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Leading Foundry Selects Nova as Provider of Optical CD for 22/32nm Technology Nodes

Company expects to receive several tool orders in coming quarters

REHOVOT, Israel, September 29, 2009 - Nova Measuring Instruments Ltd. (NASDAQ: NVMI) provider of leading edge stand-alone metrology and the market leader of integrated metrology solutions to the semiconductor process control market, today announced that its NovaT500™ and NovaMARS® have been selected as the metrology solution of record for both the 22nm and 32nm technology nodes, at one of the world's leading foundries. The selection defines Nova as the sole provider of Stand Alone Optical CD metrology for both back end and front end of line applications including Lithography, Etch, CMP and advanced thin film applications. The Company expects to receive several stand alone tool orders in the coming quarters.

"The selection of Nova's metrology solution by one of the world's technology leaders is clear recognition of the technology leadership we have attained in the stand alone Optical CD market over the past few years. Our solution was evaluated against competing technologies over the past 12 months in the most advanced and challenging development environments and was able to cope with the most complicated next generation applications across several key areas of the fab", commented Dr. Boaz Brill, VP Technology Development at Nova.

"Winning the support of this particular customer, who is known as a technology leader and an industry benchmark, is of huge strategic value to the Company. With this third major foundry win we further expand our reach into this growing segment, an area where most capital spending is expected to continue in the coming years", commented Gabi Seligsohn, President & CEO at Nova.

The NovaT500 provides extremely high throughput of 250 Wafers Per Hour (13 measurement sites). Based on Nova's patented Normal Incidence Spectral Reflectometry, the NovaT500 redesigned optics, improve metrology precision by 30% over current generation NovaScan 3090Next. This flexible platform allows up to three Measurement Units to be installed on the same tool, providing an easy and cost effective path to upgrades as well as adding other metrology capabilities as they become available. Combined with NovaMARS, advanced application development software, the NovaT500 has the ability to measure fine profile parameters on complex 3D test structures as well as in the device.

About Nova: Nova Measuring Instruments Ltd. develops, produces and markets advanced integrated and stand alone metrology solutions for the semiconductor manufacturing





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industry. Nova is traded on the NASDAQ & TASE under the symbol NVMI. The Company's website is www.nova.co.il.

This press release contains forward-looking statements within the meaning of safe harbor provisions of the Private Securities Litigation Reform Act of 1995 relating to future events or our future performance, such as statements regarding trends, demand for our products, expected deliveries, transactions, expected revenues, operating results, earnings and profitability. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied in those forward looking statements. These risks and other factors include but are not limited to: unanticipated consequences of the global economic crisis, our dependency on a single integrated process control product line; the highly cyclical nature of the markets we target; our inability to reduce spending during a slowdown in the semiconductor industry; our ability to respond effectively on a timely basis to rapid technological changes; risks associated with our dependence on a single manufacturing facility; our ability to expand our manufacturing capacity or marketing efforts to support our future growth; our dependency on a small number of large customers and small number of suppliers; risks related to our intellectual property; changes in customer demands for our products; new product offerings from our competitors; changes in or an inability to execute our business strategy; unanticipated manufacturing or supply problems; changes in tax requirements; changes in customer demand for our products; risks related to currency fluctuations; and risks related to our operations in Israel. We cannot guarantee future results, levels of activity, performance or achievements. The matters discussed in this press release also involve risks and uncertainties summarized under the heading "Risk Factors" in Nova's Annual Report on Form 20-F for the year ended December 31, 2008 filed with the Securities and Exchange Commission on March 30, 2009. These factors are updated from time to time through the filing of reports and registration statements with the Securities and Exchange Commission. Nova Measuring Instruments Ltd. does not assume any obligation to update the forward-looking information contained in this press release.

