

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 6-K

Report of Foreign Private Issuer
Pursuant to Rule 13a-16 or 15d-16
of the Securities Exchange Act of 1934

Date of Report: March 5, 2007
Commission File No.: 000-30688

NOVA MEASURING INSTRUMENTS LTD.

**Building 22 Weitzmann Science Park, Rehovoth
P.O.B 266
Israel**

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 Form 40-F

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

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

Yes No

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with 12g3-2(b):

N/A.

Attached hereto and incorporated by way of reference herein is the Registrant's press release entitled "Court Grants Nova Stay in Nanometrics Patent Infringement Lawsuit".

This report on Form 6-K is hereby incorporated by reference into Nova Measuring Instruments Ltd.'s registration statements on Form S-8, filed with the Securities and Exchange Commission on the following dates: September 13, 2000 (File No. 333-12546); March 5, 2002 (File No. 333-83734); December 24, 2002 (File No. 333-102193, as amended by Amendment No. 1, filed on January 5, 2006); March 24, 2003 (File No. 333-103981); May 17, 2004 (three files, File Nos. 333-115554, 333-115555, and 333-115556, as amended by Amendment No. 1, filed on January 5, 2006); March 7, 2005 (File No. 333-123158); December 29, 2005 (File No. 333-130745); and September 21, 2006 (File No. 333-137491).

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.
(the "Registrant")

By: */s/ Dror David*

Dror David
Chief Financial Officer

Date: March 5, 2007



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Court Grants Nova Stay in Nanometrics Patent Infringement Lawsuit

Rehovoth, Israel – March 5, 2007 - 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 its motion for a stay in the patent litigation case brought by Nanometrics Incorporated (Nasdaq: NANO) had been granted by Judge Sandra Brown Armstrong in the U.S. District Court for the Northern District of California, pending completion of the re-examination process of the patent in the lawsuit by the U.S Patent & Trademark Office.

On March 29, 2006, Nova was served with a complaint alleging that certain of its products sold in the U.S. infringed U.S. Patent No. Re: 34,783. Nova has consistently asserted that it believes that none of its products infringe any intellectual property of Nanometrics and has maintained that it intends to vigorously and aggressively defend itself in the litigation. As part of such defense, Nova had filed a request for re-examination of the Nanometrics' patent with the U.S. Patent & Trademark Office (PTO). This request for re-examination was accepted by the PTO for review in December 2006. After reading and considering the arguments presented by the parties, the Court granted Nova's motion to stay.

Commenting on the lawsuit, Gabi Seligsohn, President and CEO of Nova noted that "We are pleased by this ruling and believe that the ultimate outcome of this matter will demonstrate that Nanometrics' patent is invalid and its claims are without merit."

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.

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, including statements



relating to the future outcome of a pending claim. 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: unexpected developments in our legal matters, our ability to successfully complete our integration of HyperNex, our ability to leverage our existing channels to expand into the market for X-Ray diffraction metrology, 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, risks related to our intellectual property and changes in customer demand for our products. 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, 2005 filed with the Securities and Exchange Commission on June 29, 2006. 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.