

KLA TENCOR CORP
Form S-4/A
June 07, 2018
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As filed with the Securities and Exchange Commission on June 6, 2018

Registration No. 333-224982

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

Amendment No. 1
to
FORM S-4
REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933

KLA-Tencor Corporation
(Exact name of Registrant as specified in its charter)

Delaware

3827

04-2564110

**(State or other jurisdiction of
incorporation or organization)**

**(Primary Standard Industrial
Classification Code Number)
One Technology Drive**

**(I.R.S. Employer
Identification Number)**

Milpitas, California 95305

(408) 875-3000

**(Address, including zip code, and telephone number, including area code, of Registrant's principal executive
offices)**

Teri A. Little

Executive Vice President and Chief Legal Officer

KLA-Tencor Corporation

One Technology Drive

Milpitas, California 95305

(408) 875-3000

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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Douglas K. Schnell	KLA-Tencor Corporation	Orbotech Ltd.	Cravath, Swaine & Moore LLP
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Fax: (650) 493-6811		Fax: +972-8-9438769	

Approximate date of commencement of proposed sale of the securities to the public: As soon as practicable after this Registration Statement becomes effective and upon completion of the merger described in the enclosed proxy statement/prospectus.

If the securities being registered on this Form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer, smaller reporting company and emerging growth company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

If applicable, place an X in the box to designate the appropriate rule provision relied upon in conducting this transaction:

Exchange Act Rule 13e-4(i) (Cross-Border Issuer Tender Offer)

Exchange Act Rule 14d-1(d) (Cross-Border Third-Party Tender Offer)

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act, or until the Registration Statement shall become effective on such dates as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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Information contained herein is subject to completion or amendment. A registration statement relating to these securities has been filed with the Securities and Exchange Commission. These securities may not be sold nor may offers to buy be accepted prior to the time the registration statement becomes effective. This proxy statement/prospectus shall not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of such securities, in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to appropriate registration or qualification under the securities laws of such jurisdiction.

PRELIMINARY SUBJECT TO COMPLETION DATED JUNE 6, 2018

MERGER PROPOSED YOUR VOTE IS VERY IMPORTANT

Dear Orbotech Ltd. shareholder:

You are cordially invited to attend the extraordinary general meeting of shareholders of Orbotech Ltd. (Orbotech or we) to be held at 10:00 a.m., Israel time, on Thursday, July 12, 2018, at Orbotech s offices at 7 Sanhedrin Boulevard, North Industrial Zone, Yavne, Israel.

As previously announced, on March 18, 2018, Orbotech entered into an agreement and plan of merger, as amended (the Merger Agreement), with KLA-Tencor Corporation (KLA-Tencor) and Tiburon Merger Sub Technologies Ltd. (Merger Sub) under which Orbotech would be acquired by KLA-Tencor (the Merger). Pursuant to the terms of the Merger Agreement, each ordinary share of Orbotech that is issued and outstanding (other than certain Excluded Shares) will be canceled and converted into the right to receive \$38.86 in cash and 0.25 of a share of KLA-Tencor common stock. You will be asked at the meeting to consider and vote on the approval and adoption of the Merger Agreement, the Merger and the other transactions contemplated by the Merger Agreement (the Merger Proposal). We encourage you to read the Merger Agreement, a copy of which is attached to this proxy statement/prospectus as Annex A, in its entirety.

The Orbotech Board of Directors has (i) determined that the Merger Agreement and the transactions contemplated by the Merger Agreement, including the Merger, are advisable, fair to and in the best interests of Orbotech and its shareholders and that, considering the financial position of the merging companies, and assuming, among other things, the accuracy of the representations and warranties of the other parties in the Merger Agreement, no reasonable concern exists that the surviving company, as a result of the Merger, will be unable to fulfill the obligations of Orbotech to its creditors; (ii) approved the Merger Agreement and the transactions contemplated by the Merger Agreement, including the Merger; and (iii) resolved to direct that the Merger Agreement and the transactions contemplated by the Merger Agreement be submitted to the shareholders of Orbotech for approval and adoption and recommended that the shareholders of Orbotech vote in favor of the approval and adoption of the Merger Agreement, the Merger and the other transactions contemplated by the Merger Agreement, all upon the terms and subject to the conditions set forth in the Merger Agreement. **Accordingly, the Orbotech Board of Directors unanimously recommends that you vote FOR the Merger Proposal.**

We urge you to read the accompanying proxy statement/prospectus, including the Annexes and the documents incorporated by reference, carefully and in its entirety. In particular, we urge you to read carefully the section entitled Risk Factors .

We look forward to greeting personally those Orbotech shareholders who are able to be present at the meeting. If you do plan to attend, to gain access to the meeting we ask that you bring with you some form of personal identification

and verification of your status as a shareholder as of the close of trading on June 6, 2018, the record date for the meeting. However, whether or not you will be with us at the meeting, it is important that your shares be represented. Accordingly, you are requested to complete, date, sign and mail the enclosed proxy in the envelope provided at your earliest convenience and in any event so as to be received in a timely manner as discussed in the enclosed proxy statement/prospectus. Your shares can be voted at the meeting only if you are present or represented by a valid proxy.

Thank you for your cooperation.

Very truly yours,

ASHER LEVY

Chief Executive Officer, Orbotech Ltd.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities to be issued under this proxy statement/prospectus or determined if this proxy statement/prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

This proxy statement/prospectus is dated June 7, 2018 and is first being made available to Orbotech shareholders on or about June 7, 2018.

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ORBOTECH LTD.

7 Sanhedrin Boulevard

North Industrial Zone

P.O. Box 215

Yavne 8110101, Israel

PROXY STATEMENT

EXTRAORDINARY GENERAL MEETING OF SHAREHOLDERS

This proxy statement/prospectus is being furnished to the holders of ordinary shares, New Israeli Shekels (NIS) 0.14 nominal (par) value per share (Orbotech shares), of Orbotech Ltd. (Orbotech) in connection with the solicitation by the Board of Directors of Orbotech (the Orbotech Board) of proxies for use at Orbotech 's extraordinary general meeting of shareholders (the meeting) or at any adjournment thereof.

The meeting will be held on Thursday, July 12, 2018 at 10:00 a.m., Israel time, at Orbotech 's principal executive offices at 7 Sanhedrin Boulevard, North Industrial Zone, Yavne, Israel, to consider and vote on the following matter in connection with the acquisition of Orbotech by KLA-Tencor Corporation, a Delaware corporation (KLA-Tencor):

To approve and adopt (i) the agreement and plan of merger dated March 18, 2018, as amended (the Merger Agreement), among KLA-Tencor, Tiburon Merger Sub Technologies Ltd., a company organized under the laws of the State of Israel and a wholly owned subsidiary of KLA-Tencor (Merger Sub) and Orbotech; (ii) the merger of Merger Sub with and into Orbotech (the Merger) on the terms and subject to the conditions set forth in the Merger Agreement and in accordance with the provisions of Sections 314-327 of the Companies Law 1999 of the State of Israel (together with the rules and regulations promulgated thereunder, the ICL), following which Merger Sub will cease to exist, and Orbotech will become a wholly owned subsidiary of KLA-Tencor; and (iii) all other transactions contemplated by the Merger Agreement, all upon the terms and subject to the conditions set forth in the Merger Agreement (the Merger Proposal).

Voting procedures. A form of proxy for use at the meeting and a return envelope for the proxy are enclosed. No postage is required if mailed in the United States. Shareholders may revoke the authority granted by their execution of a proxy at any time before the effective exercise thereof by filing with Orbotech a written notice of revocation or a duly executed proxy bearing a later date, or by voting in person at the meeting. *In order for a proxy to be counted, it must be duly executed and received prior to the meeting. This will be deemed to have occurred only if such proxy is received either by Orbotech at its principal executive offices at 7 Sanhedrin Boulevard, North Industrial Zone, Yavne, Israel, at any time prior to the commencement of the meeting, or by American Stock Transfer & Trust Company, LLC, Orbotech 's transfer agent, in New York City, New York, by no later than 11:59 p.m., New York City time, on July 11, 2018, the last business day immediately preceding the date of the meeting (and, in each case, not revoked prior to such time). Orbotech shares represented by any proxy received after the time specified above will not be counted as present at the meeting and will not be voted.*

If a shareholder properly executes and returns the form of proxy to Orbotech prior to the meeting (as specified above) without indicating how the shareholder intends to vote with respect to the Merger Proposal, the Orbotech shares

represented by the proxy will be counted as being present for quorum purposes, but will not be treated as having been voted in respect of the Merger Proposal and will have no effect on the voting with respect to the Merger Proposal.

Joint holders of Orbotech shares should take note that, pursuant to Article 62 of the Articles of Association of Orbotech, the vote of the senior holder of joint holders of any Orbotech share who tenders a vote, whether in person or by proxy, will be accepted to the exclusion of the vote(s) of the other joint holder(s) of such Orbotech

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share, and for this purpose seniority will be determined by the order in which the names stand in Orbotech's share register.

Record date. Proxies for use at the meeting are being solicited by the Orbotech Board. Only shareholders with Orbotech shares registered in his, her, its or their name or names, at the close of trading on June 6, 2018, the record date (Orbotech shareholders of record), will be entitled to vote at the meeting or at any adjournment thereof. Proxies are expected to be mailed to Orbotech shareholders of record on or about June 15, 2018, and their return will be solicited chiefly by mail; however, certain officers, directors, employees and agents of Orbotech, none of whom will receive additional compensation therefor, as well as Okapi Partners LLC, the proxy solicitor for Orbotech, may solicit proxies by telephone, facsimile transmission, electronic mail or other personal contact. Orbotech will bear the costs of the solicitation of proxies, including postage, printing and handling, and will reimburse the reasonable expenses of brokerage firms and others for forwarding material to beneficial owners of Orbotech shares.

Quorum. At the close of trading on June 6, 2018, the record date, 48,569,735 Orbotech shares were outstanding¹, each of which is entitled to one vote upon each of the matters to be presented at the meeting. No less than two Orbotech shareholders of record present in person or by proxy, and holding or representing between them Orbotech shares conferring in the aggregate more than 50% of the voting rights of Orbotech, shall constitute a quorum at the meeting. If within one-half hour from the time appointed for the holding of the meeting a quorum is not present, the meeting shall be adjourned to July 23, 2018, at the same time and place. At any such adjourned meeting, if a quorum is not present within one-half hour from the specified time, any shareholders present in person or by proxy shall constitute a quorum even if they hold or represent Orbotech shares conferring 50% or less of the voting rights of Orbotech.

