

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

**FORM S-3  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

**Astera Labs, Inc.**

(Exact name of registrant as specified in its charter)

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

**82-3437062**  
(I.R.S. Employer Identification No.)

2345 North First Street  
San Jose, CA 95131  
(408) 766-3806

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

Philip T. Mazzara  
General Counsel & Secretary  
Astera Labs, Inc.  
2345 North First Street  
San Jose, CA 95131  
(408) 766-3806

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

*Copies to:*

Bradley C. Weber  
Julia R. White  
Goodwin Procter LLP  
601 Marshall Street  
Redwood City, CA 94063  
(650) 752-3100

**Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective.**

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, 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, please 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(c) 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 registration statement pursuant to General Instruction I.D or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth 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.

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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.

## PROSPECTUS

**5,578,474 Shares of Common Stock  
Offered by the Selling Stockholder**

This prospectus relates to the offer and resale, from time to time, of up to 5,578,474 shares of our common stock, par value \$0.0001 per share ("Common Stock"), by the selling stockholder identified in this prospectus. The shares of Common Stock being offered by the selling stockholder are those that may be acquired upon exercise of warrants held by the selling stockholder.

We are not offering or selling any shares of our Common Stock and will not receive any proceeds from the resale of the shares of Common Stock by the selling stockholder.

The selling stockholder will act independently in making decisions with respect to the timing, manner and size of any sale or non-sale related transfer. Our registration of the securities covered by this prospectus does not mean that the selling stockholder will offer or sell any of the shares of Common Stock offered hereby. The selling stockholder may sell the securities in one or more transactions at the market price for our Common Stock prevailing at the time of sale, a price related to the prevailing market price, a negotiated price or such other price as the selling stockholder determines from time to time. We will pay certain offering fees and expenses and fees in connection with the registration of the shares offered hereunder by the selling stockholder. We provide more information about how the selling stockholder may sell the securities in the section entitled "Plan of Distribution."

Our Common Stock is listed on the Nasdaq Global Select Market ("Nasdaq") under the symbol "ALAB." On March 18, 2026, the closing price of our shares of Common Stock as reported on Nasdaq was \$126.34 per share.

**Investing in these securities involves certain risks. See "Risk Factors" on page 1 of this prospectus as well as those included in any accompanying prospectus supplement and in the documents incorporated by reference in this prospectus for a discussion of the factors you should carefully consider before deciding to purchase these securities**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.**

**The date of this prospectus is March 20, 2026.**

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## ABOUT THIS PROSPECTUS

This prospectus is part of an automatic shelf registration statement on Form S-3ASR that we filed with the Securities and Exchange Commission (the “SEC”) as a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act of 1933, as amended (“Securities Act”), utilizing a “shelf” registration process. Under this shelf registration process, the selling stockholder may from time to time sell shares of our Common Stock described in this prospectus in one or more offerings. We will not receive any proceeds from the sale by the selling stockholder of the shares offered by it that are described in this prospectus.

In connection with the offer and sale of shares by the selling stockholder, the selling stockholder may provide a prospectus supplement to this prospectus that contains specific information about the securities being offered and sold and the specific terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. Any such prospectus supplement or free writing prospectus may also add, update or change information contained or incorporated by reference in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement or free writing prospectus, you should rely on the prospectus supplement or free writing prospectus, as applicable. This prospectus, together with any accompanying prospectus supplement, contains important information you should know before investing in our securities, including important information about us and the securities being offered. You should read both this prospectus, any applicable accompanying prospectus supplement, and any related free writing prospectus, together with the additional information described under the headings “Where You Can Find More Information” and “Incorporation by Reference” beginning on page [13](#) of this prospectus.

Neither we nor the selling stockholder have authorized anyone to provide any information or make any representations other than those contained in this prospectus, any amendment or supplement to this prospectus, or in any free writing prospectus we have prepared. We and the selling stockholder take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The selling stockholder is offering to sell, and seeking offers to buy, shares of our Common Stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus, any amendment or supplement to this prospectus, or any free writing prospectus, is accurate as of the date on its respective cover or as otherwise specified therein and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise. Our business, financial condition, results of operations, and prospects may have changed since that date.

Astera and other trademarks or service marks of Astera appearing in this prospectus are the property of Astera. The other trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

As used in this prospectus, unless the context otherwise requires, references to the terms “Astera,” “the Company,” “we,” “us” and “our,” and similar designations refer to Astera Labs, Inc. and, where appropriate, our subsidiaries. The term “selling stockholder” refers to Amazon.com NV Investment Holdings LLC and includes pledgees, donees, assignees, transferees or other successors-in-interest who may later hold the selling stockholder’s interest.

**RISK FACTORS**

Investing in our Common Stock involves a high degree of risk. You should carefully consider the risks and uncertainties set forth in our filings with the SEC that are incorporated by reference herein, including our most recent Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K, and all other information contained or incorporated by reference into this prospectus, as updated by our subsequent filings under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the risk factors and other information contained in any applicable prospectus supplement or applicable free writing prospectus, before making an investment decision. Any of these risks could have a material adverse effect on our business, financial condition, or results of operations. The trading price of our securities could decline due to the materialization of any of these risks, and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business.

### SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference, includes forward-looking statements within the meaning of the federal securities laws, which are statements that involve substantial risks and uncertainties. Forward-looking statements generally relate to future events or our future financial or operating performance. All statements other than statements of historical fact included in this prospectus and the documents that we incorporate by reference, including statements regarding our strategy, future operations, prospects, plans and objectives of management are forward-looking statements. In some cases, you can identify forward-looking statements because they contain words such as “aims,” “anticipated,” “believes,” “budget,” “can,” “certain,” “committed,” “continue,” “could,” “designed,” “estimates,” “expect,” “future,” “growing,” “indicative,” “intended,” “may,” “mission,” “opportunities,” “plan,” “position,” “potential,” “predict,” “probable,” “projections,” “scheduled,” “should,” “to be,” “will,” or “would,” or the negative of these words or other similar terms or expressions. Forward-looking statements include, but are not limited to, statements relating to our business plans, strategies, market or investment opportunities, platform, products and services, including future investments therein and anticipated benefits therefrom; demand; our future financial or operating performance and growth (such as revenue, gross profit and margins, expenses, income (losses) and other operating results); our future cash flows, expenditures, requirements, uses, sufficiency and funding sources; our accounting practices and policies (including the impacts associated with them and accounting pronouncements, estimates, accruals, amortizations, commitments/contingencies, warrant vesting, the period over which expenses are expected to be realized and non-GAAP financial measures); our taxes; our personnel and operations; our disclosure and internal controls, procedures and remediation efforts; our lease terms, including any renewal and future payments; our risk factors; our merger, acquisition, joint venture and similar activities; and our legal and compliance matters such as legal proceedings and 10b5-1 trading arrangements.

We may not actually achieve the plans, intentions, expectations or events disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Forward-looking statements are subject to risks, uncertainties and other factors described in, or incorporated by reference into, the section titled “Risk Factors” and elsewhere in this prospectus. The following include some, but not all, of the factors that could cause the outcome of the events described in our forward-looking statements to differ from those anticipated:

- our ability to sustain and manage our growth effectively;
- our ability to maintain future profitability;
- our ability to accurately predict future revenue for appropriate budgeting and expense adjustment;
- our ability to anticipate and respond to new and evolving market trends or industry standards, develop and sell new products, or penetrate new markets;
- our customer concentration, with a limited number of end customers driving our revenue;
- our ability to achieve product design wins and opportunities for customer sales and investment recoupment;
- our ability to demonstrate the value of new products or newer product generations to customers;
- our AI technology adoption, use, and commercialization;
- our reliance on, and relationship management of, a limited number of third-party manufacturing and supply chain services partners;
- our ability to successfully qualify our products with customers without significant delays;
- our product pricings often decrease over time;
- product supply disruptions, unforeseen product delays, expenses or undetected defects, bugs, or security vulnerabilities;
- adverse changes in the political, regulatory, and economic policies of governments, including in connection with trade restrictions and export controls with respect to China and Chinese customers;
- our ability to hire and retain skilled personnel and senior management team members;

- cybersecurity risks;
- warranty claims or product liability claims;
- litigation and other legal proceedings, including related to patents or other intellectual property;
- our ability to successfully integrate and to realize anticipated benefits or synergies, on a timely basis or at all, in connection with our past, current, or any future acquisitions, divestitures, significant investments, joint ventures or strategic transactions;
- global operational risks, including exposure to numerous legal and regulatory requirements and unexpected changes and compliance failures;
- regulatory risks of authorities in jurisdictions into or from which we ship our products or import supplies levying fines, restricting or delaying our product exports or supply imports, or increasing product manufacturing or transfer costs;
- changes in tax laws, rules or practices;
- our competitive markets and ability to compete effectively, including as a result of industry consolidation;
- our ability to adequately protect our intellectual property rights;
- our reliance on third-party technologies for product development and future ability to use such technologies; and
- global financial and economic conditions and geopolitical events, including fluctuating interest, inflation, foreign currency and unemployment rates, economic slowdowns or recessions, or financial market volatility, including as a result of, among other factors, the ongoing Russia and Ukraine war, the Middle East conflict, announced or future tariff increases and export controls between the U.S. and China, international tensions or instability, significant changes in governmental policies or similar events.

We caution you that the foregoing list may not contain all of the forward-looking statements made in this prospectus. You should not rely upon forward-looking statements as predictions of future events.

We have based the forward-looking statements contained in this prospectus primarily on management's current beliefs and our current expectations and projections about future events and trends that we believe may affect our business, results of operations, financial condition, and prospects. In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain, and you are cautioned not to unduly rely upon these statements. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this prospectus. The results, events, and circumstances reflected in the forward-looking statements may not be achieved or occur, and actual results, events, or circumstances could differ materially from those described in the forward-looking statements.

The forward-looking statements made in this prospectus relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this prospectus to reflect events or circumstances after the date of this prospectus or to reflect new information or the occurrence of unanticipated events, except as required by law.

