UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO. 1 TO FORM S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Luminar Technologies, Inc.

(Exact name of registrant as specified in its charter)

Delaware(State or other jurisdiction of incorporation or organization)

aware

2603 Discovery Drive, S

2603 Discovery Drive, Suite 100 Orlando, Florida 32826 (407) 900-5259

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

Austin Russell President and Chief Executive Officer 2603 Discovery Drive, Suite 100 Orlando, Florida 32826 Telephone: (407) 900–5259

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

With copies to:

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83-1804317

(I.R.S. Employer Identification Number)

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement.

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

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. \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 $oxed{\square}$ Accelerated filer $oxed{\square}$

Emerging growth company \Box

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 that 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 date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

This Amendment No. 1, dated January 31, 2022, modifies and replaces our registration statement filed on January 20, 2022. As amended, this registration statement contains two prospectuses:

- a base prospectus which covers the potential future offering, issuance and sale by us of up to \$204,000,000 of our debt securities, preferred stock, Class A common stock, warrants and/or units, none of which have been issued or sold as of the date hereof; and
- a secondary offering prospectus which covers the potential future offering and sale by the selling stockholders described therein of up to 7,650,902 shares of Class A common stock from time to time in one or more offerings, consisting of: (i) up to 1,500,000 shares of Class A common stock that we agreed to issue in connection with entry into our strategic collaboration agreement with Daimler North America Corporation; (ii) 618,924 shares of Class A common stock that were issued in connection with our equity investment in Robotic Research OpCo, LLC; (iii) up to an aggregate of 4,288,074 shares of Class A common stock currently held by or issuable to Jun Hong Heng, a member of our board of directors, or entities affiliated with Mr. Heng, as described under "Selling Stockholders" in the secondary offering prospectus; (iv) up to 958,060 shares that we agreed to issue in connection with entry into that certain consulting agreement with P3 USA, Inc., (v) up to 257,866 shares that we agreed to issue in connection with entry into that certain consulting agreement with STEER Tech and (vii) up to 5,755 shares of Class A common stock that we agreed to issue to Technical Representatives, Inc. in connection with a consulting arrangement.

The base prospectus immediately follows this explanatory note. The secondary offering prospectus immediately follows the base prospectus. The 7,650,902 shares of Class A common stock that may be offered and sold under the secondary offering prospectus are not included in the \$204,000,000 of securities that may be offered, issued and sold by us under the base prospectus.

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated January 31, 2022

PROSPECTUS



\$204,000,000
Class A Common Stock
Preferred Stock
Debt Securities
Warrants
Units

From time to time, we may offer, issue and sell up to \$204,000,000 of any combination of the securities described in this prospectus in one or more offerings. We may also offer securities as may be issuable upon conversion, redemption, repurchase, exchange or exercise of any securities registered hereunder, including any applicable antidilution provisions.

This prospectus provides a general description of the securities we may offer. Each time we offer securities, we will provide specific terms of the securities offered in a supplement to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may also add, update or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as any documents incorporated by reference, before you invest in any of the securities being offered

This prospectus may not be used to sell our securities unless accompanied by a prospectus supplement. The prospectus supplement or any related free writing prospectus may also add to, update, supplement or clarify information contained in this prospectus.

Our Class A common stock is traded on The Nasdaq Global Select Market under the symbol "LAZR". The last reported sales price of our Class A common stock on The Nasdaq Global Select Market on January 28, 2022 was \$13.03 per share.

We may offer and sell our securities to or through one or more agents, underwriters, dealers or other third parties or directly to one or more purchasers on a continuous or delayed basis. If agents, underwriters or dealers are used to sell our securities, we will name them and describe their compensation in a prospectus supplement. The price to the public of our securities and the net proceeds we expect to receive from the sale of such securities will also be set forth in a prospectus supplement.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties referenced under the heading "Risk Factors" on page 3 of this prospectus as well as those contained in the applicable prospectus supplement and any related free writing prospectus, and in the other documents that are incorporated by reference into this prospectus or the applicable prospectus supplement.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is	, 2022.