In determining whether there is a quorum for the meeting and whether the required number of votes for the Merger Proposal has been cast, Orbotech shares subject to abstentions or to broker non-votes are counted for purposes of determining whether there is a quorum for the meeting but, with regard to the Merger Proposal, are not counted as having been voted in respect thereof. Broker non-votes are votes that brokers holding Orbotech shares of record for their clients are, pursuant to applicable stock exchange or other rules, precluded from casting in respect of certain non-routine proposals because such brokers have not received specific instructions from their clients as to the manner in which such Orbotech shares should be voted on those proposals and as to which the brokers have advised Orbotech that, accordingly, they lack voting authority.

Required vote. The affirmative vote of a simple majority of the voting rights of Orbotech shares represented and voting thereon at the meeting is necessary for the approval of the Merger Proposal, provided that such majority includes at least a majority of the votes cast by Orbotech shareholders that are not KLA-Tencor, Merger Sub or a KLA Related Person (as defined below), who are present and voting (abstentions are disregarded) (the Merger Majority).

Pursuant to the ICL, each Orbotech shareholder voting on the Merger Proposal is required to inform Orbotech as detailed below prior to voting at the meeting if the shareholder is any of KLA-Tencor, Merger Sub, or a KLA Related Person and to indicate such matter in the appropriate place in the enclosed proxy, as further detailed below. A KLA Related Person is (a) a person holding, directly or indirectly, either (i) 25% or more of the voting rights of KLA-Tencor or Merger Sub, or (ii) the right to appoint 25% or more of the directors of KLA-Tencor or Merger Sub, or (b) one of such person's spouse, siblings, parents, grandparents, descendants, spouse's descendants, siblings or parents or the spouse of any such person, or a corporation controlled by any one or more of such persons or by KLA-Tencor or Merger Sub.

Does not include, as at that date: (i) a total of 4,401,303 Orbotech shares that were either subject to outstanding equity awards granted pursuant to equity remuneration plans of Orbotech or were available for grant pursuant to such plans and (ii) a total of 5,410,773 Orbotech shares held as treasury shares, including (A) 37,022 Orbotech shares held on behalf of Orbotech by the Section 102 Trustee and (B) 3,416,855 Orbotech shares held by direct or indirect wholly owned subsidiaries of Orbotech, all as described in further detail under the section entitled Security Ownership of Certain Beneficial Owners and Management of Orbotech .

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Special voting instructions under the ICL. In order to provide for proper counting of your shareholder vote, in the enclosed proxy you are required to indicate whether or not you are KLA-Tencor, Merger Sub, or a KLA Related Person with respect to the Merger Proposal. If you have not marked **NO** on the proxy (or in your electronic submission), thereby confirming that you are not any of KLA-Tencor, Merger Sub, or a KLA Related Person with respect to the Merger Proposal, your vote will not be counted for purposes of the Merger Majority with respect to the Merger Proposal, and your signature on the enclosed proxy (or the submission of an electronic vote) will constitute a certification that you are either KLA-Tencor, Merger Sub or a KLA Related Person.

Based on information provided by KLA-Tencor and Merger Sub to Orbotech, as of the date of this proxy statement/prospectus, Orbotech is not aware of any holdings of Orbotech shares by KLA-Tencor, Merger Sub or any KLA Related Persons, and therefore believes that all of its shareholders should mark **NO** in the appropriate place on the enclosed proxy (or in their electronic submission).

Abstentions and broker non-votes will be counted for purposes of determining whether there is a quorum for the meeting but will not be treated as having been voted in respect of the Merger Proposal. Consequently, assuming a quorum is present at the meeting, broker non-votes and abstentions will have no effect on the voting with respect to the Merger Proposal.

Orbotech is unaware at this time of any other matters that will come before the meeting. If any other matters properly come before the meeting, it is the intention of the persons designated as proxies to vote in accordance with their judgment on such matters. Orbotech shares represented by executed and unrevoked proxies will be voted in accordance with such judgment.

ADDITIONAL INFORMATION

This proxy statement/prospectus incorporates important business and financial information about KLA-Tencor and Orbotech from other documents that are not included in or delivered with this proxy statement/prospectus. This information is available to you without charge upon your request. You can obtain the documents incorporated by reference into the proxy statement/prospectus free of charge by requesting them in writing or by telephone from the appropriate company at the following addresses and telephone numbers:

KLA-Tencor Corporation

One Technology Drive

Milpitas, CA 95035

(408) 875-3000

Attention: Investor Relations

Orbotech Ltd.

P. O. Box 215

Yavne 8110101, Israel

972-8-9423622

Attention: Michael Havin, Corporate Secretary

Investors may also consult KLA-Tencor's or Orbotech's website for more information concerning the Merger described in this proxy statement/prospectus. KLA-Tencor's website is www.kla-tencor.com. Orbotech's website is www.orbotech.com. Information included on these websites is not incorporated by reference into this proxy statement/prospectus.

In addition, if you have questions about the Merger, the merger consideration or related matters or this proxy statement/prospectus, would like additional copies of this proxy statement/prospectus or need to obtain proxy cards or other information related to the proxy solicitation, please contact Okapi Partners LLC, the proxy solicitor for Orbotech, toll-free at +1 (855) 305-0857 or collect at +1 (212) 297-0720. You will not be charged for any of these documents that you request. If you have any questions about the merger consideration or related matters, you may also contact D.F. King & Co., Inc., the information agent for the Merger, by phone at +1 (800) 628-8538 (toll-free for stockholders) or +1 (212) 269-5550 (banks and brokers) or by email at orbotech@dfking.com.

If you would like to request any documents, please do so by July 5, 2018 in order to receive them before the extraordinary general meeting of Orbotech shareholders.

For a more detailed description of the information incorporated by reference into this proxy statement/prospectus and how you may obtain it, see the section entitled Where You Can Find More Information .

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ABOUT THIS PROXY STATEMENT/PROSPECTUS

This proxy statement/prospectus, which forms part of a registration statement on Form S-4 filed with the U.S. Securities and Exchange Commission (the "SEC") by KLA-Tencor, constitutes a prospectus of KLA-Tencor under Section 5 of the Securities Act of 1933, as amended (the "Securities Act") with respect to the shares of KLA-Tencor common stock to be issued to Orbotech shareholders pursuant to the Merger Agreement. This proxy statement/prospectus also constitutes a notification with respect to the extraordinary general meeting of Orbotech shareholders.

You should rely only on the information contained in or incorporated by reference into this proxy statement/prospectus. No one has been authorized to provide you with information that is different from that contained in, or incorporated by reference into, this proxy statement/prospectus. This proxy statement/prospectus is dated June 7, 2018. You should not assume that the information contained in this proxy statement/prospectus is accurate as of any other date. You should not assume that the information incorporated by reference into this proxy statement/prospectus is accurate as of any date other than the date of the incorporated document. Neither our making available this proxy statement/prospectus to Orbotech shareholders nor the issuance by KLA-Tencor of shares of common stock pursuant to the Merger Agreement will create any implication to the contrary.

This proxy statement/prospectus does not constitute an offer to sell, or a solicitation of an offer to buy, any securities, or the solicitation of a proxy, in any jurisdiction to or from any person to whom it is unlawful to make any such offer or solicitation. Information contained in this proxy statement/prospectus regarding KLA-Tencor has been provided by KLA-Tencor and information contained in this proxy statement/prospectus regarding Orbotech has been provided by Orbotech.

All references in this proxy statement/prospectus to "KLA-Tencor" refer to KLA-Tencor Corporation, a Delaware corporation; all references in this proxy statement/prospectus to "Orbotech" refer to Orbotech Ltd., a company organized under the laws of the State of Israel; all references to "Merger Sub" refer to Tiburon Merger Sub Technologies Ltd., a company organized under the laws of the State of Israel and a wholly owned subsidiary of KLA-Tencor formed for the sole purpose of effecting the Merger, or its permitted assignees; unless otherwise indicated or as the context requires, all references in this proxy statement/prospectus to "we," "our" and "us" refer to KLA-Tencor and Orbotech collectively; unless otherwise indicated or as the context requires, all references to the "combined company" refer to KLA-Tencor, Orbotech and their subsidiaries, collectively, following the consummation of the Merger; unless otherwise indicated or as the context requires, all references to the "Merger Agreement" refer to the agreement and plan of merger, dated as of March 18, 2018, as amended, among KLA-Tencor, Merger Sub and Orbotech, a copy of which is attached to this proxy statement/prospectus as Annex A; all references to the "Merger" refer to the merger of Merger Sub with and into Orbotech, with Orbotech as the surviving company.

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Annex B Opinion of Barclays Capital Inc.

Annex C Proxy Card

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QUESTIONS AND ANSWERS

The following are some questions that you, as a shareholder of Orbotech, may have regarding the Merger Proposal being considered at the extraordinary general meeting of Orbotech shareholders (the meeting) and the answers to those questions. KLA-Tencor and Orbotech urge you to carefully read the remainder of this proxy statement/prospectus because the information in this section does not provide all the information that might be important to you with respect to the Merger Proposal being considered at the meeting. Additional important information is also contained in the Annexes to, and the documents incorporated by reference into, this proxy statement/prospectus. For more information, see the section entitled Where You Can Find More Information .

Q: Why am I receiving this proxy statement/prospectus?

A: KLA-Tencor and Orbotech have agreed to an acquisition of Orbotech by KLA-Tencor under the terms of the Merger Agreement that is described in this proxy statement/prospectus. A copy of the Merger Agreement is attached to this proxy statement/prospectus as Annex A. The Merger Agreement is the legal document governing the Merger.

In order to consummate the Merger, Orbotech shareholders must vote to approve and adopt the Merger Proposal described in this proxy statement/prospectus, and all other conditions to the Merger must be satisfied or waived.