## OUR COMPANY

### Overview

Our mission is to innovate, design, and deliver semiconductor-based connectivity solutions that are purpose-built to unleash the full potential of cloud and AI infrastructure.

Building on years of experience with a singular focus on addressing connectivity challenges in data-centric systems, we have developed and deployed our leading Intelligent Connectivity Platform built from the ground up for cloud and AI infrastructure. Our Intelligent Connectivity Platform comprises of semiconductor-based, high-speed, mixed-signal connectivity products that integrate a matrix of microcontrollers and sensors, and COSMOS, our software suite, which is embedded in our connectivity products and integrated into our customers' systems.

Our Intelligent Connectivity Platform provides our customers with the ability to deploy and operate high-performance cloud and AI infrastructure at scale, addressing an increasingly diverse set of requirements. We provide our connectivity products in various form factors including Integrated Circuits ("ICs"), boards, and modules. Our patented software-defined platform approach delivers critical connectivity performance, enables flexibility and customization, and supports observability and predictive analytics. This approach aims to efficiently address the data, network, and memory bottlenecks, scalability, and other unique infrastructure requirements of our hyperscaler and system OEM customers.

Based on trusted relationships with the leading hyperscalers and collaboration with data center infrastructure suppliers, our platform is designed to meet our customers' unique cloud scale requirements. Our COSMOS software suite is foundational to our Intelligent Connectivity Platform and is designed to enable our customers to seamlessly configure, manage, monitor, optimize, troubleshoot, and customize functions in our IC, board, and module products.

Today, our connectivity solutions are at the heart of major AI platforms deployed worldwide featuring both commercially available Graphic Processing Units ("GPUs") and proprietary AI accelerators. We currently offer our customers four product families across multiple form factors including ICs, boards, and modules, shipping millions of devices across leading hyperscalers. Our products, which include Aries PCIe<sup>®</sup>/CXL<sup>®</sup> Smart DSP Retimers, Aries PCIe<sup>®</sup>/CXL<sup>®</sup> Smart Cable Modules<sup>™</sup>, Taurus Ethernet Smart Cable Modules<sup>™</sup>, Leo CXL Memory Connectivity Controllers, and Scorpio Smart Fabric Switches are built upon industry standard connectivity protocols such as Peripheral Component Interconnect Express ("PCIe"), Ethernet, and Compute Express Link ("CXL") to address the growing demand for purpose-built connectivity solutions that solve critical data, network, and memory bottlenecks inherent in cloud and AI infrastructure.

### Corporate History

We were incorporated in Delaware in October 2017 under the name Astera Labs, Inc. Our principal executive offices are located at 2345 North First Street, San Jose, CA 95131, and our telephone number is (408) 766-3806. Our website address is [www.asteralabs.com](http://www.asteralabs.com). Information contained on or that can be accessed through our website does not constitute part of this prospectus or any applicable prospectus supplement and the inclusion of our website address in this prospectus is intended to be an inactive textual reference only. You should not consider information contained on our website to be part of this prospectus or in deciding whether to purchase shares of our Common Stock.

**USE OF PROCEEDS**

The selling stockholder may, from time to time, sell the securities offered by it that are described in this prospectus. We will not receive any proceeds from the sale by such selling stockholder of the securities offered by it that are described in this prospectus.

## DESCRIPTION OF COMMON STOCK

The following description of our Common Stock is intended as a summary only and therefore is not a complete description of our Common Stock. This description is based upon, and is qualified in its entirety by reference to, our Amended and Restated Certificate of Incorporation, our Second Amended and Restated Bylaws (“Bylaws”) and applicable provisions of the Delaware General Corporation Law. You should read our Amended and Restated Certificate of Incorporation and our Bylaws, in each case, as amended and supplemented, copies of which have been filed with the SEC.

### *Authorized Common Stock*

Our authorized Common Stock consists of 1,000,000,000 shares of common stock, \$0.0001 par value per share. Our Common Stock is registered under Section 12(b) of the Exchange Act.

### *Dividend Rights*

Subject to preferences that may apply to any shares of preferred stock outstanding at the time, the holders of our Common Stock are entitled to receive dividends out of funds legally available if our board of directors, in its discretion, determines to issue dividends and then only at the times and in the amounts that our board of directors may determine.

### *Voting Rights*

Holders of our Common Stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders. We do not provide for cumulative voting for the election of directors in our Amended and Restated Certificate of Incorporation.

### *No Preemptive or Similar Rights*

Our Common Stock is not entitled to preemptive rights and is not subject to conversion, redemption, or sinking fund provisions.

### *Right to Receive Liquidation Distributions*

If we become subject to a liquidation, dissolution or winding-up, the assets legally available for distribution to our stockholders would be distributable ratably among the holders of our Common Stock and any participating preferred stock outstanding at that time, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights of and the payment of liquidation preferences, if any, on any outstanding shares of preferred stock.