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We are responsible for the information contained and incorporated by reference in this prospectus, in any accompanying prospectus supplement, and in any related free writing prospectus we prepare or authorize. We have not authorized anyone to give you any other information, and we take no responsibility for any other information that others may give you. If you are in a jurisdiction where offers to sell, or solicitations of offers to purchase, the securities offered by this documentation are unlawful, or if you are a person to whom it is unlawful to direct these types of activities, then the offer presented in this document does not extend to you. The information contained in this document speaks only as of the date of this document, unless the information specifically indicates that another date applies. Neither the delivery of this prospectus or any accompanying prospectus supplement, nor any sale of securities made under these documents, will, under any circumstances, create any implication that there has been no change in our affairs since the date of this prospectus, any accompanying prospectus supplement or any free writing prospectus we may provide you in connection with an offering or that the information contained or incorporated by reference is correct as of any time subsequent to the date of such information. You should assume that the information in this prospectus or any accompanying prospectus supplement, is accurate only as of the date of the documents containing the information, unless the information specifically indicates that another date applies. Our business, financial condition, results of operations and prospects may have changed since those dates.

ABOUT THIS PROSPECTUS

This prospectus provides you with a general description of our securities being offered. You should read this prospectus together with the additional information described under the heading "Where You Can Find Additional Information" and "Incorporation of Certain Information by Reference."

Under this shelf registration process, we may offer and sell, either individually or in combination, in one or more offerings, any of the securities described in this prospectus, for total gross proceeds of up to \$204,000,000. This prospectus only provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will contain more specific information about the specific terms of the 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. This prospectus may not be used to sell our securities unless accompanied by a prospectus supplement. Each such prospectus supplement and any free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in documents incorporated by reference into this prospectus. We urge you to carefully read this prospectus, any applicable prospectus supplement and any related free writing prospectus, together with the information incorporated herein by reference as described under the headings "Where You Can Find Additional Information" and "Incorporation of Certain Information by Reference" before you invest in our securities.

We have not authorized anyone to provide you with information in addition to or different from that contained in this prospectus, any applicable prospectus supplement and any related free writing prospectus. We take no responsibility for, and can provide no assurances as to the reliability of, any information not contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus that we may authorize to be provided to you. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any related free writing prospectus, or any sale of a security.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading "Where You Can Find Additional Information".

Unless otherwise mentioned or unless the context requires otherwise, throughout this prospectus, any applicable prospectus supplement and any related free writing prospectus, the words "Luminar", "we", "us", "our", the "company" or similar references refer to Luminar Technologies, Inc. and its subsidiaries; and the term "securities" refers collectively to our Class A common stock, preferred stock, debt securities, warrants or any combination of the foregoing securities.

Luminar, the Luminar logo and our other registered or common law trademarks, service marks or trade names appearing in this prospectus are the property of Luminar. Solely for convenience, our trademarks, tradenames and service marks referred to in this prospectus appear without the ®, TM and SM symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights to these trademarks and tradenames. Other trademarks, service marks and trade names used in this prospectus are the property of their respective owners.

COMPANY OVERVIEW

Our vision is to make autonomous transportation safe and ubiquitous. As a global leader in lidar autonomous driving technology, we are enabling the world's first autonomous solutions for automotive series production in passenger cars and commercial trucks.

Founded in 2012 by President and Chief Executive Officer Austin Russell, we built a new type of lidar from the chip—level up, with technological breakthroughs across all core components. As a result, we have created what we believe is the only lidar sensor that meets the demanding performance, safety, and cost requirements for autonomous vehicles in production bypassing the traditional limitations of legacy lidar technology, while also enabling Advanced Driving Assistance Systems ("ADAS") with our Proactive Safety solution. Integrating this advanced hardware with our custom developed software stack enables a turn—key autonomous solution to accelerate widespread adoption across automakers at series production scale.

Our lidar hardware and software products help set the standard for safety in the industry, and are designed to enable accurate and reliable detection of some of the most challenging "edge cases" that autonomous vehicles can encounter on a regular basis. This is achieved by advancing existing lidar range and resolution to new levels, ensuring hard—to—see objects like a tire on the road ahead or a child that runs into the street are more likely to be detected. Our software is also critical to interpreting the data and informing autonomous and assisted driving decisions.

