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 August 2012

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

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/ Moshe Eisenberg

Moshe Eisenberg, Chief Financial Officer

Dated: August 1, 2012

Camtek Ltd.

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FOR IMMEDIATE RELEASE

CAMTEK ANNOUNCES SECOND QUARTER 2012 RESULTS

38% sequential revenue growth and Non-GAAP net income of \$3.0 million

MIGDAL HAEMEK, Israel – August 1, 2012 – Camtek Ltd. (NASDAQ and TASE: CAMT), today announced its financial results for the quarter ended June 30, 2012.

Highlights of the Second Quarter 2012

- Revenues of \$25.0 million, a 38% growth over the prior quarter and at the top end of previously issued guidance
 - Gross margin of 48.2% versus 42.0% in the prior quarter
 - Non-GAAP operating income of \$3.4 million; GAAP operating income of \$3.3 million
 - Non-GAAP net income of \$3.0 million; GAAP net income of \$2.3 million
 - Third quarter revenue guidance of \$23-25 million

Roy Porat, Camtek's Chief Executive Officer, commented, "We are pleased with our second quarter results, showing a solid improvement and meeting the top end of our expectations. We saw improvements, particularly in our semiconductor inspection business, and our gross margin was especially strong in the quarter due to this favorable product mix. We believe that this margin profile is a good indication of our long-term model."

Continued Mr. Porat, "Given the global macroeconomic concerns which have surfaced recently, our industry as a whole sees increased uncertainty ahead. We expect revenues for the third quarter between \$23-25 million."

Second Quarter 2012 Financial Results

Revenues for the second quarter of 2012 were \$25.0 million. This is a decrease of 13% compared to \$28.8 million in the second quarter of 2011 and an increase of 38% compared with \$18.2 million in the prior quarter. The sequential growth in the revenues was driven by the sales of our semiconductors inspection products.

Gross profit on a GAAP basis in the quarter totaled \$12.1 million (48.2% of revenues). This is compared with \$13.0 million (45.3% of revenues) in the second quarter of 2011 and \$7.6 million (42% of revenues) in the prior quarter.

Gross profit on a non-GAAP basis in the quarter totaled \$12.2 million (48.6% of revenues). This is compared with \$13.1 million (45.6% of revenues) in the second quarter of 2011 and \$7.7 million (42.5% of revenues) in the prior quarter.

Operating income on a GAAP basis in the quarter was \$3.3 million (13.0% of revenues). This is compared with an operating income of \$2.8 million (9.7% of revenues) in the second quarter of 2011 and an operating loss of \$1.1 million in the prior quarter.

Operating income on a non-GAAP basis, in the quarter was \$3.4 million (13.8% of revenues). This is compared to non-GAAP operating income of \$3.0 million (10.4% of revenues) in the second quarter of 2011 and an operating loss of \$0.9 million in the prior quarter.

Operating income and net income in the quarter included a one-time income of approximately \$1 million related to a settlement with a former service provider of the company.

Net income on a GAAP basis in the quarter totaled \$2.3 million, or \$0.08 per diluted share. This is compared with a net income of \$2.2 million, or \$0.07 per diluted share in the second quarter of 2011 and a net loss of 1.4 million, or \$0.05 per diluted share in the prior quarter.

Net income on a non-GAAP basis, in the quarter was \$3.0 million, or \$0.10 per diluted share. This is compared with a net income of \$2.9 million, or \$0.10 per diluted share in the second quarter of 2011 and a net loss of \$0.6 million or \$0.02 per diluted share in the prior quarter.

Cash and cash equivalents and short-term deposits as of June 30, 2012 were \$21.6 million (\$15.7 million net of bank loans) compared with \$26.0 million (\$19.6 million net of bank loans), as of March 31, 2012. As a result of an increase in its business during the second quarter of 2012, the company reported a negative operating cash flow of \$3.1 million.

Conference Call

Camtek will host a conference call today, August 1, 2012, at 10:00 am ET.

