober design and automation, the system is the only 300mm prober that employs precision direct-drive technology to enable it to achieve the highest accuracy currently available. Simultaneously, the prober can deliver the fastest throughput obtainable for any test application as measured from lot-start to lot-end. Designed for advanced applications such as copper and low k dielectrics, the system employs proprietary stage and control technology to enable highly accurate, impact control probing on delicate devices.

The EG6300e offers exceptional probe-to-pad accuracy and is designed to provide extremely low system noise, electrical leakage and capacitance, making it the ideal prober for chipmakers in need of highly accurate parametric testing at increasingly lower current and voltage levels.

100-200mm Wafer Probers

The 4090 μ +, introduced in 2004, is a new extended performance wafer prober system for 200 mm wafers. The 4090 μ + addresses the demands of testing fine pitch devices, semiconductors with copper interconnects and low-k dielectric processes, and other advanced applications, while simultaneously reducing test cost by increasing test cell availability and throughput. In addition, the 4090 μ + has simplified and fully automated operation for high volume manufacturing applications, such as those that exist at integrated device manufacturers and in contract test facilities. Customers who want to use the latest high productivity 200mm probing solution from Electroglas can also cost-effectively upgrade existing 4080, 4090 and 4090 Micro prober systems with 4090 μ + technology.

The 4090 μ Fast Probe is the fastest stepping prober available, delivering increased throughput and productivity, and a reduced cost of ownership for applications that require short test times or testing of large numbers of die per wafer. Built on Electroglas' proven, reliable Horizon platform, the 4090 μ Fast Probe employs a proprietary 0.5-mil Z-drive to deliver a 40 to 50 percent gain in system throughput and manufacturing for low-cost, commodity-type devices.

PROBER-BASED
TEST HANDLERS

Electroglas' test handlers are built upon proven prober technology to give chipmakers a fast, flexible handling solution for today's latest packaging technologies, including Wafer Level Packages (WLP), Known-Good Die (KGD), Microelectromechanical Systems (MEMS), ultra-thin and/or diced wafers, as well as any packages in strip, panel, film or leadframe format.

Delivering greater speed and accuracy than traditional handling methodologies, Pathfinder and Sidewinder provide automated, very high speed, parallel test handling solutions that accommodate any device packaging – simplifying the final test process. This allows chipmakers to maximize profitability by increasing test cell throughput and handling the tightest geometries of new packages.

Dicing frame

Pathfinder is an advanced, fully automatic wafer, die and package test-handling system that leverages Electroglas' production-proven prober technology to bring a new level of automation to the die and package test arena. The system allows chipmakers to accurately test known-good die, wafer-level packages and microelectromechanical systems (MEMS) after dicing, delivering unparalleled accuracy for the testing of singulated and ultra-thin wafers, and strips mounted on film in industry-standard film frames.

TEST FLOOR MANAGEMENT
SOFTWARE

Before chipmakers can solve their manufacturing problems, they must first identify them. Electroglas test floor management software allows them to do just that, bridging the gap between raw data and genuine process improvement - using powerful analysis and reporting capabilities to deliver real productivity gains.

Web-based test floor management

SORTmanager enables chipmakers to access and report on data from sort floors anywhere in the world, at any time, using a powerful, secure web environment. Data about device yield, binning, prober performance and throughput can be collected from all SORTmanager-connected wafer probers, and that information can then be delivered via dynamic, interactive web pages that allow users to view the underlying data or perform additional analysis. Powerful web publishing capabilities allow web reports to be created and distributed throughout an enterprise.

EXECUTIVE TEAM

Tom Rohrs**Chairman of the Board and Chief Executive Officer**

Mr. Rohrs has been a Director of the Company since December 2004. Mr. Rohrs presently serves on the board of Magna Design Automation, Inc., Ultraclean Technologies, and several private companies. In addition, he is an adviser and consultant to a number of companies both public and private. Mr. Rohrs spent five years with Applied Materials Inc., most recently as Senior Vice President, Global Operations, and was also a member of the company's Executive Committee. Prior to that, he held executive positions with Silicon Graphics, MIPS Computer Systems and Hewlett-Packard Company's Personal Computer Group. Mr. Rohrs hold a masters degree from Harvard Business School and a bachelors degree in Mechanical Engineering from Notre Dame University.

Thomas E. Brunton**Vice President, Finance, Chief Financial Officer, Treasurer and Secretary**

Thomas E. Brunton was appointed vice president-finance, chief financial officer, treasurer and secretary of Electroglas, Inc. in November 2000. Prior to joining the Company, Brunton was chief financial officer of Centigram Communications from March 1998 to July 2000. He joined Centigram in March 1991 as controller and also served as Treasurer. Prior to his post at Centigram, he had financial management responsibilities at 3Com, Sun Microsystems and IBM/Rolm. Brunton holds a master's degree in business administration from the University of California at Los Angeles and a bachelor's degree in business administration from Loyola University.

Richard J. Casler**Vice President, Engineering**

Rick Casler was named VP, Engineering for Electroglas in April 2004. For more than 15 years, Mr. Casler has overseen robot and control platform development for use in industrial, medical, and service industry and sub-micron assembly applications. His recent posts have included a stint as vice president of research and development for a startup company commercializing 3D MEMS technology, vice president of systems engineering for Intuitive Surgical, and nearly 8 years as vice president of engineering for Adept Technology. Earlier in his career, he served as CEO for Genesis Automation (a company that he co-founded) from 1986-1992, and as manager of new product development for Unimation/Westinghouse from 1981-1986. Mr. Casler holds BS and MSME degrees from the Massachusetts Institute of Technology. He has 25 patents to his credit.

EXECUTIVE TEAM

Wes Highfill**Vice President, Global Sales and Marketing**

Wes Highfill joined Electroglas as Director of North American Sales in September 2003. In July 2004, he was named Vice President of Worldwide Sales and Applications. Mr. Highfill served as Director of Sales for Yield Dynamics, Inc. from 2002 to 2003, and Sales Manager from 2001 to 2002. Prior to his service at Yield Dynamics, he was the Intel Global Account Manager and Sales Manager for Tokyo Electron America's Test Systems Division from 1996 to 2001. From 1988 through 1996 Mr. Highfill held various positions in Engineering and Product Marketing for KLA Instruments

Wayne E. Woodard**Vice President, Service and Operations**

Wayne E. Woodard was appointed Vice President of Service and Operations for Electroglas, Inc., in 2004. Woodard has been Vice President of Operations since 1999, and additionally has served as General Manager of the Prober Products Division from 2001 to 2003. He joined Electroglas in 1998. Prior to joining Electroglas, Woodard was Director, Supply Management for Ridge Technologies where he developed much of the company's operations infrastructure before Adaptec, Inc. acquired the company. Before Ridge Technologies, Woodard held various management positions at Sun Microsystems, including operations management, sales development and corporate planning. Woodard holds a bachelor's degree in industrial technology from San Jose State University.