CORPORATE INFORMATION

We were incorporated in the State of Delaware in August 2018 as a special purpose acquisition company under the name Gores Metropoulos, Inc. On February 5, 2019, we completed our initial public offering. On December 2, 2020, we consummated the business combination (the "Business Combination") pursuant to the Agreement and Plan of Merger (the "Merger Agreement"), dated August 24, 2020 with the pre–Business Combination Luminar Technologies, Inc. ("Legacy Luminar"). Legacy Luminar was incorporated in Delaware on March 31, 2015. In connection with the consummation of the Business Combination, we changed our name from Gores Metropoulos, Inc. to Luminar Technologies, Inc.

Our principal executive offices are located at 2603 Discovery Drive, Suite 100, Orlando, Florida 32826. Our telephone number is (407) 900–5259. Our website address is www.luminartech.com. Information contained on our website or connected thereto does not constitute part of, and is not incorporated by reference into, this prospectus or the registration statement of which it forms a part.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the risks and uncertainties described in the documents incorporated by reference in this prospectus supplement, as well as other information we include or incorporate by reference into this prospectus and any applicable prospectus supplement, before making an investment decision. Our business, financial condition or results of operations could be materially adversely affected by the materialization of any of these risks. 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. This prospectus and the documents incorporated herein by reference also contain forward—looking statements that involve risks and uncertainties. Actual results could differ materially from those anticipated in these forward—looking statements as a result of certain factors, including the risks described under the headings "Risk Factors" in the documents incorporated herein by reference, including in our Annual Report on Form 10–K for the year ended December 31, 2020, in any applicable prospectus supplement and any risk factors set forth in our other filings with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, including our Quarterly Reports on Form 10–Q and our Current Reports on Form 8–K, before making an investment decision.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference, contains forward–looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Any statements about our expectations, beliefs, plans, objectives, assumptions or future events or performance are not historical facts and may be forward–looking. These statements are often, but are not always, made through the use of words or phrases such as "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "seek," "should," "target," "will," "would," or the negative of these words or other comparable terminology. Accordingly, these statements involve estimates, assumptions and uncertainties which could cause actual results to differ materially from those expressed in them. Any forward–looking statements are qualified in their entirety by reference to the factors discussed throughout this prospectus, and in particular those factors referenced in the section "Risk Factors."

This prospectus, including the sections entitled "About this Prospectus" and "Risk Factors," contains forward—looking statements that are based on our management's belief and assumptions and on information currently available to our management. These statements relate to future events or our future financial performance, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward—looking statements. Forward—looking statements include, but are not limited to, statements about:

- general economic uncertainty and the effect of general economic conditions on the Company's industry in particular, including the level of demand and financial performance of the autonomous vehicle industry and market adoption of lidar;
- the Company's history of losses and whether it will continue to incur significant expenses and continuing losses for the foreseeable future; the effect of continued pricing pressures, automotive original equipment manufacturers ("OEMs") cost reduction initiatives and the ability of automotive OEMs to re—source or cancel vehicle or technology programs which may result in lower than anticipated margins, or losses, which may adversely affect the Company's business;
- the ability of the Company to protect and enforce its intellectual property rights;
- · whether the Company's lidar products are selected for inclusion in autonomous driving or ADAS systems by automotive OEMs or their suppliers;
- the Company's inability to reduce and control the cost of the inputs on which Luminar relies, which could negatively impact the adoption of its products and its profitability;
- · changes in personnel and availability of qualified personnel;
- the effects of the ongoing coronavirus (COVID-19) pandemic or other infectious diseases, health epidemics, pandemics and natural disasters on Luminar's business;
- the Company's ability to remediate the material weakness in its internal controls over financial reporting;
- · the Company's ability to transition to an outsourced manufacturing business model;
- · the Company's anticipated investments in and results from sales and marketing and research and development ("R&D");
- the success of the Company's customers in developing and commercializing products using the Company's solutions;
- the Company's estimated total addressable market;

- the amount and timing of future sales;
- whether the complexity of the Company's products results in undetected defects and reliability issues which could reduce market adoption of its new products, damage
 its reputation and expose the Company to product liability and other claims;
- strict government regulation that is subject to amendment, repeal or new interpretation and the Company's ability to comply with modified or new laws and regulations applying to its business;
- the Company's ability to recognize the anticipated benefits of the recently consummated Business Combination, which may be affected by, among other things, competition, and the ability of the Company to manage its growth and expand its business operations effectively;
- · whether the concentration of the Company's stock ownership and voting power limits the ability of the Company's stockholders to influence corporate matters;
- · the increasingly competitive environment in which the Company operates;
- the Company's ability to recognize the anticipated benefits of its customer partnerships and the volume of sales to such partners; and
- any changes in strategy by the Company's President and Chief Executive Officer and the Company's ability to execute on management's strategies for its future.