Orbotech will hold the meeting to obtain this approval for the Merger Proposal. This proxy statement/prospectus contains important information about the Merger, the Merger Proposal and the meeting, and you should read it carefully. The enclosed proxy materials allow you to vote your shares without attending the meeting.

Your vote is important. We encourage you to vote as soon as possible. For more information on how to vote your shares, see the section entitled The Orbotech Extraordinary General Meeting Voting Procedures .

This proxy statement/prospectus is for the extraordinary general meeting of the shareholders of Orbotech to consider the Merger Proposal and does not relate to the 2018 annual general meeting of Orbotech shareholders (the 2018 Orbotech Annual Meeting) scheduled to be held on June 21, 2018 . **To vote on the Merger Proposal, you must follow the procedures in this proxy statement/prospectus. Completing the proxy for or voting at the 2018 Orbotech Annual Meeting is not a vote on the Merger Proposal.** This proxy statement/prospectus is not soliciting votes for the 2018 Orbotech Annual Meeting and a separate proxy statement relating to the 2018 Orbotech Annual Meeting was made available to Orbotech shareholders on or about May 17, 2018. See the section entitled Where You Can Find More Information .

Q: What is a proxy?

A: A proxy is another person you authorize to vote on your behalf. Orbotech is asking its shareholders to vote, or to instruct their proxy how to vote, their Orbotech ordinary shares (the Orbotech shares) so that all Orbotech shares may be voted at the meeting even if the holders do not attend the meeting.

Q: When were the enclosed solicitation materials first made available to shareholders?

A: The enclosed solicitation materials were first made available to Orbotech shareholders on or about June 7, 2018 and are expected to be mailed to Orbotech shareholders on or about June 15, 2018.

Q: What do I need to do now?

A: After you have carefully read and considered the information contained in or incorporated by reference into this proxy statement/prospectus, please either join us at the meeting to vote in person or vote by submitting

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your proxy card by following the instructions set forth below in the sections entitled The Orbotech Extraordinary General Meeting Vote Required at the Meeting, and The Orbotech Extraordinary General Meeting Voting Procedures .

Questions and Answers about the Merger Proposal and Extraordinary General Meeting

Q: When and where is the meeting?

A: The meeting will be held on Thursday, July 12, 2018 at 10:00 a.m., Israel time, at Orbotech's principal executive offices at 7 Sanhedrin Boulevard, North Industrial Zone, Yavne, Israel.

Q: Who is entitled to vote at the meeting?

A: Only Orbotech shareholders with Orbotech shares registered in his, her, its or their name or names as of the close of trading on June 6, 2018, the record date (Orbotech shareholders of record), will be entitled to vote at the meeting or at any adjournment thereof. As of the close of trading on June 6, 2018, the record date, 48,569,735 Orbotech shares were outstanding², each of which is entitled to one vote upon the matter presented at the meeting.

Q: What proposal will be considered at the meeting?

A: At the meeting, you will be asked to consider and vote on the following item:

To approve and adopt (i) the Merger Agreement; (ii) the Merger on the terms and subject to the conditions set forth in the Merger Agreement and in accordance with the provisions of Sections 314-327 of the ICL, following which Merger Sub will cease to exist, and Orbotech will become a wholly owned subsidiary of KLA-Tencor; and (iii) all other transactions contemplated by the Merger Agreement, all upon the terms and subject to the conditions set forth in the Merger Agreement (the Merger Proposal).

Q: What constitutes a quorum?

A: No less than two Orbotech shareholders of record present in person or by proxy, and holding or representing between them Orbotech shares conferring in the aggregate more than 50% of the voting rights of Orbotech, shall constitute a quorum at the meeting. If within one-half hour from the time appointed for the holding of the meeting a quorum is not present, the meeting shall be adjourned to July 23, 2018, at the same time and place. At any such adjourned meeting, if a quorum is not present within one-half hour from the specified time, any shareholders present in person or by proxy shall constitute a quorum even if they hold or represent Orbotech shares conferring 50% or less of the voting rights of Orbotech.

In determining whether there is a quorum for the meeting and whether the required number of votes for the Merger Proposal has been cast, Orbotech shares subject to abstentions or to broker non-votes are counted for purposes of determining whether there is a quorum for the meeting but, with regard to the Merger Proposal, are not counted as having been voted in respect thereof. Broker non-votes are votes that brokers holding Orbotech shares of record for their clients are, pursuant to applicable stock exchange or other rules, precluded from casting in respect of certain non-routine proposals because such brokers have not received specific instructions from their clients as to the manner in which such Orbotech shares should be voted on

² Does not include, as at that date: (i) a total of 4,401,303 Orbotech shares that were either subject to outstanding equity awards granted pursuant to equity remuneration plans of Orbotech or were available for grant pursuant to such plans and (ii) a total of 5,410,773 Orbotech shares held as treasury shares, including (A) 37,022 Orbotech shares held on behalf of Orbotech by the Section 102 Trustee and (B) 3,416,855 Orbotech shares held by direct or indirect wholly owned subsidiaries of Orbotech, all as described in further detail in the section entitled Security Ownership of Certain Beneficial Owners and Management of Orbotech .

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those proposals and as to which the brokers have advised Orbotech that, accordingly, they lack voting authority.

Q: What vote of Orbotech shareholders is required to approve the Merger Proposal?

A: The affirmative vote of a simple majority of the voting rights of Orbotech represented and voting thereon at the meeting is necessary for the approval of the Merger Proposal, provided that such majority includes at least a majority of the votes cast by Orbotech shareholders that are not KLA-Tencor, Merger Sub or a KLA Related Person, who are present and voting (abstentions are disregarded) (the Merger Majority).

Q: How does the Orbotech Board recommend that I vote?

A: The Board of Directors of Orbotech (the Orbotech Board) unanimously recommends a vote FOR the Merger Proposal.

For a discussion of the factors that the Orbotech Board considered in determining to recommend the approval and adoption of the Merger Agreement, the Merger and all other transactions contemplated by thereby, see the section entitled The Merger Orbotech's Reasons for the Merger; Recommendation of the Orbotech Board.

Q: Do any of Orbotech's directors or executive officers have any interests in the Merger that may be different from, or in addition to, my interests as an Orbotech shareholder?

A: In considering the proposal to be voted on at the meeting, you should be aware that Orbotech's directors and executive officers have interests that may be different from, or in addition to, the interests of the Orbotech shareholders generally. For more information, see the section entitled The Merger Interests of Orbotech Directors and Executive Officers in the Merger.

Q: What do I need to do now?

A: After carefully reading and considering the information contained in this proxy statement/prospectus, including the Annexes and the other documents incorporated by reference in this proxy statement/prospectus, please ensure your Orbotech shares are voted at the meeting by completing, dating, signing and mailing the enclosed proxy in the envelope provided at your earliest convenience and in any event so as to be received in a timely manner as discussed in this proxy statement/prospectus.

Your shares can be voted at the meeting only if you are present or represented by a valid proxy. In order to provide for proper counting of your shareholder vote, in the enclosed proxy you are required to indicate whether or not you are KLA-Tencor, Merger Sub, or a KLA Related Person with respect to the Merger Proposal. If you have not marked NO on the proxy (or in your electronic submission), thereby confirming that you are not any of KLA-Tencor, Merger Sub, or a KLA Related Person with respect to the Merger Proposal, your vote will not be counted for purposes of the Merger Majority with respect to the Merger Proposal, and your signature on the enclosed proxy (or the submission of

an electronic vote) will constitute a certification that you are either KLA-Tencor, Merger Sub or a KLA Related Person.

Q: What happens if I sell my Orbotech shares before the meeting?

A: The record date for the meeting is earlier than the date of the meeting. If you own Orbotech shares on the record date and transfer your Orbotech shares after the record date but before the time of the meeting, you will retain your right to vote such Orbotech shares at the meeting, but the right to receive the Merger Consideration will pass to the person to whom you transferred your Orbotech shares. In order to receive the Merger Consideration, you must hold your Orbotech shares through the completion of the Merger.

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Q: How do I cast my vote if I am an Orbotech shareholder of record?

A: If you are an Orbotech shareholder of record, you may vote in person at the meeting or by submitting a proxy for the meeting. In order for a proxy to be counted, it must be a duly executed proxy and received prior to the meeting. This will be deemed to have occurred only if such proxy is received either by Orbotech at its principal executive offices at 7 Sanhedrin Boulevard, North Industrial Zone, Yavne, Israel, at any time prior to the commencement of the meeting, or by American Stock Transfer & Trust Company, LLC, Orbotech's transfer agent, in New York, New York, by no later than 11:59 p.m., New York City time, on July 11, 2018, the last business day immediately preceding the date of the meeting (and, in each case, not revoked prior to such time). Orbotech shares represented by any proxy received after the time specified above will not be counted as present at the meeting and will not be voted. For more detailed instructions on how to vote, see the sections entitled "The Orbotech Extraordinary General Meeting Vote Required at the Meeting" and "The Orbotech Extraordinary General Meeting Voting Procedures".

Joint holders of Orbotech shares should take note that, pursuant to Article 62 of the Articles of Association of Orbotech, the vote of the senior holder of joint holders of any Orbotech share who tenders a vote, whether in person or by proxy, will be accepted to the exclusion of the vote(s) of the other joint holder(s) of the Orbotech share, and for this purpose seniority will be determined by the order in which the names stand in Orbotech's share register.

If you are an Orbotech shareholder of record who properly executes and returns the form of proxy to Orbotech prior to the meeting (as specified above) without indicating how you intend to vote with respect to the Merger Proposal, the Orbotech shares represented by the proxy will be counted as being present for quorum purposes, but will not be treated as having been voted in respect of the Merger Proposal and will have no effect on the voting with respect to the Merger Proposal.

Q: How do I cast my vote if my Orbotech shares are held in street name by my broker?

A: If you are an Orbotech shareholder with Orbotech shares held in street name, which means your Orbotech shares are held in an account at a broker, bank or other nominee, you must follow the instructions from your broker, bank or other nominee in order to vote. Without following those instructions, your Orbotech shares will not be voted.

Q: What will happen if I abstain from voting on the Merger Proposal?