### *Registration Rights*

Certain holders of our Common Stock are entitled to rights with respect to the registration of their shares under the Securities Act to the extent not expired. These registration rights are contained in our amended and restated investors’ rights agreement, dated as of May 17, 2022 (“Investors’ Rights Agreement”) and include demand registration rights, short-form registration rights and piggyback registration rights. We, along with certain holders of our Common Stock, are parties to the Investors’ Rights Agreement. The registration rights set forth in the Investors’ Rights Agreement will expire upon the earlier of five years following the completion of our initial public offering, or, with respect to any particular stockholder, when such stockholder is able to sell all of its shares pursuant to Rule 144 of the Securities Act without any volume limitations. In an underwritten offering, the underwriters have the right, subject to specified conditions, to limit the number of shares such holders may include.

### *Anti-Takeover Provisions*

Certain provisions of Delaware law, our Amended and Restated Certificate of Incorporation and our Bylaws, which are summarized below, may have the effect of delaying, deferring, or preventing another person from acquiring control of our company. They are also designed, in part, to encourage persons seeking

to acquire control of us to negotiate first with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

#### ***Delaware Law***

We are governed by the provisions of Section 203 of the DGCL. In general, Section 203 prohibits a public Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A “business combination” includes mergers, asset sales or other transactions resulting in a financial benefit to the stockholder. An “interested stockholder” is a person who, together with affiliates and associates, owns, or within three years did own, 15% or more of the corporation’s outstanding voting stock. These provisions may have the effect of delaying, deferring, or preventing a change in our control.

#### ***Amended and Restated Certificate of Incorporation and Bylaws Provisions***

Our Amended and Restated Certificate of Incorporation and our Bylaws include a number of provisions that could deter hostile takeovers or delay or prevent changes in control of our board of directors or management team, including the following:

- *Board of Directors Vacancies; Number of Directors.* Our Amended and Restated Certificate of Incorporation and our Bylaws authorize only our board of directors to fill vacant directorships, including newly created seats. In addition, the number of directors constituting our board of directors is fixed solely and exclusively by a resolution duly adopted by the board of directors.
- *Classified Board.* Our Amended and Restated Certificate of Incorporation and our Bylaws provide that our board of directors is classified into three classes of directors.
- *Stockholder Action; Special Meeting of Stockholders.* Our Amended and Restated Certificate of Incorporation provides that our stockholders may not take action by written consent but may only take action at annual or special meetings of our stockholders. Our Amended and Restated Certificate of Incorporation further provides that a special meeting of our stockholders may be called only by a majority of our board of directors, thus prohibiting a stockholder from calling a special meeting.
- *Advance Notice Requirements for Stockholder Proposals and Director Nominations.* Our Bylaws provide for advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders or to nominate candidates for election as directors at our annual meeting of stockholders. Our Bylaws also specify certain requirements regarding the form and content of a stockholder’s notice.
- *No Cumulative Voting.* The DGCL provides that stockholders are not entitled to cumulate votes in the election of directors unless a corporation’s certificate of incorporation provides otherwise. Our Amended and Restated Certificate of Incorporation does not provide for cumulative voting.
- *Directors Removed Only for Cause.* Our Amended and Restated Certificate of Incorporation provides that stockholders may remove directors only for cause.
- *Amendment of Charter Provisions.* Any amendment of the above provisions in our Amended and Restated Certificate of Incorporation requires approval by holders of at least a majority of our then outstanding Common Stock.
- *Issuance of Undesignated Preferred Stock.* Our board of directors has the authority, without further action by the stockholders, to issue up to 100,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by our board of directors.
- *Exclusive Forum.* Our Bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for state law claims for (1) any derivative action or proceeding brought on our behalf, (2) any

action asserting a claim of, or a claim based on, a breach of a fiduciary duty owed by any of our current or former directors, officers, and employees to us or our stockholders, (3) any action asserting a claim against us, or any current or former director, officer or employee of us, arising out of or pursuant to the DGCL, our Amended and Restated Certificate of Incorporation or our Bylaws or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware, (4) any action asserting a claim against us or any current or former director, officer or employee that is governed by the internal affairs doctrine; provided, however, that this provision does not apply to any causes of action arising under the Securities Act or the Exchange Act, or to any claim for which the federal courts have exclusive jurisdiction. In addition, our Bylaws provide that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States will be the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, the Exchange Act or the respective rules and regulations promulgated thereunder. To the fullest extent permitted by law, any person or entity purchasing or otherwise acquiring any interest in our securities will be deemed to have notice of and to have consented to these forum provisions.

**Listing on The Nasdaq Global Select Market**

Our Common Stock is listed on The Nasdaq Global Select Market under the symbol “ALAB.”

**Transfer Agent and Registrar**

The transfer agent and registrar for our Common Stock is Equiniti Trust Company, LLC. The transfer agent’s address is 48 Wall Street, Floor 23, New York, NY 10005.

## SELLING STOCKHOLDER

This prospectus relates to the offer and sale from time to time of up to 5,578,474 shares of Common Stock by the selling stockholder identified in the table below. The shares being offered by the selling stockholder (the “Warrant Shares”) are those that may be acquired upon exercise of (i) the warrant, dated as of October 14, 2022 and as subsequently amended on October 31, 2023, we issued to the selling stockholder (the “2022 Warrant”), and (ii) the warrant we issued to the selling stockholder pursuant to the related Transaction Agreement, dated as of February 5, 2026 (the “Transaction Agreement”) by and between the Company and the selling stockholder (the “2026 Warrant” and, together with the 2022 Warrant, the “Warrants”).