You should not rely upon forward—looking statements as predictions of future events. Such statements are based on management's expectations as of the date of this filing and involve many risks and uncertainties that could cause our actual results, events or circumstances to differ materially from those expressed or implied in our forward—looking statements. Such risks and uncertainties include those risks more fully discussed in the "Risk Factors" section in this prospectus, the section of any accompanying prospectus supplement entitled "Risk Factors" and the risk factors and cautionary statements described in other documents that we file from time to time with the SEC, specifically under "Item 1A: Risk Factors" and elsewhere in our most recent Annual Report on Form 10–K for the period ended December 31, 2020, and our Current Reports on Form 8–K.

Given these uncertainties, readers should not place undue reliance on our forward-looking statements. These forward-looking statements speak only as of the date on which the statements were made and are not guarantees of future performance. Except as may be required by applicable law, we do not undertake to update any forward-looking statements after the date of this prospectus or the respective dates of documents incorporated by reference herein or therein that include forward-looking statements.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of the securities as set forth in the applicable prospectus supplement.

DESCRIPTION OF OUR CAPITAL STOCK

The following description summarizes the most important terms of our capital stock. Because it is only a summary, it does not contain all of the information that may be important to you, and is qualified by reference to our Second Amended and Restated Certificate of Incorporation and our Amended and Restated Bylaws, which are exhibits to the registration statement of which this prospectus is a part. We urge you to read each of the Second Amended and Restated Certificate of Incorporation and the Amended and Restated Bylaws in their entirety for a complete description of the rights and preferences of our securities.

General

Pursuant to the terms of the Second Amended and Restated Certificate of Incorporation, our authorized capital stock consists of:

- 715,000,000 shares of Class A common stock, \$0.0001 par value per share ("Class A common stock");
- 121,000,000 shares of Class B common stock, \$0.0001 par value per share ("Class B common stock");
- 0 shares of Class F common stock, \$0.0001 par value per share ("Class F common stock"); and
- 10,000,000 shares of undesignated Preferred Stock, \$0.0001 par value per share ("Preferred Stock").

As of September 30, 2021, the Company had 259,808,501 and 101,588,670 shares of Class A and Class B common stock issued and outstanding, respectively.

Common Stock

Voting Power

Holders of Class A common stock are entitled to one vote per share and holders of Class B common stock are entitled to ten votes per share, on all matters submitted to a vote of stockholders. The holders of Class A common stock and Class B common stock will generally vote together as a single class on all matters submitted to a vote of stockholders, unless otherwise required by Delaware law or the Second Amended and Restated Certificate of Incorporation. Delaware law could require either holders of Class A common stock or Class B common stock to vote separately as a single class in the following circumstances:

- if we were to seek to amend the Second Amended and Restated Certificate of Incorporation to increase or decrease the par value of a class of the capital stock, then that class would be required to vote separately to approve the proposed amendment; and
- if we were to seek to amend the Second Amended and Restated Certificate of Incorporation in a manner that alters or changes the powers, preferences, or special rights of a class of capital stock in a manner that affected its holders adversely, then that class would be required to vote separately to approve the proposed amendment.

The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws established a classified board of directors that is divided into three classes with staggered three-year terms. Only the directors in one class will be subject to election by a plurality of the votes cast at each annual meeting of stockholders, with the directors in the other classes continuing for the remainder of their respective three-year terms. The Second Amended and Restated Certificate of Incorporation does not provide for cumulative voting for the election of directors.

