

NOVA MEASURING INSTRUMENTS LTD  
Form 6-K  
July 11, 2012

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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER  
PURSUANT TO RULE 13a-16 OR 15d-16 OF  
THE SECURITIES EXCHANGE ACT OF 1934

July 11, 2012

Commission File No.: 000-30688

NOVA MEASURING INSTRUMENTS LTD.  
(Translation of registrant's name into English)

Building 22 Weizmann Science Park, Rehovot  
P.O.B 266  
Israel  
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F  S    Form 40-F  F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Indicate by check mark whether by furnishing the information contained in this Form, the registrant is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes  F    No  S

Attached hereto and incorporated by way of reference herein is a press release issued by the Registrant and entitled: "Nova Revolutionizes TSV Metrology with Innovative New System Introducing Nova V2600TM with Dark-Field Reflectometry for Full TSV Profile Control".

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NOVA MEASURING INSTRUMENTS LTD.  
(Registrant)

Date: July 11, 2012

By: /s/ Dror David

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Dror David  
Chief Financial Officer

Company Contact:  
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Nova Revolutionizes TSV Metrology with Innovative New System  
Introducing Nova V2600™ with Dark-Field Reflectometry for Full TSV  
Profile Control

- Novel technology brings the profiling power of Optical CD to TSV metrology
- Enables the move to production of 3D integration with robust high-throughput control of TSV formation processes

REHOVOT, Israel, July 11, 2012 - Nova Measuring Instruments Ltd. (NASDAQ: NVMI), a leading provider of optical metrology solutions to the semiconductor process control market, today announced a technological breakthrough that will enable chipmakers to accelerate the development and improve production yield of multi-chip integrations that rely on TSVs (Through Silicon Vias). The powerful new Nova V2600 TSV Metrology system, developed in collaboration with leading device makers, allows for the first time accurate measurement of critical TSV features such as side-wall angle, bottom diameter, and bottom curvature. This much-awaited process control solution delivers complete TSV dimensional metrology in a high-throughput production-ready system for the industry's transition to 3D integration in production.

Several new technologies were developed by Nova for this complex application, breaking the barrier that previously precluded the use of Optical CD methodology on non-periodic structures. Using a special optical configuration (patent pending), Nova V2600 collects a dark-field reflectometry spectrum that is highly sensitive to variations in TSV internal structures. An innovative and unique modeling engine, proven to enable the translation of this spectrum into accurate via dimensions through spectral fitting, has been developed. Unlike competing technologies that rely on resolution-limited optical imaging, this spectral method can be extended to future TSVs with diameters below 5 microns.

“We are excited to make our entry into the 3D integration market with a truly differentiated metrology product. It is very satisfying to introduce game-changing innovation into an emerging market segment that is looking for the right solution”, said Gabi Seligsohn, President and CEO of Nova. “Customers response to the technology, performance, and productivity of the Nova V2600 has been outstanding, and we expect multiple orders from leading chipmakers to be finalized in the near future, following a rigorous selection process”.

Nova V2600 fits into the production-proven Nova Modular Metrology™ platform that accommodates two metrology units on a single compact frame. This high-throughput platform is recognized for providing superior cost of ownership and operational flexibility. For more information please visit: <http://www.nova.co.il>.

About Nova: Nova Measuring Instruments Ltd. develops, produces and markets advanced integrated and stand alone metrology solutions for the semiconductor manufacturing industry. Nova is traded on the NASDAQ & TASE under the symbol NVMI. The Company's website is [www.nova.co.il](http://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, transaction, 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: our dependency on two product lines; 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; our dependency on OEM suppliers; cyber security risks; risks related to open source technologies; our ability to retain our competitive position despite the ongoing consolidation in our industry; 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; our dependency on our key employees; risks related to changes in our order backlog; risks related to the financial, political and environmental instabilities that may affect our sales in Asia; 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, 2011 filed with the Securities and Exchange Commission on March 28, 2012. 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.

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