A: Abstentions and broker non-votes will be counted for purposes of determining whether there is a quorum for the meeting but will not be treated as having been voted in respect of the Merger Proposal. Consequently, assuming a quorum is present at the meeting, broker non-votes and abstentions will have no effect on the voting with respect to the Merger Proposal.

Q: Can I change my vote after I have delivered my proxy?

A: Yes. If you are an Orbotech shareholder of record, once you have given your proxy votes for the matters before our Orbotech shareholders as described in this proxy statement/prospectus, you may revoke such vote at any time prior to the time it is voted, (1) by filing with Orbotech an instrument revoking such proxy, (2) by completing, signing, dating and returning a new proxy bearing a later date by mail to Orbotech or (3) by attending the meeting and voting in person.

Merely attending the meeting will not, by itself, revoke a proxy. Please note that if you want to revoke your proxy by sending a new proxy or an instrument revoking such proxy to Orbotech, you should ensure that you send your new proxy or instrument revoking such proxy in sufficient time for it to be received by Orbotech prior to the meeting. Only your last-dated proxy will count. If you are an Orbotech shareholder of record, you may obtain a new legal proxy by contacting Okapi Partners LLC, Orbotech's proxy solicitor, at 1212 Avenue of the Americas, 24th Floor, New York, NY 10036 or by telephone at +1 (212) 297-0720.

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If you are an Orbotech shareholder with Orbotech shares held in street name, you should follow the instructions of your broker regarding the revocation of proxies. If your broker allows you to submit a proxy via the internet or by telephone, you may be able to change your vote by submitting a new proxy via the internet or by telephone or by mail. Please note that if your Orbotech shares are held in the name of a broker, you must obtain and bring to the meeting a proxy issued in your name from the broker to be able to vote at the meeting.

Q: If I hold my Orbotech shares in certificated form, should I send in my share certificates now?

A: No. You should not send in your share certificate(s) with your proxy. A letter of transmittal with instructions for the surrender of your certificates representing any Orbotech shares will be mailed to Orbotech shareholders if the Merger is completed.

Promptly after the Effective Time (as defined below in the answer to the question *When do you expect the Merger to be completed?*), each holder of record of a certificate representing any Orbotech share (each a *certificate*) or uncertificated Orbotech shares, in each case that have been converted into the right to receive the Merger Consideration (as defined in the section entitled *The Merger Effects of the Merger*), will be sent a letter of transmittal describing the procedure for surrendering such certificate or acknowledging the conversion of such uncertificated shares into the right to receive the Merger Consideration. Upon delivery to the exchange agent of the letter of transmittal and a declaration for tax withholding purposes or a valid tax certificate and, if applicable, surrender of the certificates for cancellation to the exchange agent, the holders of such certificates or uncertificated shares, as applicable, will be entitled to receive in exchange therefor the Merger Consideration. Payments and deliveries will be made to such addresses or bank accounts as set forth in the letter of transmittal. For more information, see the sections entitled *The Merger Procedures for Surrendering Orbotech Shares in the Merger* and *The Merger Agreement Exchange Agent; Letter of Transmittal* .

Q: Am I entitled to exercise dissenters' rights or appraisal rights instead of receiving the Merger Consideration for my Orbotech shares?

A: No. Under Israeli law, holders of Orbotech shares are not entitled to statutory appraisal rights in connection with the Merger.

Questions and Answers about the Merger

Q: What will happen in the Merger?

A: Under the terms of the Merger Agreement, Merger Sub will merge with and into Orbotech, with Orbotech continuing as the surviving company and as a wholly owned subsidiary of KLA-Tencor. After the Merger, Orbotech will no longer be a publicly held corporation.

Q: What is required to complete the Merger?

A: Each of KLA-Tencor's and Orbotech's obligation to consummate the Merger is subject, as relevant, to a number of conditions specified in the Merger Agreement, including the following:

approval of the Merger Agreement, the Merger and the other transactions contemplated thereby by Orbotech shareholders as described in this proxy statement/prospectus;

the termination or expiration of any applicable waiting period, or the exemption or approval of applicable government entities, under certain antitrust laws;

the absence of (i) any law, order, judgment, injunction or other ruling instituted by a governmental entity with competent jurisdiction, that is in effect and has the effect of making the Merger illegal or of prohibiting or otherwise preventing the consummation of the Merger in any jurisdiction or (ii) any

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legal proceeding seeking to enjoin, restrain or prohibit the Merger pursuant to any applicable antitrust laws or seeking to impose certain burdensome conditions on the consummation of the Merger;

approval for listing on the NASDAQ Global Select Market (NASDAQ) of the shares of KLA-Tencor common stock to be issued in the Merger, subject to official notice of issuance;

that this registration statement on Form S-4 has been declared by the SEC to be effective under the Securities Act and is not the subject of any stop order or proceedings seeking a stop order;

certain customary Israeli conditions relating to the compliance of KLA-Tencor and Orbotech with applicable Israeli laws;

subject to certain materiality standards contained in the Merger Agreement, the accuracy of representations and warranties of Orbotech and KLA-Tencor, respectively, and material performance by Orbotech and KLA-Tencor of their respective covenants contained in the Merger Agreement; and

the absence of a material adverse effect with respect to the other party.

The consummation of the Merger is not subject to a financing condition. For more information, see the section entitled

The Merger Agreement Conditions to Completion of the Merger as well as the copy of the Merger Agreement attached to this proxy statement/prospectus as Annex A and incorporated herein by reference.

Q: Is the consummation of the Merger conditioned on the approval of the Merger Agreement by KLA-Tencor's stockholders?

A: No. The consummation of the Merger is not conditioned on the approval of the Merger Agreement by KLA-Tencor's stockholders.

Q: When do you expect the Merger to be completed?

A: KLA-Tencor and Orbotech expect the closing of the Merger (the Closing) to occur in the fourth quarter of calendar year 2018 (such date that the Closing occurs, the Closing Date). However, the Merger is subject to various regulatory approvals and the satisfaction or waiver of other conditions, and it is possible that factors outside the control of KLA-Tencor and Orbotech could result in the Merger being completed at an earlier time, a later time or not at all. There may be a substantial amount of time between the date on which the meeting is held and the date of the completion of the Merger. The Merger will become effective following the satisfaction or waiver of the conditions to Closing upon the issuance by the Companies Registrar of the State of Israel (the Registrar) of a certificate of merger (the Effective Time).

Q: In the Merger, what will Orbotech shareholders receive for their shares?

A: If the Merger is consummated, each Orbotech share that is issued and outstanding immediately prior to the Closing, other than certain Excluded Shares (as defined in the section entitled "The Merger Agreement - Merger Consideration") will be converted into the right to receive (1) cash, without interest, in an amount equal to \$38.86 (the "Cash Consideration"), and (2) 0.25 of a share of KLA-Tencor common stock (the "Stock Consideration" and, together with the Cash Consideration, the "Merger Consideration"), in each case subject to the terms and conditions set forth in the Merger Agreement. Orbotech shareholders will not receive any fractional shares of KLA-Tencor common stock and will instead receive cash in lieu of any such fractional shares of KLA-Tencor common stock. For more information, see the section entitled "The Merger Agreement - Merger Consideration".

Q: What is the value of the Merger Consideration per share?

A: The exact value of the Merger Consideration will depend on the price per share at which KLA-Tencor common stock trades at the Effective Time. Such price will not be known at the time of the meeting and may be less than the current price of the KLA-Tencor common stock or its price at the time of the meeting. Based on the closing stock price of KLA-Tencor common stock on March 16, 2018, the last trading day

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before public announcement of the Merger, of \$120.62, and assuming that the price of KLA-Tencor common stock at the Effective Time of the Merger is the same as it was on March 16, 2018, the value of the Merger Consideration per share would be \$69.02 for each Orbotech share. The market prices of shares of KLA-Tencor common stock and Orbotech shares are subject to fluctuation, and the price of KLA-Tencor's common stock at the Effective Time may be higher or lower than it was on March 16, 2018, on the date of this proxy statement/prospectus or on the date of the meeting. We urge you to obtain current market quotations of KLA-Tencor common stock and Orbotech shares. For more information, see the sections entitled "Where You Can Find More Information" and "Summary Unaudited Comparative Per Share Market Value and Dividend Information".

Q: After the Merger, how much of KLA-Tencor will Orbotech shareholders own?

A: Based on the number of Orbotech shares issued and outstanding as of June 4, 2018, the number of shares of KLA-Tencor common stock issued and outstanding as of June 4, 2018, the number of vested Orbotech Equity Awards outstanding as of June 4, 2018, and assuming a KLA-Tencor Average Closing Price (as defined in the section entitled "The Merger Agreement Merger Consideration") of \$113.77 (calculated based on the ten trading days ended June 4, 2018, the most recent practicable range of trading days prior to the date of this proxy statement/prospectus), it is expected that, immediately after completion of the Merger, former Orbotech shareholders will receive shares of KLA-Tencor common stock in the Merger representing approximately 7.3% of the outstanding shares of KLA-Tencor common stock immediately following the Effective Time, assuming the Effective Time is on June 5, 2018.

Q: Will Orbotech shareholders be able to trade the shares of KLA-Tencor common stock that they receive in the transaction?

A: Yes. Shares of KLA-Tencor common stock are listed on NASDAQ under the symbol "KLAC". Shares of KLA-Tencor common stock received in exchange for Orbotech shares in the Merger will be freely transferable under U.S. federal securities laws.

Q: What will happen to my outstanding Orbotech equity compensation awards in the Merger?

A: For information regarding the treatment of Orbotech's Equity Awards, see the section entitled "The Merger Agreement Treatment of Orbotech Equity Awards".

Q: How will I receive the Merger Consideration to which I am entitled?

A: After receiving the proper documentation from holders of Orbotech shares, subject to the terms and conditions set forth in the Merger Agreement, the exchange agent in the transaction will transfer to such holders the cash and the shares of KLA-Tencor common stock to which such holders are entitled. Orbotech shareholders will not receive any fractional shares of KLA-Tencor common stock and will instead receive cash in lieu of any such fractional shares.