Conversion

Each outstanding share of Class B common stock is convertible at any time at the option of the holder into one share of Class A common stock. In addition, each share of Class B common stock will convert automatically into one share of Class A common stock upon any transfer, whether or not for value, except for certain permitted transfers described in the paragraph that immediately follows this paragraph and further described in the Second

Amended and Restated Certificate of Incorporation. Once converted into Class A common stock, the Class B common stock will not be reissued.

A transfer of Class B common stock will not trigger an automatic conversion of such stock to Class A common stock if it is a permitted transfer. A permitted transfer is a transfer by certain holders of Class B common stock to any of the persons or entities listed in clauses "(i)" through "(v)" below, each referred to herein as a "Permitted Transferee", and from any such Permitted Transferee back to such holder of Class B common stock and/or any other Permitted Transferee established by or for such holder of Class B common stock: (i) to a trust for the benefit of the holder of Class B common stock and over which such holder of Class B common stock retains sole dispositive power and voting control, provided the holder of Class B common stock does not receive consideration in exchange for the transfer (other than as a settlor or beneficiary of such trust; (ii) to a trust for the benefit of persons other than the holder of Class B common stock so long as the holder of Class B common stock retains sole dispositive power and voting control, provided the holder of Class B common stock does not receive consideration in exchange for the transfer (other than as a settlor or beneficiary of such trust); (iii) to a trust under the terms of which such holder of Class B common stock has retained a "qualified interest" within the meaning of Section 2702(b)(1) of the U.S. Tax Code, and/or a reversionary interest so long as the holder of Class B common stock retains sole dispositive power and exclusive voting control with respect to the shares of Class B common stock held by such trust; (iv) to an Individual Retirement Account, as defined in Section 408(a) of the U.S. Tax Code, or a pension, profit sharing, stock bonus, or other type of plan or trust of which such holder of Class B common stock is a participant or beneficiary and which satisfies the requirements for qualification under Section 401 of the U.S. Tax Code, so long as such holder of Class B common stock retains sole dispositive power and exclusive voting control with

Each share of Class B common stock will convert automatically, without further action by the Company or the holder thereof, into one fully paid and nonassessable share of Class A common stock, upon: (a) the receipt by the Company of a written request for such conversion from the holders of a majority of the Class B common stock then outstanding, or, if later, the effective date for conversion specified in such request or (b) the occurrence of a transfer, other than a permitted transfer, of such share of Class B common stock.

Each outstanding share of Class B common stock held by a natural person or their Permitted Transferee will convert automatically into one share of Class A common stock upon the death or permanent disability of such holder.

Dividend Rights

Subject to preferences that may apply to any shares of Preferred Stock outstanding at the time, the holders of Class A common stock and Class B common stock are entitled to receive dividends out of funds legally available if the Board, in its discretion, determines to issue dividends and then only at the times and in the amounts that the Board may determine.

No Preemptive or Similar Rights

Class A common stock and Class B common stock will not be entitled to preemptive rights, and are not subject to conversion (except as noted above), redemption or sinking fund provisions.

Right to Receive Liquidation Distributions

If the Company becomes subject to a liquidation, dissolution or winding—up, the assets legally available for distribution to the stockholders would be distributable ratably among the holders of Class A common stock and Class B 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.

Fully Paid and Non-Assessable

All of the outstanding shares of Class A common stock and Class B common stock will be fully paid and non-assessable.

Preferred Stock

Our board of directors (the "Board") is authorized, subject to limitations prescribed by Delaware law, to issue Preferred Stock in one or more series, to establish from time to time the number of shares to be included in each series, and to fix the designation, vesting, powers, preferences, and rights of the shares of each series and any of its qualifications, limitations, or restrictions, in each case without further vote or action by the stockholders. The Board can also increase or decrease the number of shares of any series of Preferred Stock, but not below the number of shares of that series then outstanding, without any further vote or action by the stockholders.

The Board may authorize the issuance of Preferred Stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of Class A common stock and Class B common stock. The issuance of Preferred Stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring, or preventing a change in control of the Company and may adversely affect the market price of Class A common stock and the voting and other rights of the holders of Class A common stock and Class B common stock.

The particular terms of any series of Preferred Stock to be offered by this prospectus will be set forth in the prospectus supplement relating to the offering. The description of the terms of a particular series of Preferred Stock that will be set forth in the applicable prospectus supplement does not purport to be complete and will be qualified in its entirety by reference to the certificate of designation relating to the series. We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the Preferred Stock that we may offer under this prospectus, as well as the complete certificate of designation that contains the terms of the particular series of Preferred Stock.