Roy Porat, Chief Executive Officer and Moshe Eisenberg, Chief Financial Officer, will host the call and will be available to answer questions after presenting the results.

To participate, please call one of the following telephone numbers a few minutes before the start of the call.

US: 1 888 407 2553 at 10:00 am Eastern Time Israel: 03 918 0609 at 5:00 pm Israel Time

International: +972 3 918

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For those unable to participate, the teleconference will be available for replay on Camtek's website at http://www.camtek.co.il/ beginning 24 hours after the call.

ABOUT CAMTEK LTD.

Camtek Ltd. provides automated and technologically advanced solutions dedicated to enhancing production processes and increasing yields, enabling and supporting customer's latest technologies in the Semiconductors, Printed Circuit Boards (PCB) and IC Substrates industries.

Camtek addresses the specific needs of these interconnected industries with dedicated solutions based on a wide and advanced platform of technologies including intelligent imaging, image processing, adaptive ion milling (AIM) and digital material deposition (DMD). Camtek's solutions range from micro-to-nano by applying its technologies to the industries' 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, intellectual property litigation, price reductions as well as due to risks identified in the documents filed by the Company with the SEC.

Use of non-GAAP Measures

This press release provides financial measures that exclude certain items such as: (i) amortization of acquired intangible assets and revaluation of liabilities with respect to the acquisitions of Sela and Printar; (ii) share based compensation expenses and (iii) certain inventory write-downs, and are therefore not calculated in accordance with generally accepted accounting principles (GAAP). Management believes that these Non-GAAP financial measures provide meaningful supplemental information regarding our performance. The presentation of this non-GAAP financial information is not intended to be considered in isolation or as a substitute for the financial information prepared and presented in accordance with GAAP. Management uses both GAAP and non-GAAP measures when evaluating the business internally and therefore felt it is important to make these non-GAAP adjustments available to investors. A reconciliation between the GAAP and non-GAAP results appears in the tables at the end of this press release.

Consolidated Balance Sheets

| (In thousands) | | | | |
|--|----------------|----------------|--|--|
| | | December | | |
| | June 30, | 31, | | |
| | 2012 | 2011 | | |
| | U.S. De | ollars (In | | |
| | thousands) | | | |
| Assets | ĺ | | | |
| | | | | |
| Current assets | | | | |
| Cash and cash equivalents | 13,833 | 22,185 | | |
| Short-term deposits | 7,800 | 4,100 | | |
| Accounts receivable, net | 31,115 | 24,451 | | |
| Inventories | 25,794 | 24,355 | | |
| Due from affiliates | 331 | 388 | | |
| Other current assets | 3,983 | 3,357 | | |
| Deferred tax asset | 110 | 110 | | |
| Total current assets | 82,966 | 79,946 | | |
| Fixed assets, net | 14,472 | 14,577 | | |
| Long term inventory | 2,700 | 1,954 | | |
| Deferred tax asset | 132 | 132 | | |
| Other assets, net | 304 | 304 | | |
| Intangible assets, net * Goodwill | 3,986 3,653 | 4,191 3,653 | | |
| Goodwill | 10,775 | 10,234 | | |
| Total assets | 10,773 | 10,234 | | |
| Total assets | 100,213 | 104,737 | | |
| Liabilities and shareholders' equity | | | | |
| Current liabilities | | | | |
| Short term bank loans | 3,000 | 3,000 | | |
| Accounts payable – trade | 11,429 | 6,773 | | |
| Long term bank loans – current portion | 1,700 | 1,700 | | |
| Due to affiliates | 196 | - | | |
| Other current liabilities | 20,228 | 21,568 | | |
| Total current liabilities | 36,553 | 33,041 | | |
| Long term liabilities | 20,222 | 00,011 | | |
| Long term bank loans | 1,242 | 2,092 | | |
| Liability for employee severance benefits | 645 | 652 | | |
| Other long term liabilities * | 8,728 | 9,039 | | |
| | 10,615 | 11,783 | | |
| Total liabilities | 47,168 | 44,824 | | |
| | | | | |
| Commitments and contingencies | | | | |
| | | | | |
| Shareholders' equity | | | | |
| Ordinary shares NIS 0.01 par value, authorized 100,000,000 shares, | | | | |