Holders of Orbotech Equity Awards granted under Section 102 of the Israeli Income Tax Ordinance [New Version], 1961 (the ITO and, such Orbotech Equity Awards, the 102 Compensatory Awards), that are not being assumed by KLA-Tencor will receive the Merger Consideration to which such holders are entitled through the 102 Trustee (as described in the section entitled The Merger Agreement Merger Consideration), in accordance with the terms and conditions of Section 102 of the ITO and the Tax Rulings (as defined below in the answer to the question What are the Israeli tax consequences of the exchange of Orbotech shares for the Merger Consideration?).

Holders of Orbotech Equity Awards (other than 102 Compensatory Awards) that are not being assumed by KLA-Tencor will receive the Merger Consideration to which such holders are entitled from Orbotech or, if applicable, a relevant engaging subsidiary, through its payroll system, subject to applicable withholdings.

More information on the documentation required to be delivered to the exchange agent may be found under the section entitled Material Israeli Tax Consequences .

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Q: Do I need to do anything with my certificates representing Orbotech shares now?

A: No. After the Merger is consummated, if you held certificates representing Orbotech shares prior to the Merger, the exchange agent will send you instructions for exchanging your Orbotech shares for the Merger Consideration.

Q: What happens if the Merger is not completed?

A: If the Merger Proposal is not approved by Orbotech shareholders or if the Merger is not completed for any other reason, Orbotech shareholders will not receive the Merger Consideration in exchange for their Orbotech shares. Instead, Orbotech will remain a stand-alone public company and Orbotech shares will continue to be listed and traded. Under specified circumstances, Orbotech may be required to pay KLA-Tencor a termination fee, as described in the section entitled [The Merger Agreement Termination Fees](#) . See also the section entitled [Where You Can Find More Information](#) .

Q: Are Orbotech shareholders entitled to appraisal or dissenters' rights?

A: No. Under Israeli law, Orbotech shareholders are not entitled to statutory appraisal or dissenters' rights in connection with the Merger.

Q: What are the U.S. federal income tax consequences of the exchange of Orbotech shares for the Merger Consideration?

A: If you are a U.S. Holder (as defined in the section entitled [Material U.S. Federal Income Tax Consequences of the Merger](#)), the exchange of your Orbotech shares for cash and shares of KLA-Tencor common stock in the Merger will be a taxable transaction for U.S. federal income tax purposes, which generally will require you to recognize gain or loss for U.S. federal income tax purposes in an amount equal to the difference, if any, between the sum of the amount of cash and the fair market value of the shares of KLA-Tencor common stock you receive in the Merger and your tax basis in the Orbotech shares exchanged in the Merger.

Because particular circumstances may differ, we recommend that you consult your own tax advisor to determine the U.S. federal income tax consequences to you relating to the Merger in light of your own particular circumstances and the consequences to you arising under U.S. federal non-income tax laws or the laws of any state, local or non-U.S. taxing jurisdiction. A more complete description of material U.S. federal income tax consequences of the Merger is provided in the section entitled [Material U.S. Federal Income Tax Consequences of the Merger](#) .

Q: What are the Israeli tax consequences of the exchange of Orbotech shares for the Merger Consideration?

A: The following statements are only a summary of certain material Israeli tax consequences of the Merger.

As a consequence of the Merger, holders of Orbotech shares will be treated as having sold their Orbotech shares in the Merger. When an Israeli company is sold, regardless of whether the consideration in the sale is cash or stock, its shareholders are generally subject to Israeli taxation.

The ITO distinguishes between Real Capital Gain and Inflationary Surplus. The Inflationary Surplus is the portion of the total capital gain which is equivalent to the increase of the relevant asset's purchase price which is attributable to the increase in the Israeli CPI or, in certain circumstances, a foreign currency exchange rate, between the date of purchase and the date of sale. The Real Capital Gain is the excess of the total capital gain over the Inflationary Surplus.

The capital gains tax rate applicable to the Real Capital Gain is 25% for individuals (and if such individual is holding or is entitled to purchase, directly or indirectly, alone or together with such person's relative or

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another person who collaborates with such person on a permanent basis, one of the following: (i) at least 10% of the issued and outstanding Orbotech shares, (ii) at least 10% of the voting rights of Orbotech, (iii) the right to receive at least 10% of Orbotech's profits or its assets upon liquidation, (iv) the right to appoint a manager/director, or (v) the right to instruct any other person to do any of the foregoing (a Major Stockholder) on the date of sale or on any date falling within the 12-month period preceding that date of sale, such Major Stockholder would be subject to Israeli taxation at the rate of 30% and 23% for corporations. An additional tax at a rate of three percent on the Real Capital Gain may be imposed upon individual shareholders whose annual income from all sources that is taxable in Israel exceeds a certain amount. The Inflationary Surplus is generally exempt from tax, provided that the shares being sold were acquired after December 31, 1993.

Shareholders of a company, such as Orbotech, whose shares are traded on an authorized stock exchange outside Israel, or on a regulated market outside of Israel, who are non-Israeli residents, would generally be exempt from Israeli capital gains tax, provided that certain conditions are met (e.g., including that the capital gain is not made through a permanent establishment that the non-Israeli resident shareholder maintains in Israel). In addition, such sale may be exempt from Israeli capital gain tax (or be subject to a reduced tax rate) under the provisions of an applicable tax treaty between Israel and the seller's country of residence (subject to the receipt of a valid certificate from the Israel Tax Authority allowing for an exemption or a reduced tax rate).

Orbotech has filed requests for tax rulings from the Israel Tax Authority with respect to (i) exemption from withholding of Israeli tax on payments of Merger Consideration paid to Orbotech shareholders who are non-Israeli residents and meet certain conditions, (ii) deferral of the obligation of Israeli tax resident holders of Orbotech shares, to pay Israeli tax on the exchange of the Orbotech shares for KLA-Tencor common stock in accordance with the provisions of Section 104H of the ITO and (iii) the application of Israeli tax withholding and other Israeli tax treatment applicable to holders of Orbotech options, RSUs and shares issued to certain directors and employees under Section 102 of the ITO and to certain directors and others under Section 3(i) of the ITO (collectively, the Tax Rulings). If and when the tax rulings are finalized, Orbotech will issue a press release and furnish a Form 6-K or other document with the SEC describing the scope of the exemptions provided by the rulings. There can be no assurance that such rulings will be granted before the Closing or at all or that, if obtained, such rulings will be granted under the conditions requested by Orbotech.

Whether or not a particular Orbotech shareholder is actually subject to Israeli capital gains tax in connection with the Merger, absent receipt by Orbotech of a tax ruling from the Israel Tax Authority prior to Closing, all Orbotech shareholders will be subject to Israeli tax withholding at the rate of 25% (for individuals) and 23% (for corporations) on the gross Merger Consideration (unless the shareholder requests and obtains an individual certificate of exemption or a reduced tax rate from the Israel Tax Authority, as described below), and KLA-Tencor or the exchange agent will withhold and deduct from the Cash Consideration an amount equal to 25%, 23% or such other reduced tax rate as stipulated in the certificate obtained, as applicable, of the gross Merger Consideration received by such shareholder and, if the Cash Consideration is lower than the required amount to be withheld, no KLA-Tencor common stock will be issued to such shareholder of Orbotech, until such shareholder remits sufficient cash to cover the required amount to be withheld.

Regardless of whether Orbotech obtains the requested tax rulings from the Israel Tax Authority, any holder of Orbotech shares who believes that it is entitled to such an exemption (or reduced tax rate) may separately apply to the Israel Tax Authority to obtain a certificate of exemption from withholding or an individual tax ruling providing for no withholding or withholding at a reduced rate, and submit such certificate of exemption or ruling to the exchange agent at least five business days prior to the date that is 180 days following the Closing Date. If KLA-Tencor or the exchange agent receive a valid exemption certificate or tax ruling (as determined in KLA-Tencor's or the exchange agent's discretion) at least five business days prior to the date that is 180 days following the Closing Date, then the

withholding (if any) of any amounts under the ITO, from the Merger Consideration payable shall be made only in accordance with the provisions of such Israeli tax certificate or tax ruling.

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You are urged to consult with your own tax advisor for a full understanding of the tax consequences of the Merger to you, including the consequences under any applicable, state, local, foreign or other tax laws.

For a more detailed description of the material Israeli tax consequences of the Merger, see the section entitled **Material Israeli Tax Consequences** .

Q: Who can help answer my questions?

A: If you have questions about the Merger or the other matters to be voted on at the meeting or desire additional copies of this proxy statement/prospectus or additional proxy cards, you should contact Okapi Partners LLC, the proxy solicitor for Orbotech, toll free at +1 (855) 305-0857 or collect at +1 (212) 297-0720. You will not be charged for any of those documents that you request.

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SUMMARY

*This summary highlights selected information contained elsewhere in this proxy statement/prospectus and may not contain all the information that is important to you with respect to the Merger Proposal to be considered at the meeting. KLA-Tencor and Orbotech urge you to read the remainder of this proxy statement/prospectus carefully, including the attached Annexes, and the other documents to which we have referred you. See also the section entitled *Where You Can Find More Information*. We have included references in this summary to direct you to more complete descriptions of the topics presented below.*

The Companies

KLA-Tencor Corporation

KLA-Tencor is a leading supplier of process control and yield management solutions for the semiconductor and related nanoelectronics industries. KLA-Tencor's broad portfolio of defect inspection and metrology products, and related service, software and other offerings primarily supports integrated circuit, which is referred to as an IC or chip, manufacturers throughout the entire semiconductor fabrication process, from research and development to final volume production. KLA-Tencor provides leading-edge equipment, software and support that enable IC manufacturers to identify, resolve and manage significant advanced technology manufacturing process challenges and obtain higher finished product yields at lower overall cost. In addition to serving the semiconductor industry, KLA-Tencor also provides a range of technology solutions to a number of other high technology industries, including the LED and data storage industries, as well as general materials research.

KLA-Tencor's common stock is traded on NASDAQ under the symbol KLAC.

The principal executive offices of KLA-Tencor are located at One Technology Drive, Milpitas, California, 95035, and its telephone number is (408) 875-3000.

Orbotech Ltd.