As of the date of this prospectus, the selling stockholder has not exercised the Warrants. The information in the table below (other than the percentages of our outstanding shares of Common Stock beneficially owned) in respect of the selling stockholder was furnished by or on behalf of the selling stockholder and is as of February 28, 2026. The outstanding Warrant Shares that are currently exercisable or exercisable within 60 days of February 28, 2026 are included in the number of shares of Common Stock beneficially owned by the selling stockholder and the percentage ownership of the selling stockholder. Percentage of beneficial ownership is based on 171,246,523 shares of Common Stock outstanding as of February 28, 2026.

The selling stockholder is not obligated to sell any of the Warrant Shares. Because the selling stockholder may sell some or all of Warrant Shares, and because there are currently no agreements, arrangements or understandings with respect to the sale of any such Warrant Shares, no estimate can be given as to the number of Warrant Shares that will be held by the selling stockholder upon termination of this offering. Therefore, for the purposes of the table below, we have assumed that none of the Warrant Shares will be beneficially owned by the selling stockholder after this offering.

	Number of Shares Beneficially Owned Before Sale of All Shares of Common Stock Offered Hereby <sup>(1)(2)</sup>		Number of Shares of Common Stock to be Sold in the Offering	Number of Shares Beneficially Owned After Sale of All Shares of Common Stock Offered Hereby <sup>(3)</sup>	
	Number	%		Number	Number
Amazon.com NV Investment Holdings LLC <sup>(4)</sup>	1,248,707	0.73%	5,578,474	5,578,474	3.26%

- (1) Represents 1,248,707 shares of Common Stock underlying the Warrants that have vested as of February 28, 2026. The remainder of the Warrant Shares are subject to vesting in multiple tranches over the term of the Warrant based on payments to us from or on behalf of Amazon or its affiliates under the Commercial Agreements or otherwise.
- (2) Shares beneficially owned consists of shares of common stock underlying the 2022 Warrant and 2026 Warrant that are exercisable within 60 days of February 28, 2026. This prospectus registers all such shares, in addition to the remaining shares of common stock underlying the Warrants that become vested and exercisable only upon the achievement of certain performance conditions under certain commercial agreements with the Company. Irrespective of vesting achievement, the Warrants also limit selling stockholder’s beneficial ownership to 4.999% of our outstanding shares unless selling stockholder waives this limit upon 61 days’ notice.
- (3) Assumes the sale of all shares of Common Stock offered by this prospectus by the selling stockholder and that the selling stockholder does not acquire any additional shares of Common Stock.
- (4) The address for Amazon.com NV Investment Holdings LLC is c/o Amazon.com, Inc., 410 Terry Avenue North, Seattle, Washington 98109.

## PLAN OF DISTRIBUTION

The selling stockholder may, from time to time, sell any or all of the shares of Common Stock offered hereby. The sales may be made on one or more exchanges or in the over-the-counter market or otherwise, at prices and at terms then prevailing or at prices related to the then current market price, or in negotiated transactions. The selling stockholder will act independently of us in making decisions with respect to the timing, manner and size of each sale.

We will not receive any proceeds from the sale of the securities by the Selling Stockholder.

The selling stockholder may effect such transactions by selling the shares to or through broker-dealers. The shares of Common Stock may be sold through broker-dealers by one or more of, or a combination of, the following:

- a block trade in which the broker-dealer so engaged will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by such broker-dealer for its account;
- ordinary brokerage transactions and transactions in which the broker solicits purchasers; and
- in privately negotiated transactions.

The selling stockholder may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus. The selling stockholder also may transfer the shares in other circumstances, in which case the transferees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The selling stockholder may enter into derivative or hedging transactions with respect to the shares or pledge the shares to secure debts and other obligations (including obligations associated with derivatives transactions).

The selling stockholder and any broker-dealers, agents or derivatives or hedging counterparties that are involved in selling the shares may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers, agents or counterparties and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act.

The selling stockholder has informed us that it does not have any agreement or understanding, directly or indirectly, with any person to distribute the shares of Common Stock. If the selling stockholder notifies us that a material arrangement has been entered into with a broker-dealer or other person deemed an “underwriter” for the sale of shares through a block trade, special offering or secondary distribution, a purchase by a broker or dealer or certain derivative or hedging transactions, we may be required to file a prospectus supplement pursuant to the applicable rules promulgated under the Securities Act.

There can be no assurance that the selling stockholder will sell any or all of the shares registered pursuant to the registration statement of which this prospectus forms a part.

We are required to pay registration expenses relating to the registration of the shares covered by this prospectus, other than underwriting discounts and selling commissions. We have agreed to indemnify the selling stockholder against certain losses, claims, damages and liabilities, including liabilities under the Securities Act, or the selling stockholder may be entitled to contribution. We may be indemnified by the selling stockholder against civil liabilities, including liabilities under the Securities Act that may arise from written information furnished to us by the selling stockholder specifically for use in this prospectus.