31,986,005 issued as June 30,2012 and 31,810,340 as of December 31,2011, outstanding 29,893,629

| as of June 30, 2012 and 29,717,964 as of December 31, 2011 | 133 | 133 |
|---|---------|------------|
| Additional paid-in capital | 61,217 | 61,014 |
| Accumulated income | 1,593 | 684 |
| | 62,943 | 61,831 |
| Treasury stock, at cost (2,092,376 as of June 30, 2012 and December 31, 2011) | (1,898 |) (1,898) |
| Total shareholders' equity | 61,045 | 59,933 |
| Total liabilities and shareholders' equity | 108,213 | 104,757 |

(*) Relates to Printar and SELA acquisitions

Camtek Ltd.

Consolidated Statements of Operations

(in thousands, except share data)

| (in thousands, except share data) | | | | | | | | | | |
|---|---|---|--------|---|---|---|--------|---|---|---|
| | Six Months ended June 30, 2012 2011 U.S. dollars | | | | Three Months ended June 30, 2012 2011 U.S. dollars | | | | Year ended December 31, 2011 U.S. dollars | |
| Revenues | 43,211 | | 56,248 | | 25,033 | | 28,778 | | 107,028 | |
| Cost of revenues | 23,506 | | 30,415 | | 12,961 | | 15,752 | | 59,588 | |
| Gross profit | 19,705 | | 25,833 | | 12,072 | | 13,026 | | 47,440 | |
| Research and development costs | 6,645 | | 7,360 | | 3,320 | | 3,581 | | 14,077 | |
| Selling, general and administrative expenses | *10,923 | | 12,707 | | *5,488 | | 6,644 | | 24,341 | |
| 6, 6, | 17,568 | | 20,067 | | 8,808 | | 10,225 | | 38,418 | |
| | | | | | | | | | | |
| Operating income | 2,137 | | 5,766 | | 3,264 | | 2,801 | | 9,022 | |
| Financial expenses, net | (986 |) | (769 |) | (854 |) | (361 |) | (2,900 |) |
| Income before income | | | | | | | | | | |
| taxes | 1,151 | | 4,997 | | 2,410 | | 2,440 | | 6,122 | |
| | | | | | | | | | | |
| Income tax | (242 |) | (370 |) | (144 |) | (234 |) | (744 |) |
| | | | | | | | | | | |
| Net income | 909 | | 4,627 | | 2,266 | | 2,206 | | 5,378 | |
| Net income per ordinary share: | | | | | | | | | | |
| Basic | 0.03 | | 0.16 | | 0.08 | | 0.07 | | 0.18 | |
| Busic | 0.03 | | 0.10 | | 0.00 | | 0.07 | | 0.10 | |
| Diluted | 0.03 | | 0.15 | | 0.08 | | 0.07 | | 0.18 | |
| Weighted average number of ordinary shares outstanding: | | | | | | | | | | |
| Basic | 29,803 | | 29,487 | | 29,881 | | 29,641 | | 29,577 | |
| | | | | | , | | | | | |
| Diluted | 30,003 | | 30,017 | | 30,013 | | 29,973 | | 30,009 | |

^(*)Including income of approximately 1 million dollars related to a settlement with a former service provider of the company.

Camtek Ltd.