Orbotech is a global innovator and supplier of enabling solutions used to manufacture the world's most sophisticated consumer and industrial electronic products and is part of a select group of companies whose technology is literally driving the future of electronics. Orbotech's core business lies in enabling electronic device manufacturers to inspect, test and measure printed circuit boards (PCBs) and flat panel displays (FPDs) to verify their quality (reading); pattern the desired electronic circuitry on the relevant substrate and perform three-dimensional shaping of metalized circuits on multiple surfaces (writing); and utilize advanced vacuum deposition and etching processes in semiconductor device (SD) and semiconductor manufacturing and to perform laser drilling of electronic substrates (connecting). Orbotech refers to this reading, writing and connecting as enabling the Language of Electronics.

Orbotech ordinary shares, New Israeli Shekels (NIS) 0.14 nominal (par) value per share (the Orbotech shares), are traded on NASDAQ under the symbol ORBK.

The principal executive offices of Orbotech are located at 7 Sanhedrin Boulevard, North Industrial Zone, Yavne 8110101 Israel, and its telephone number is +972-8-9423533.

Tiburón Merger Sub Technologies Ltd.

Merger Sub, a wholly-owned subsidiary of KLA-Tencor, is a company organized under the laws of the State of Israel that was formed on March 15, 2018 for the sole purpose of effecting the Merger. In the Merger, Merger

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Sub will be merged with and into Orbotech, with Orbotech surviving as a wholly owned subsidiary of KLA-Tencor.

The Merger

A copy of the Merger Agreement is attached as Annex A to this proxy statement/prospectus and is incorporated by reference herein. KLA-Tencor and Orbotech encourage you to read the entire Merger Agreement carefully, because it is the principal document governing the Merger. For more information on the Merger Agreement, see the section entitled "The Merger Agreement."

Structure of the Merger

The Merger Agreement provides for the Merger, in which Merger Sub will be merged with and into Orbotech, with Orbotech surviving the Merger as a wholly owned subsidiary of KLA-Tencor.

After the completion of the Merger, Orbotech's memorandum of association ("Orbotech's Memorandum") and Orbotech's articles of association ("Orbotech's Articles") and, together with Orbotech's Memorandum, "Orbotech's Charter Documents") in effect immediately prior to completion of the Merger will be the memorandum of association and articles of association, respectively, of Orbotech as the surviving company of the Merger, the directors of Merger Sub immediately prior to the completion of the Merger will be the directors of Orbotech as the surviving company of the Merger and the officers of Orbotech immediately prior to the completion of the Merger will be the officers of Orbotech as the surviving company of the Merger.

Merger Consideration

Each of the KLA-Tencor Board and the Orbotech Board has approved the Merger Agreement, which provides for the merger of Merger Sub with and into Orbotech. Upon the closing of the Merger (the "Closing"), Orbotech will be the surviving company and will become a wholly owned subsidiary of KLA-Tencor. Each Orbotech share that is issued and outstanding immediately prior to the Closing, other than any Excluded Shares (as defined in the section entitled "The Merger Agreement - Merger Consideration"), will be converted into the right to receive (1) cash, without interest, in an amount equal to \$38.86, and (2) 0.25 of a share of KLA-Tencor common stock, in each case subject to the terms and conditions set forth in the Merger Agreement.

In lieu of any fractional share of KLA-Tencor common stock that otherwise would be issuable pursuant to the Merger, each holder of Orbotech shares who otherwise would be entitled to receive a fraction of a share of KLA-Tencor common stock pursuant to the Merger will be paid an amount in cash (without interest) equal to (i) the fraction of a share of KLA-Tencor common stock to which such holder would otherwise be entitled multiplied by (ii) the KLA-Tencor Average Closing Price (as defined in the section entitled "The Merger Agreement - Merger Consideration").

Material U.S. Federal Income Tax Consequences of the Merger

For U.S. federal income tax purposes, the receipt of cash and KLA-Tencor common stock by a U.S. Holder (as defined under the section entitled "Material U.S. Federal Income Tax Consequences of the Merger") in exchange for such U.S. Holder's Orbotech shares in the Merger generally will result in the recognition of gain or loss in an amount equal to the difference, if any, between (1) the amount of cash and the fair market value, at the time of the Merger, of the KLA-Tencor common stock received in the Merger and (2) the U.S. Holder's adjusted tax basis in the Orbotech shares surrendered pursuant to the Merger.

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For more information, see the section entitled **Material U.S. Federal Income Tax Consequences of the Merger**. **Orbotech shareholders should consult their own tax advisors concerning the U.S. federal income tax consequences relating to the Merger in light of their particular circumstances and any consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.**

Material Israeli Tax Consequences of the Merger

The following statements are only a summary of certain material Israeli tax consequences of the Merger.

As a consequence of the Merger, holders of Orbotech shares will be treated as having sold their Orbotech shares in the Merger. When an Israeli company is sold, regardless of whether the consideration in the sale is cash or stock, its shareholders are generally subject to Israeli taxation.

The Israeli Income Tax Ordinance [New Version], 1961 (the **ITO**) distinguishes between **Real Capital Gain** and **Inflationary Surplus**. The **Inflationary Surplus** is the portion of the total capital gain which is equivalent to the increase of the relevant asset's purchase price which is attributable to the increase in the Israeli CPI or, in certain circumstances, a foreign currency exchange rate, between the date of purchase and the date of sale. The **Real Capital Gain** is the excess of the total capital gain over the **Inflationary Surplus**.

The capital gains tax rate applicable to the **Real Capital Gain** is 25% for individuals (and if such individual is a Major Stockholder on the date of sale or on any date falling within the 12-month period preceding that date of sale, such Major Stockholder would be subject to Israeli taxation at the rate of 30%) and 23% for corporations. An additional tax at a rate of three percent on the **Real Capital Gain** may be imposed upon individual shareholders whose annual income from all sources that is taxable in Israel exceeds a certain amount. The **Inflationary Surplus** is generally exempt from tax, provided that the shares being sold were acquired after December 31, 1993.

Shareholders of a company, such as Orbotech, whose shares are traded on an authorized stock exchange outside Israel, or on a regulated market outside of Israel, who are non-Israeli residents, would generally be exempt from Israeli capital gains tax, provided that certain conditions are met (e.g., including that the capital gain is not made through a permanent establishment that the non-Israeli resident shareholder maintains in Israel). In addition, such sale may be exempt from Israeli capital gain tax (or be subject to a reduced tax rate) under the provisions of an applicable tax treaty between Israel and the seller's country of residence (subject to the receipt of a valid certificate from the Israel Tax Authority allowing for an exemption or a reduced tax rate).

Orbotech has filed requests for tax rulings from the Israel Tax Authority with respect to (i) exemption from withholding of Israeli tax on payments of Merger Consideration paid to Orbotech shareholders who are non-Israeli residents and meet certain conditions, (ii) deferral of the obligation of Israeli tax resident holders of Orbotech shares, to pay Israeli tax on the exchange of the Orbotech shares for KLA-Tencor common stock in accordance with the provisions of Section 104H of the ITO and (iii) the application of Israeli tax withholding and other Israeli tax treatment applicable to holders of Orbotech Options, RSUs and shares issued to certain directors and employees under Section 102 of the ITO and to certain directors and others under Section 3(i) of the ITO. If and when the tax rulings are finalized, Orbotech will issue a press release and furnish a Form 6-K or other document with the SEC describing the scope of the exemptions provided by the rulings. There can be no assurance that such rulings will be granted before the Closing or at all or that, if obtained, such rulings will be granted under the conditions requested by Orbotech.

Whether or not a particular shareholder is actually subject to Israeli capital gains tax in connection with the Merger, absent receipt by Orbotech of a tax ruling from the Israel Tax Authority prior to Closing, all Orbotech shareholders

will be subject to Israeli tax withholding at the rate of 25% (for individuals) and 23% (for corporations) on the gross Merger Consideration (unless the shareholder requests and obtains an individual

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certificate of exemption or a reduced tax rate from the Israel Tax Authority, as described below), and KLA-Tencor or the exchange agent will withhold and deduct from the Cash Consideration an amount equal to 25%, 23% or such other reduced tax rate as stipulated in the certificate obtained, as applicable, of the gross Merger Consideration received by such shareholder and, if the Cash Consideration is lower than the required amount to be withheld, no KLA-Tencor common stock will be issued to such shareholder of Orbotech, until such shareholder remits sufficient cash to cover the required amount to be withheld.

Regardless of whether Orbotech obtains the requested tax rulings from the Israel Tax Authority, any holder of Orbotech shares who believes that it is entitled to such an exemption (or reduced tax rate) may separately apply to the Israel Tax Authority to obtain a certificate of exemption from withholding or an individual tax ruling providing for no withholding or withholding at a reduced rate, and submit such certificate of exemption or ruling to the exchange agent at least five business days prior to the date that is 180 days following the Closing Date. If KLA-Tencor or the exchange agent receive a valid exemption certificate or tax ruling (as determined in KLA-Tencor's or the exchange agent's discretion) at least five business days prior to the date that is 180 days following the Closing Date, then the withholding (if any) of any amounts under the ITO, from the Merger Consideration payable shall be made only in accordance with the provisions of such Israeli tax certificate or tax ruling.

You are urged to consult with your own tax advisor for a full understanding of the tax consequences of the Merger to you, including the consequences under any applicable, state, local, foreign or other tax laws.

For a more detailed description of the material Israeli tax consequences of the Merger, see the section entitled Material Israeli Tax Consequences .

Recommendation of the Orbotech Board

The Board of Directors of Orbotech (the Orbotech Board) unanimously recommends a vote FOR the Merger Proposal. For a discussion of the factors that the Orbotech Board considered in determining to recommend the approval and adoption of the Merger Agreement, the Merger and all other transactions contemplated by the Merger Agreement, see the section entitled The Merger Orbotech's Reasons for the Merger; Recommendation of the Orbotech Board . In addition, in considering the recommendation of the Board with respect to the Merger Agreement, the Merger, and the other transactions contemplated by the Merger Agreement, you should be aware that Orbotech's directors and executive officers have interests that may be different from, or in addition to, the interests of the Orbotech shareholders generally. For more information, see the section entitled The Merger Interests of Orbotech Directors and Executive Officers in the Merger .