We may restrict or suspend offers and sales or other dispositions of the shares under this prospectus, at any time from and after the filing date of this prospectus, subject to certain terms and conditions. In the event of such restriction or suspension, the selling stockholder will not be able to offer or sell or otherwise dispose of the shares under this prospectus.

Once sold under the registration statement of which this prospectus forms a part, the shares will be freely tradeable in the hands of persons other than our affiliates.

**LEGAL MATTERS**

Unless the applicable prospectus supplement indicates otherwise, the validity of the securities in respect of which this prospectus is being delivered will be passed upon by Goodwin Procter LLP, Redwood City, California.

**EXPERTS**

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus by reference to the [Annual Report on Form 10-K for the year ended December 31, 2025](#) have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

**WHERE YOU CAN FIND MORE INFORMATION**

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains periodic and current reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is [www.sec.gov](http://www.sec.gov). Other information about us is also on our website at [www.asteralabs.com](http://www.asteralabs.com). However, except for the information specifically incorporated by reference herein as set forth below, the information on or accessible through the SEC's website and the information on or accessible through our website do not constitute a part of this prospectus.

This prospectus is part of an automatic shelf registration statement on Form S-3ASR we filed with the SEC. This prospectus omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information about us and our consolidated subsidiaries and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

**INCORPORATION BY REFERENCE**

The SEC allows us to “incorporate by reference” the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and all documents subsequently filed with the SEC pursuant to Section 13 (a), 13 (c), 14 or 15 (d) of the Exchange Act, prior to the termination of the offering under this prospectus:

- [Annual Report on Form 10-K for the fiscal year ended December 31, 2025, filed with the SEC on February 20, 2026.](#)
- [our Definitive Proxy Statement on Schedule 14A \(other than information furnished rather than filed\), filed with the SEC on April 24, 2025;](#)
- [Current Reports on Form 8-K \(other than information furnished rather than filed\) filed with the SEC on February 10, 2026;](#) and
- The description of our common stock contained in our registration statement on [Form 8-A filed with the SEC under Section 12\(b\) of the Exchange Act on March 15, 2024](#), as updated and superseded by the description of our common stock contained in [our Annual Report on Form 10-K for the fiscal year ended December 31, 2025, as filed with the SEC on February 20, 2026](#), including any amendments or reports filed for the purposes of updating this description.

Unless specifically stated to the contrary, none of the information that we disclose under Items 2.02 or 7.01 of any Current Report on Form 8-K that we may from time to time furnish to the SEC or any other document or information deemed to have been furnished and not filed with the SEC will be incorporated by reference into, or otherwise included in, this prospectus.

Any statement contained in this prospectus or in a document (or part thereof) incorporated or considered to be incorporated by reference in this prospectus shall be considered to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or in any other subsequently filed document (or part thereof) that is or is considered to be incorporated by reference in this prospectus modifies or supersedes that statement. The modifying or superseding statement need not state that it has modified or superseded a prior statement or include any other information set forth in the document that it modifies or supersedes. Any statement so modified or superseded shall not be considered, except as so modified or superseded, to constitute any part of this prospectus.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Astera Labs, Inc.  
2345 North First Street  
San Jose, CA 95131  
(408) 766-3806

You may also access these documents, free of charge on the SEC’s website at [www.sec.gov](http://www.sec.gov) or on our website at [www.asteralabs.com](http://www.asteralabs.com). Information contained in or accessible through our website does not constitute a part of this prospectus and is not incorporated by reference in this prospectus. We have included our website solely as an inactive textual reference.

This prospectus is part of a registration statement we filed with the SEC. We have incorporated exhibits into this registration statement. You should read the exhibits carefully for provisions that may be important to you.



## **Common Stock**

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### **PROSPECTUS**

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**March 20, 2026**

Neither we, nor the selling stockholder, have authorized any dealer, salesperson or other person to give any information or represent anything not contained in this prospectus. You must not rely on any unauthorized information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus does not offer to sell any securities in any jurisdiction where it is unlawful. Neither the delivery of this prospectus, nor any sale made hereunder, shall create any implication that the information in this prospectus is correct after the date hereof.

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**PART II**  
**INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 14. Other Expenses of Issuance and Distribution.**

The expenses payable by Astera Labs, Inc. (the “Registrant” “we,” “our,” “us” or the “Company”) in connection with the issuance and distribution of the securities being registered (other than underwriting discounts and commissions, if any) are set forth below. Each item listed is estimated, except for the Securities and Exchange Commission (“SEC”) registration fee.