Reconciliation of GAAP to Non-GAAP results

(In thousands, except share data)

| (in thousands, except share data) | | | | | | | | | | |
|--|--------|-------------------------------|--|----|--------|----|---|----|--------|----|
| | 201 | onths ended ine 30, 201 | Three Months ended June 30, 2012 2011 U.S. dollars | | | | Year ended December 31, 2011 U.S. dollars | | | |
| Reported net income attributable to Camtek | | | | | | | | | | |
| Ltd. on GAAP basis | 909 | | 4,627 | | 2,266 | | 2,206 | | 5,378 | |
| | | | | | | | | | | |
| Acquisition of Sela and Printar related | | | | | | | | | | |
| expenses (1) | 1,170 | | 1,138 | | 596 | | 575 | | 2,377 | |
| Inventory write –downs (2) | - | | - | | - | | - | | 685 | |
| Share-based compensation | 205 | | 235 | | 103 | | 126 | | 416 | |
| Shelf registration expenses | 94 | | - | | - | | - | | - | |
| Non-GAAP net income | 2,378 | | 6,000 | | 2,965 | | 2,907 | | 8,856 | |
| N. CLIB | 1 | | | | | | | | | |
| Non –GAAP net income per share, basic ar | | | 0.20 | | 0.10 | | 0.10 | | 0.20 | |
| diluted | 0.08 | | 0.20 | | 0.10 | | 0.10 | | 0.30 | |
| Gross margin on GAAP basis | 45.6 | % | 45.9 | % | 48.2 | % | 45.3 | % | 44.3 | % |
| Reported gross profit on GAAP basis | 19,705 | 70 | 25,833 | 70 | 12,072 | 70 | 13,026 | 70 | 47,440 | 70 |
| reported gross profit on Graffi ousis | 19,703 | | 25,055 | | 12,072 | | 13,020 | | 17,110 | |
| Acquisition of Sela and Printar related | | | | | | | | | | |
| expenses (1) | 150 | | 160 | | 75 | | 80 | | 331 | |
| Inventory write –downs (2) | - | | - | | _ | | - | | 685 | |
| Share-based compensation | 50 | | 54 | | 25 | | 29 | | 97 | |
| Non- GAAP gross margin | 46.2 | % | 46.3 | % | 48.6 | % | 45.6 | % | 45.4 | % |
| Non-GAAP gross profit | 19,905 | | 26,047 | | 12,172 | | 13,135 | | 48,553 | |
| • | | | | | | | | | | |
| Reported operating income attributable to | | | | | | | | | | |
| Camtek Ltd. on GAAP basis | 2,137 | | 5,766 | | 3,264 | | 2,801 | | 9,022 | |
| | | | | | | | | | | |
| Acquisition of Sela and Printar related | | | | | | | | | | |
| expenses (1) | 150 | | 160 | | 75 | | 80 | | 331 | |
| Inventory write-downs (2) | - | | - | | - | | - | | 685 | |
| Share-based compensation | 205 | | 235 | | 103 | | 126 | | 416 | |
| Shelf registration expenses | 94 | | - | | - | | - | | - | |
| Non-GAAP operating income | 2,586 | | 6,161 | | 3,442 | | 3,007 | | 10,454 | |

⁽¹⁾ During the three and six months ended June 30, 2012 and 2011 and the twelve months ended December 31, 2011, the Company recorded acquisition expenses of \$0.6 million, \$1.2 million, \$0.6 million, \$1.1 million and \$2.4 million, respectively, consisting of: (1) inventory written-up to fair value in purchase accounting charges of \$0 million, \$0 million, \$0.01 million, \$0.02 million and \$0.02 million, respectively. These amounts are recorded under cost of revenues line item. (2) Revaluation adjustments of \$0.5 million, \$1.0 million, \$0.5 million, \$1.0

million and \$2.0 million, respectively, of contingent consideration and certain future liabilities recorded at fair value. These amounts are recorded under finance expenses line item and (3) \$0.07 million, \$0.15 million, \$0.07 million, \$0.14 million and \$0.3 million, respectively, with respect to amortization of intangible assets acquired recorded under cost of revenues line item.

(2)During the three months and six months ended June 30, 2012 and 2011, and the twelve months ended December 31, 2011, the Company recorded inventory write down in the amount of \$0 million, \$0 million, \$0 million, and \$0.7 million, respectively.