Opinion of Orbotech's Financial Advisor

Orbotech engaged Barclays Capital Inc., which we refer to as Barclays , to act as its financial advisor in connection with the Merger and the other transactions contemplated by the Merger Agreement (the proposed transaction). On March 18, 2018, Barclays rendered its oral opinion (which was subsequently confirmed in writing) to the Orbotech Board that, as of such date and based upon and subject to the qualifications, limitations and assumptions stated in its opinion, the consideration to be offered to the holders of Orbotech shares, other than the holders of any Excluded Shares, in the proposed transaction was fair, from a financial point of view, to such holders.

The full text of Barclays' written opinion, dated as of March 18, 2018, is attached as Annex B to this proxy statement/prospectus. Barclays' written opinion sets forth, among other things, the assumptions made, procedures followed, factors considered and limitations upon the review undertaken by Barclays in

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rendering its opinion. You are encouraged to read the opinion carefully in its entirety. This summary is qualified in its entirety by reference to the full text of the opinion. Barclays' opinion is addressed to the Orbotech Board and addresses only the fairness, from a financial point of view, of the consideration to be offered to the holders of Orbotech shares (other than the holders of the Excluded Shares) in the proposed transaction and does not constitute a recommendation to any holder of Orbotech shares as to how such holder should vote with respect to the proposed transaction or any other matter. For a description of the opinion that Orbotech received from Barclays, see the section entitled "The Merger Opinion of Orbotech's Financial Advisor."

Interests of Orbotech Directors and Executive Officers in the Merger

The directors and executive officers of Orbotech have interests in the Merger that may be different from, or in addition to, those of the Orbotech shareholders generally. The Orbotech Board was aware of and considered these anticipated interests, among other things, in evaluating the Merger Agreement, the Merger and the other transactions contemplated by the Merger Agreement, and in recommending that Orbotech shareholders approve the Merger Proposal. These interests include the treatment of equity awards granted under Orbotech's equity-based incentive plans (which we refer to as "Orbotech Equity Awards") in connection with the Merger (including potential accelerated vesting and payout or settlement of Orbotech Equity Awards held by directors and executive officers in connection with the Closing of the Merger or upon certain qualifying terminations of employment, as applicable), potential cash severance payments and other benefits payable to certain executive officers and the Active Chairman of the Orbotech Board pursuant to their employment agreements and as otherwise agreed by KLA-Tencor in the event of a resignation or termination of employment following the approval of the Merger by Orbotech's shareholders, extension of eligibility of executive officers to continue to receive severance benefits triggered by the approval of the Merger by Orbotech's shareholders so long as such executive officer is employed by Orbotech, cash-based and equity-based retention awards that may be granted to the employees and executive officers of Orbotech in connection with the Merger, proposed new post-Closing compensation arrangements for the Active Chairman of the Orbotech Board, the Chief Executive Officer of Orbotech and the President and Chief Operating Officer of Orbotech, certain other retention arrangements for the Chief Executive Officer of Orbotech and the President and Chief Operating Officer of Orbotech, KLA-Tencor's undertakings with respect to continuing director and officer indemnity arrangements and the purchase of a seven year tail policy on directors' and officers' insurance.

In general, references in this proxy statement/prospectus to executive officers refers to "Office Holders" as defined under applicable Israeli law, other than directors.

Treatment of Orbotech Equity Awards

In accordance with the terms of the Merger Agreement, Orbotech Equity Awards will be treated in the following manner upon the completion of the Merger.

Orbotech Restricted Share Units. Outstanding and unvested Orbotech restricted share units will be assumed by KLA-Tencor and subject to substantially the same terms and conditions as were applicable to such restricted share units at the Effective Time (as defined below in the section entitled "Expected Timing of the Merger") (except for any performance-based vesting conditions). We refer to such assumed restricted share units as "Assumed Orbotech RSUs". The number of shares of KLA-Tencor common stock that will be subject to each Assumed Orbotech RSU will be determined by multiplying the number of Orbotech shares subject to such Assumed Orbotech RSU as of immediately prior to the Effective Time (assuming, in the case of an Assumed Orbotech RSU that is subject to performance-based vesting conditions, that any applicable

performance goals have been attained at maximum levels) by the Exchange Ratio (as defined in the section entitled "The Merger Agreement - Treatment of Orbotech Equity Awards"), rounded to the nearest whole number of shares. At the

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Effective Time, outstanding Orbotech restricted share units that are not Assumed Orbotech RSUs, will be cancelled and converted into the right to receive the Merger Consideration for each Orbotech share subject to such award, plus any accrued but unpaid dividends in respect of such award. We refer to such cancelled Orbotech restricted share unit awards as *Cancelled Orbotech RSUs* .

Orbotech Restricted Share Awards. Outstanding and unvested awards of Orbotech restricted shares will be assumed by KLA-Tencor and subject to substantially the same terms and conditions as were applicable to such awards at the Effective Time. We refer to such assumed restricted share awards as *Assumed Orbotech RSAs* . The number of shares of KLA-Tencor common stock that are subject to each Assumed Orbotech RSA will be determined by multiplying the number of Orbotech shares subject to such Assumed Orbotech RSA as of immediately prior to the Effective Time by the Exchange Ratio, rounded to the nearest whole number of shares. Outstanding Orbotech restricted share awards that are not Assumed Orbotech RSAs will be cancelled and converted into the right to receive the Merger Consideration for each Orbotech share subject to such award, plus any accrued but unpaid dividends in respect of such award. We refer to such cancelled Orbotech restricted share awards as *Cancelled Orbotech RSAs* .

Orbotech Options. Outstanding and unvested options to purchase Orbotech shares will be assumed by KLA-Tencor and subject to substantially the same terms and conditions as were applicable to such options immediately prior to the Effective Time (except for any performance-based vesting conditions). We refer to such assumed option awards as *Assumed Orbotech Options* . The number of shares of KLA-Tencor common stock that are subject to each Assumed Orbotech Option will be determined by multiplying the number of Orbotech shares subject to such Assumed Orbotech Option as of immediately prior to the Effective Time (assuming, in the case of an Assumed Orbotech Option that is subject to performance-based vesting conditions, that any applicable performance goals have been attained at maximum levels) by the Exchange Ratio, rounded down to the nearest whole number of shares. The per share exercise price of each Assumed Orbotech Option will be determined by dividing the applicable exercise price of such Assumed Orbotech Option by the Exchange Ratio, rounded up to the nearest whole cent. Outstanding vested options to purchase Orbotech shares, including any options that vest as a result of the consummation of the Merger, will be cancelled and converted into the right to receive the Merger Consideration for each net share (as defined in the section entitled *The Merger Agreement Treatment of Orbotech Equity Awards*) subject to such award. We refer to such cancelled Orbotech options as *Cancelled Orbotech Options* .

In addition, certain Assumed Orbotech Options, Assumed Orbotech RSUs and Assumed Orbotech RSAs may be subject to potential accelerated vesting and payout or settlement upon certain terminations of employment following the Merger. For more information, see the section entitled *The Merger Interests of Orbotech Directors and Executive Officers in the Merger Treatment of Orbotech Equity Awards Potential Accelerated Vesting and/or Payout of Assumed Orbotech Equity Awards Upon Certain Terminations of Employment* .

For a more detailed description of the treatment of Orbotech Equity Awards, see the section entitled *The Merger Agreement Treatment of Orbotech Equity Awards* .

Competition Clearances Required for the Merger

KLA-Tencor and Orbotech are required to submit notifications to various competition authorities prior to completing the Merger. With respect to the United States, the 30-day waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (the *HSR Act*), related to the Merger has expired. In addition, the Israel Antitrust Authority has granted KLA-Tencor's request for an exemption from any premerger notification requirement

in Israel related to the Merger and the German Federal Cartel Office, the Austrian Federal Competition Authority and the Taiwanese Fair Trade Commission have respectively cleared or waived

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jurisdiction over the Merger. The Closing remains subject to the exemption or approval of applicable government entities under the antitrust laws of China, Korea and Japan.

Although KLA-Tencor and Orbotech expect to obtain all required regulatory clearances, KLA-Tencor and Orbotech cannot assure you that the antitrust regulators or other government agencies, including state attorneys general or private parties, will not initiate actions to challenge the Merger before or after it is completed. Any such challenge to the Merger could result in an administrative or court order enjoining the Merger or in restrictions or conditions that would have a material adverse effect on the combined company if the Merger is completed. Such restrictions and conditions could include requiring the divestiture or spin-off of assets or businesses, the required licensing of intellectual property rights, or limitations on the ability of the combined company to operate its business as it sees fit. Neither KLA-Tencor nor Orbotech can provide assurance that any such conditions, terms, obligations or restrictions will not result in the delay or abandonment of the Merger.

Expected Timing of the Merger

KLA-Tencor and Orbotech expect the Closing to occur in the fourth quarter of calendar year 2018 (such date that the Closing occurs, the Closing Date). However, the Merger is subject to various regulatory approvals and the satisfaction or waiver of other conditions, and it is possible that factors outside the control of KLA-Tencor and Orbotech could result in the Merger being completed at an earlier time, a later time or not at all. There may be a substantial amount of time between the date on which the meeting is held and the date of the completion of the Merger. The Merger will become effective following the satisfaction or waiver of the conditions to Closing upon the issuance by the Companies Registrar of the State of Israel (the Registrar) of a certificate of merger (the Effective Time).

Conditions to Completion of the Merger

Under the Merger Agreement, each party's obligation to effect the Merger is subject to satisfaction or, to the extent permitted where permissible under applicable law, mutual waiver at the Effective Time of each of the following conditions:

The approval of Orbotech's shareholders shall have been obtained.

All (i) applicable waiting periods (and extensions thereof) applicable to the transactions contemplated by the Merger Agreement (including the Merger) under the HSR Act shall have expired or been terminated and (ii) any affirmative exemption or approval of a governmental entity required under any antitrust law set forth on the Orbotech disclosure letter provided to KLA-Tencor on March 18, 2018 in connection with and pursuant to the Merger Agreement (the Orbotech Disclosure Letter) shall have been obtained and any mandatory waiting periods related thereto (including any extension thereof) shall have expired (collectively, the Regulatory Approvals).