SEC registration fee	\$ 92,608.25
Legal fees and expenses	\$100,000.00
Accounting fees and expenses	\$ 25,000.00
Printing fees and expenses	\$ 5,000.00
Transfer agent and trustee fees	\$ 1,000.00
Miscellaneous	\$ 10,000.00
<b>Total</b>	<b><u>\$233,608.25</u></b>

**Item 15. Indemnification of Directors and Officers.**

Section 145 of the Delaware General Corporation Law (the “DGCL”) authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact that they have served or are currently serving as a director or officer to a corporation. The indemnity may cover expenses (including attorneys’ fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding if the director or officer acted in good faith and in a manner the director or officer reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the director or officer’s conduct was unlawful. Section 145 permits corporations to pay expenses (including attorneys’ fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such director or officer is not entitled to be indemnified by the corporation as authorized in Section 145. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of their status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

We have adopted provisions in our Amended and Restated Certificate of Incorporation and our Bylaws that limit or eliminate the personal liability of our directors and officers to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended. Consequently, our directors and officers will not be personally liable to us or our stockholders for monetary damages or breach of fiduciary duty as directors or officers, except for liability for:

- any breach of their duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- for our directors, unlawful payments of dividends or unlawful stock repurchases, or redemptions as provided in Section 174 of the DGCL;
- any transaction from which they derived an improper personal benefit; or
- for our officers, any derivative action by us or in our right.

Any amendment to, or repeal of, these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission or claim that occurred or arose prior to that amendment or

repeal. If the DGCL is amended to provide for further limitations on the personal liability of directors and officers of corporations, then the personal liability of our directors and officers will be further limited to the greatest extent permitted by the DGCL.

In addition, our Bylaws provide that:

- we will indemnify our directors, officers and, in the discretion of our board of directors, certain employees to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended; and
- we will advance reasonable expenses, including attorneys' fees, to our directors and, in the discretion of our board of directors, to our officers and certain employees, in connection with legal proceedings relating to their service for or on behalf of us, subject to limited exceptions.

We have entered into indemnification agreements with each of our directors and executive officers.

These indemnification agreements will require us, among other things, to indemnify our directors and executive officers and, at times, their affiliates, against liabilities that may arise by reason of their status or service. These indemnification agreements will also require us to advance all expenses incurred by the directors and executive officers in investigating or defending any such action, suit, or proceeding. We believe that these agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers.

We also maintain general liability insurance which covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act.

#### Item 16. Exhibits and Financial Statement Schedules.

##### (a) Exhibits

Exhibit No.	Description
3.1	<a href="#">Amended and Restated Certificate of Incorporation of Astera Labs, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on March 28, 2024) (File No. 001-41979)</a>
3.2	<a href="#">Second Amended and Restated Bylaws of Astera Labs, Inc. (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed on March 28, 2024) (File No. 001-41979)</a>
4.1	<a href="#">Form of common stock certificate (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1/A filed on March 8, 2024) (File No. 333-277205)</a>
4.2	<a href="#">Amended and Restated Investors' Rights Agreement by and among Astera Labs, Inc., and the investors thereto (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1 filed on February 21, 2024) (File No. 333-277205)</a>
5.1*	<a href="#">Opinion of Goodwin Procter LLP</a>
23.1*	<a href="#">Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm</a>
23.2*	<a href="#">Consent of Goodwin Procter LLP (included in Exhibit 5.1)</a>
24.1*	<a href="#">Power of Attorney (included in the signature pages to the Registration Statement)</a>
107*	<a href="#">Filing Fee Table</a>

\* Filed herewith.

#### Item 17. Undertakings.

The undersigned Registrant hereby undertakes:

1. To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

- i. to include any prospectus required by Section 10(a)(3) of the Securities Act;
  - ii. to reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
  - iii. to include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement; provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), that are incorporated by reference in this registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this registration statement.
2. That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
3. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
4. That, for the purpose of determining liability under the Securities Act to any purchaser:
- i. each prospectus filed by the Registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
  - ii. each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.
5. That, for the purpose of determining liability of the Registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned Registrant undertakes that in a primary offering of securities of such undersigned Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered

or sold to such purchaser by means of any of the following communications, such undersigned Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- i. any preliminary prospectus or prospectus of such undersigned Registrant relating to the offering required to be filed pursuant to Rule 424;
- ii. any free writing prospectus relating to the offering prepared by or on behalf of such undersigned Registrant or used or referred to by such undersigned Registrant;
- iii. the portion of any other free writing prospectus relating to the offering containing material information about such undersigned Registrant or its securities provided by or on behalf of such undersigned Registrant; and
- iv. any other communication that is an offer in the offering made by such undersigned Registrant to the purchaser.

6. That, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof; and

7. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the indemnification provisions described herein, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in San Jose, California, on March 20, 2026.

