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 under the Securities Exchange Act of 1934

For the Month of May 2011

CAMTEK LTD. (Translation of Registrant's Name into English)

Ramat Gavriel Industrial Zone
P.O. Box 544
Migdal Haemek 23150
ISRAEL
(Address of Principal Corporate Offices)

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

Form 20-F x Form 40-F o

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 Rule 12g3-2(b) under the Securities and Exchange Act of 1934.

Yes o No x

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SIGNATURE

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.

CAMTEK LTD. (Registrant)

By: /s/ Mira Rosenzweig

Mira Rosenzweig, Chief Financial Officer

Dated: May 26, 2011

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Camtek Extends its Leadership in 3DIC with Repeat Orders from a Leading Asian Foundry

MIGDAL HAEMEK, Israel – May 26, 2011 – Camtek Ltd. (NASDAQ and TASE: CAMT) ("Camtek"), today announced that it has received repeat orders for Automatic Optical Inspection (AOI) systems. The application is advanced Micro Bump inspection and metrology from a leading foundry based in Asia. The systems will be installed during the second and third quarter of 2011.

Advanced Micro Bump and Through-Silicon-Via technology combine vertical stacking of integrated circuits. This enables "more than Moore" end-product performance, lower power consumption, a smaller footprint and reduced overall cost. Camtek's AOI provides a complete solution allowing a combination of high performance 2D and 3D metrology and inspection capabilities on the same platform.

"The technology of 3D integrated circuits (3DIC), is trending to advanced micro bumps of below $10 \, \mu m$ and may reach up to 1 million bumps per die. With this technology trend, there are significant challenges in the measurement of the small bumps, including the efficient handling of huge amounts of data" commented Roy Porat, Camtek's CEO. "The 3DIC technology is a significant driver in our market, and we are very pleased with the fact that we are the tool of choice in the selection by this very important customer. I believe that we will see further orders from this customer in the future."

ABOUT CAMTEK LTD.

Camtek Ltd provides automated solutions dedicated for enhancing production processes and yield, enabling our customers new technologies in two industries; Semiconductors, Printed Circuit Board (PCB) & IC Substrates.

Camtek addresses the specific needs of these industries with dedicated solutions based on a wide and advanced platform of technologies including intelligent imaging, image processing, ion milling and digital material deposition. Camtek's solutions range from micro-to-nano by applying its technologies to the industry-specific requirements.

This press release is available at www.camtek.co.il.

This press release may contain projections or other forward-looking statements regarding future events or the future performance of the Company. These statements are only predictions and may change as time passes. We do not assume any obligation to update that information. Actual events or results may differ materially from those projected, including as a result of changing industry and market trends, reduced demand for our products, the timely development of our new products and their adoption by the market, increased competition in the industry, price reductions as well as due to risks identified in the documents filed by the Company with the SEC.