No governmental entity of competent jurisdiction shall have (i) enacted, issued, promulgated, entered, enforced or deemed applicable to the Merger any applicable law that is in effect and has the effect of making the Merger illegal in any jurisdiction or which has the effect of prohibiting or otherwise preventing the consummation of the Merger in any jurisdiction; or (ii) issued or granted any order (whether temporary, preliminary or permanent) that has the effect of making the Merger illegal in any jurisdiction or which has

the effect of prohibiting or otherwise preventing the consummation of the Merger in any jurisdiction.

The shares of KLA-Tencor common stock issuable as Stock Consideration pursuant to the Merger Agreement shall have been approved for listing on NASDAQ, subject to official notice of issuance.

50 days shall have elapsed after the filing of the Merger Proposal with the Registrar and 30 days shall have elapsed after the approval of the Merger by Orbotech shareholders and the sole shareholder of Merger Sub.

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This Form S-4 shall have become effective under the Securities Act and shall not be the subject of any stop order or proceedings seeking a stop order.

KLA-Tencor shall have obtained the ISA Offering No-Action (as defined in the Merger Agreement) or shall have published the Israeli Prospectus (as defined in the Merger Agreement), as applicable, in accordance with the Israeli Securities Law, 1968.

Orbotech shall have submitted the written notice to the Israeli National Authority for Technological Innovation (the OCS) regarding the change in ownership of Orbotech effected as a result of the Merger and KLA-Tencor shall have submitted its written undertaking to be bound by and to comply with the provisions of the Israeli Encouragement of Research, Development and Technological Innovation in the Industry Law 1984 (the Innovation Law) that KLA-Tencor is required to execute and deliver to the OCS in connection with the Merger (collectively, the OCS Notices).

Orbotech shall have obtained approval from the Israeli Investment Center of the Israeli Ministry of Economy (the Investment Center) of the change in ownership of Orbotech to be effected by the Merger (the Investment Center Condition).

As of the date of this proxy statement/prospectus, (1) the 30-day waiting period under the HSR Act related to the Merger has expired; (2) the Israel Antitrust Authority has granted KLA-Tencor's request for an exemption from any premerger notification requirement in Israel related to the Merger and the German Federal Cartel Office, the Austrian Federal Competition Authority and the Taiwanese Fair Trade Commission have respectively cleared or waived jurisdiction over the Merger; (3) KLA-Tencor has obtained the ISA Offering No-Action; (4) the OCS has confirmed that Orbotech and KLA-Tencor have respectively submitted the required OCS Notices; and (5) the Investment Center has confirmed that its approval is not required with respect to the change in ownership of Orbotech to be effected by the Merger, and KLA-Tencor and Orbotech have acknowledged that this confirmation satisfies the Investment Center Condition, unless such confirmation is revoked, withdrawn or amended by the Investment Center prior to Closing.

KLA-Tencor's and Merger Sub's obligation to effect the Merger is further subject to the satisfaction by Orbotech or waiver by KLA-Tencor and Merger Sub of the following conditions:

Accuracy of representations and warranties of Orbotech:

Each of the representations and warranties of Orbotech set forth in the Merger Agreement (other than certain provisions of the representations and warranties of Orbotech related to capitalization and the representations set forth in the immediately following bullet point) shall have been true and correct in all respects as of the date of the Merger Agreement and shall be true and correct in all respects on and as of the Closing Date with the same force and effect as if made on and as of such date, except for any failure to be so true and correct that has not had and would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect (as defined in the section entitled Merger Agreement Material Adverse Effect) on Orbotech.

Each of the representations and warranties of Orbotech set forth in the Merger Agreement relating to Organization and Standing, Subsidiaries, Authorization, Capitalization (only in subsection (c) thereof), Brokers; Fees and Expenses, Opinion of Financial Advisor and Takeover Statutes; No Rights Plan shall have been true and correct in all material respects as of the date of the Merger Agreement and shall be true and correct in all material respects on and as of the Closing Date with the same force and effect as if made on and as of such date;

Each of the representations and warranties of Orbotech set forth in the Merger Agreement relating to Capitalization (other than subsections (b) and (c) thereof) shall have been true and correct in all respects as of the date of the merger Agreement and shall be true and correct in all respects as of the Closing Date with the same force and effect as if made on and as of such date, except for any failure to be so true and correct in any immaterial amount or as a result of any action following the

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date hereof and not prohibited, permitted or otherwise consented to by KLA-Tencor pursuant to the Merger Agreement;

In the case of each of the foregoing bullets, (1) except for those representations and warranties which address matters only as of a particular date (the accuracy of which shall be determined as of such particular date) and (2) without giving effect to any Material Adverse Effect or similar materiality qualifications in the relevant representations and warranties.

Orbotech shall have complied with or performed in all material respects each of its covenants or obligations under the Merger Agreement required to be complied with or performed at or prior to the Closing Date.

No Material Adverse Effect on Orbotech shall have occurred following the execution and delivery of the Merger Agreement.

KLA-Tencor shall have received a certificate signed on behalf of Orbotech by its chief executive officer and its chief financial officer to the effect that the conditions related to Orbotech's representations, warranties and covenants described above have been satisfied.

There shall not be pending any Legal Proceeding by a Governmental Entity (i) seeking to enjoin, restrain or prohibit the consummation of the Merger pursuant to any applicable Antitrust Laws (as defined in the Merger Agreement), or (ii) seeking to impose any Antitrust Restraint (as defined in the section entitled "The Merger Agreement Reasonable Best Efforts").

Orbotech's obligation to effect the Merger is further subject to the satisfaction by KLA-Tencor and Merger Sub or waiver by Orbotech of the following conditions:

Accuracy of representations and warranties of KLA-Tencor and Merger Sub:

Each of the representations and warranties of KLA-Tencor and Merger Sub set forth in the Merger Agreement (other than the representations in the bullet point immediately following and certain provisions of the representations and warranties of KLA-Tencor related to capitalization) shall have been true and correct in all respects as of the date of the Merger Agreement and shall be true and correct in all respects on and as of the Closing Date with the same force and effect as if made on and as of such date, except for any failure to be so true and correct that has not had and would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect on KLA-Tencor.

Each of the representations and warranties of KLA-Tencor and Merger Sub set forth in the Merger Agreement relating to Organization, Authorization, Capitalization (only in subsection (c) thereof) and Brokers; Fees and Expenses shall have been true and correct in all material respects as of the date of the Merger Agreement and shall be true and correct in all material respects on and as of the Closing Date with the same force and effect as if made on and as of such date.

Each of the representations and warranties of KLA-Tencor and Merger Sub set forth in Merger Agreement relating to Capitalization (other than subsections (b) and (c) thereof) shall have been true and correct in all respects as of the date of the Merger Agreement and shall be true and correct in all respects as of the Closing Date with the same force and effect as if made on and as of such date, except for any failure to be so true and correct in any immaterial amount or as a result of any action following the date of the Merger Agreement and not prohibited, permitted or otherwise consented to by Orbotech pursuant to the Merger Agreement;

In the case of each of the foregoing bullets, (1) except for those representations and warranties which address matters only as of a particular date (the accuracy of which shall be determined as of such

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particular date) and (2) without giving effect to any Material Adverse Effect or similar materiality qualifications in the relevant representations and warranties.

Each of KLA-Tencor and Merger Sub shall have performed in all material respects each of their respective obligations under the Merger Agreement required to be performed at or prior to the Closing Date and complied in all material respects with each covenant or other agreement of KLA-Tencor and Merger Sub required to be performed or complied with by it under the Agreement.

Orbotech shall have received a certificate signed on behalf of KLA-Tencor and Merger Sub by a duly authorized officer of each of KLA-Tencor and Merger Sub to the effect that the conditions related to KLA-Tencor's representations, warranties and covenants described above have been satisfied.

No Material Adverse Effect on KLA-Tencor shall have occurred following the execution and delivery of the Merger Agreement.

For additional information, see the section entitled The Merger Agreement Conditions to Completion of the Merger .

No Solicitation of Alternative Proposals

Orbotech has agreed that it will not, directly or indirectly:

solicit, initiate, knowingly encourage, facilitate or induce the making, submission or announcement of an acquisition proposal or the making of any inquiry, offer or proposal that constitutes or would reasonably be expected to lead to any Acquisition Proposal (as defined below);

in connection with or in response to any Acquisition Proposal or any inquiry, offer or proposal that would reasonably be expected to lead to an Acquisition Proposal, furnish to any third party any non-public information relating to Orbotech or any of its subsidiaries, or afford access to the business, properties, assets, books or records of Orbotech or any of its subsidiaries to any third party, or take any other action intended to assist or facilitate the making of any Acquisition Proposal or any inquiry, offer or proposal that would reasonably be expected to lead to an Acquisition Proposal;

participate or engage in negotiations regarding an Acquisition Proposal or knowingly engage in discussions with any third party that is seeking to make or has made an Acquisition Proposal;

approve, endorse or recommend an Acquisition Proposal;

execute or enter into any letter of intent, memorandum of understanding or contract contemplating or otherwise relating to an Acquisition Transaction (as defined below); or

except to the extent that Orbotech Board determines that the failure to do so would be reasonably likely to be inconsistent with its fiduciary duties under applicable law, terminate, amend, modify, waive or fail to enforce any rights under any standstill or other similar agreement between Orbotech or any of its subsidiaries and any third party.

Orbotech also agreed to immediately cease and cause to be terminated any and all activities, discussions or negotiations with any third party concerning any Acquisition Proposal existing as of the date of the Merger Agreement.

However, until Orbotech shareholders approve the Merger, if Orbotech receives a bona fide written Acquisition Proposal from any person that did not result from a material breach of its non-solicitation obligations that the Orbotech Board concludes in good faith is or is reasonably likely to lead to a Superior Proposal (as defined below), Orbotech may, directly or indirectly:

engage or participate in discussions or negotiations with such third party; or

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furnish to such third party any non-public information relating to Orbotech or any of its subsidiaries pursuant to a confidentiality agreement no less favorable to Orbotech (other than with respect to any standstill or similar terms) than that between Orbotech and KLA-Tencor.

Any action taken pursuant to the foregoing paragraph may be taken only if (1) at least 24 hours prior to engaging or participating in any such discussions or negotiations with, or furnishing any non-public information to, such third party, Orbotech gives KLA-Tencor written notice of the identity of such third party and all of the terms and conditions of such Acquisition Prop