**ASTERA LABS, INC.**By: /s/ Jitendra Mohan

Name: Jitendra Mohan

Title: Chief Executive Officer

**POWER OF ATTORNEY AND SIGNATURES**

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jitendra Mohan, Desmond Lynch, and Philip Mazzara, and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign the Registration Statement on Form S-3 of Astera Labs, Inc., and any or all amendments (including post-effective amendments), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite or necessary to be done in connection therewith and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Jitendra Mohan</u> Jitendra Mohan	Co-Founder, Chief Executive Officer, and Director <i>(Principal Executive Officer)</i>	March 20, 2026
<u>/s/ Desmond Lynch</u> Desmond Lynch	Chief Financial Officer <i>(Principal Financial Officer)</i>	March 20, 2026
<u>/s/ Germaine Cota</u> Germaine Cota	Chief Accounting Officer <i>(Principal Accounting Officer)</i>	March 20, 2026
<u>/s/ Manuel Alba</u> Manuel Alba	Chair of the Board	March 20, 2026
<u>/s/ Craig Barratt</u> Craig Barratt	Director	March 20, 2026
<u>/s/ Stefan Dyckerhoff</u> Stefan Dyckerhoff	Director	March 20, 2026
<u>/s/ Sanjay Gajendra</u> Sanjay Gajendra	Co-Founder, President, Chief Operating Officer, and Director	March 20, 2026
<u>/s/ Michael Hurlston</u> Michael Hurlston	Director	March 20, 2026
<u>/s/ Jack Lazar</u> Jack Lazar	Director	March 20, 2026
<u>/s/ Bethany Mayer</u> Bethany Mayer	Director	March 20, 2026

Goodwin Procter LLP  
601 Marshall Street  
Redwood City, CA 94063

goodwinlaw.com  
+1 650 752 3100



March 20, 2026

Astera Labs, Inc.  
2345 North First Street  
San Jose, CA 95131

Re: Securities Registered under Registration Statement on Form S-3

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-3 (as amended or supplemented, the "Registration Statement") filed on March 20, 2026 with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), relating to the registration of the offering of up to 5,578,474 shares (the "Shares") of the Company's common stock, par value \$0.0001 per share ("Common Stock"), of Astera Labs, Inc., a Delaware corporation (the "Company"), issuable upon the exercise of warrants to purchase shares of Common Stock (the "Warrants") to be sold by the selling stockholder listed in the Registration Statement under "Selling Stockholder" (the "Selling Stockholder").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinions set forth below, on certificates of officers of the Company. For purposes of the opinion set forth below, we have assumed that before the Shares are issued the Company does not issue shares of Common Stock or reduce the total number of shares of Common Stock the Company is authorized to issue under its certificate of incorporation such that the number of unissued shares of Common Stock authorized under the Company's certificate of incorporation is less than the number of Shares.

The opinion set forth below is limited to the Delaware General Corporation Law.

Based on the foregoing, we are of the opinion that the Warrants have been duly authorized and, assuming the Shares were issued today in accordance with the terms of the Warrants, they would be validly issued, fully paid and non-assessable.

This opinion letter and the opinion it contains shall be interpreted in accordance with the Core Opinion Principles as published in 74 *Business Lawyer* 815 (Summer 2019).

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We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm under the caption "Legal Matters" in the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ Goodwin Procter LLP

GOODWIN PROCTER LLP

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of Astera Labs, Inc. of our report dated February 20, 2026 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in Astera Labs, Inc's Annual Report on Form 10-K for the year ended December 31, 2025. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

Phoenix, Arizona

March 20, 2026

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# Calculation of Filing Fee Tables

S-3

## Astera Labs, Inc.

Table 1: Newly Registered and Carry Forward Securities

Not Applicable

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial Effective Date	Filing Fee Previously Paid in Connection with Unsold Securities to be Carried Forward
<b>Newly Registered Securities</b>												
Fees to be Paid	1 Equity	Common Stock, par value \$0.0001 per share	457(a)	5,578,474	\$ 120.21	670,588,359.54	\$ 0.0001381	\$ 92,608.25				
Fees Previously Paid												
<b>Carry Forward Securities</b>												
Carry Forward Securities												
Total Offering Amounts:							\$	\$ 92,608.25				
Total Fees Previously Paid:								\$ 0.00				
Total Fee Offsets:								\$ 0.00				
Net Fee Due:								\$ 92,608.25				

### Offering Note

1

a. Estimated in accordance with Rules 457(a) and 457(c) solely for the purpose of calculating the amount of the registration fee on the basis of the average of the high and low prices for a share of the registrant's Common Stock as reported on the Nasdaq Global Select Market on March 13, 2026.

b. Represents shares of Common Stock of the registrant that may be offered for resale by the selling stockholder upon exercise of the warrants to purchase the registrant's Common Stock. Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), the shares of Common Stock being registered hereunder include such indeterminate number of shares of Common Stock as may be issuable with respect to the shares of Common Stock being registered hereunder as a result of any stock dividend, stock split, recapitalization or similar transaction.

Table 2: Fee Offset Claims and Sources

Not Applicable

	Registrant or Filer Name	Form or Filing Type	File Number	Initial Filing Date	Filing Date	Fee Offset Claimed	Security Type Associated with Fee Offset Claimed	Security Title Associated with Fee Offset Claimed	Unsold Securities Associated with Fee Offset Claimed	Unsold Aggregate Offering Amount Associated with Fee Offset Claimed	Fee Paid with Fee Offset Source
<b>Rules 457(b) and 0-11(a)(2)</b>											
Fee Offset Claims											
Fee Offset Sources											
<b>Rule 457(p)</b>											
Fee Offset Claims											
Fee Offset Sources											

Table 3: Combined Prospectuses

Not Applicable

Security Type	Security Class Title	Amount of Securities Previously Registered	Maximum Aggregate Offering Price of Securities Previously Registered	Form Type	File Number	Initial Effective Date