Anti-Takeover Provisions

Some provisions of Delaware law, the Second Amended and Restated Certificate of Incorporation, and Amended and Restated Bylaws contain provisions that could make the following transactions more difficult: an acquisition of the Company by means of a tender offer; an acquisition of the Company by means of a proxy contest or otherwise; or the removal of incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in the Company's best interests, including transactions that provide for payment of a premium over the market price for the Company's shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of the Company to first negotiate with the Board. We believe that the benefits of the increased protection of the Company's potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure the Company outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Delaware Law

The Company is subject to the provisions of Section 203 of the DGCL regulating corporate takeovers. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years following the date on which the person became an interested stockholder unless:

• prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, (i) shares owned by persons who are directors and also officers and (ii) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to the date of the transaction, the business combination is approved by the board of directors of the corporation and authorized at an annual or special
 meeting of stockholders, and not by written consent, by the affirmative vote of at least two—thirds of the outstanding voting stock that is not owned by the interested
 stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction or series of transactions together resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock. We expect the existence of this provision to have an anti–takeover effect with respect to transactions the Board does not approve in advance. We also anticipate that Section 203 may also discourage attempts that might result in a premium over the market price for the shares of Class A common stock held by stockholders.

Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws provisions

The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws include a number of provisions that could deter hostile takeovers or delay or prevent changes in control of the Company's management team, including the following:

- Dual Class Common Stock. The Second Amended and Restated Certificate of Incorporation provides for a dual class common stock structure pursuant to which
 holders of Class B common stock will have the ability to control the outcome of matters requiring stockholder approval (even if they own significantly less than a
 majority of the shares of outstanding Class A common stock), including the election of directors and significant corporate transactions, such as a merger or other sale of
 the Company or its assets. Directors, executive officers, and employees, and their respective affiliates, may have the ability to exercise significant influence over those
 matters.
- Board of Directors Vacancies. The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws authorize only the Board to fill vacant directorships, including newly created seats. In addition, the number of directors constituting the Board is permitted to be set only by a resolution adopted by a majority vote of the Whole Board (as defined in the Second Amended and Restated Certificate of Incorporation). These provisions prevent a stockholder from increasing the size of the Board and then gaining control of the Board by filling the resulting vacancies with its own nominees. This makes it more difficult to change the composition of the Board but promotes continuity of management.
- Classified Board. The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws provide that the Board is divided into three classes of directors. The existence of a classified board of directors could discourage a third–party from making a tender offer or otherwise attempting to obtain control of the Company as it is more difficult and time consuming for stockholders to replace a majority of the directors on a classified board of directors.
- Directors Removed Only for Cause. The Second Amended and Restated Certificate of Incorporation provides that stockholders may remove directors only for cause.
- Supermajority Requirements for Amendments of The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws The Second Amended and Restated Certificate of Incorporation further provides that the affirmative vote of holders of at least two—thirds of the voting power of all of the then—outstanding shares of voting stock will be required to amend certain provisions of the Second Amended and Restated Certificate of Incorporation, including provisions relating to the classified

Board, the size of the Board, removal of directors, special meetings, actions by written consent, and designation of Preferred Stock. In addition, the affirmative vote of holders of 75% of the voting power of each of the then–outstanding Class A common stock and Class B common stock, voting separately by class, is required to amend the provisions of the Second Amended and Restated Certificate of Incorporation relating to the terms of the Class B common stock. The affirmative vote of holders of at least two–thirds of the voting power of all of the then–outstanding shares of voting stock is required to amend or repeal the Amended and Restated Bylaws, although the Amended and Restated Bylaws may be amended by a simple majority vote of the Board.

- Stockholder Action; Special Meeting of Stockholders. The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws provide that special meetings of stockholders may be called only by a majority of the Whole Board, the chairman of the Board, or the chief executive officer, thus prohibiting a stockholder from calling a special meeting. The Second Amended and Restated Certificate of Incorporation provides that the stockholders may not take action by written consent, but may only take action at annual or special meetings of stockholders. As a result, holders of capital stock are not able to amend the Amended and Restated Bylaws or remove directors without holding a meeting of stockholders called in accordance with the Amended and Restated Bylaws. These provisions might delay the ability of stockholders to force consideration of a proposal or for stockholders to take any action, including the removal of directors.
- Notice Requirements for Stockholder Proposals and Director Nominations. The Amended and Restated Bylaws provide advance notice procedures for stockholders seeking to bring business before the annual meeting of stockholders or to nominate candidates for election as directors at the annual meeting of stockholders. The Amended and Restated Bylaws also specify certain requirements regarding the form and content of a stockholder's notice. These provisions might preclude stockholders from bringing matters before the annual meeting of stockholders or from making nominations for directors at the annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions might also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of the Company.
- No Cumulative Voting. The DGCL provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless a corporation's certificate
 of incorporation provides otherwise. The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws do not provide for cumulative
 voting.
- Issuance of Undesignated Preferred Stock The Board will have the authority, without further action by the stockholders, to issue up to 10,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by the Board. The existence of authorized but unissued shares of Preferred Stock will enable the Board to render more difficult or to discourage an attempt to obtain control of the Company by means of a merger, tender offer, proxy contest, or other means.
- Choice of Forum. The Second Amended and Restated Certificate of Incorporation provides that the Chancery Court (or, if and only if the Chancery Court lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (1) any derivative action or proceeding brought on behalf of the Company; (2) any action or proceeding asserting a claim of breach of a fiduciary duty owed by any current or former director, officer, or other employee of the Company or any stockholder to the Company or the Company's stockholders; (3) any action or proceeding asserting a claim against the Company or any current or former director, officer or other employee of the Company or any stockholder in such stockholder's capacity as such arising out of or pursuant to any provision of the DGCL, the Second Amended and Restated Certificate of Incorporation or the Amended and Restated Bylaws; (4) any action or proceeding to interpret, apply, enforce or determine the validity of the Second Amended and Restated Certificate of Incorporation or the Amended and Restated Bylaws (including any right, obligation or

remedy thereunder); (5) any action or proceeding as to which the DGCL confers jurisdiction to the Chancery Court; and (6) any action asserting a claim against the Company or any director, officer or other employee of the Company or any stockholder, governed by the internal affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants. The provisions would not apply to suits brought to enforce a duty or liability created by the Securities Act, the Exchange Act, or any other claim for which the U.S. federal courts have exclusive jurisdiction. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, the Second Amended and Restated Certificate of Incorporation provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions. In such instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of the Second Amended and Restated Certificate of Incorporation. This may require significant additional costs associated with resolving such action in other jurisdictions and there can be no assurance that the provisions will be enforced by a court in those other jurisdictions.

Limitation of Liability and Indemnification

The Amended and Restated Bylaws provide that the Company will indemnify its directors and officers, and may indemnify its employees and other agents, to the fullest extent permitted by Delaware law.

Delaware law prohibits the Second Amended and Restated Certificate of Incorporation from limiting the liability of the Company's directors for the following:

- any breach of the director's duty of loyalty to the Company or to its stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- · unlawful payment of dividends or unlawful stock repurchases or redemptions; and
- any transaction from which the director derived an improper personal benefit.

If Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director, then the liability of the Company's directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. The Second Amended and Restated Certificate of Incorporation does not eliminate a director's duty of care and, in appropriate circumstances, equitable remedies, such as injunctive or other forms of non-monetary relief, remain available under Delaware law. This provision also does not affect a director's responsibilities under any other laws, such as the federal securities laws or other state or federal laws. Under the Amended and Restated Bylaws, the Company can purchase insurance on behalf of any person whom it is required or permitted to indemnify.

In addition to the indemnification required in the Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, the Company has entered into an indemnification agreement with each member of the Board and each of its officers. These agreements provide for the indemnification of the Company's directors and officers for certain expenses and liabilities incurred in connection with any action, suit, proceeding or alternative dispute resolution mechanism, or hearing, inquiry or investigation that may lead to the foregoing, to which they are a party or other participant, or are threatened to be made a party or other participant, by reason of the fact that they are or were a director, officer, employee, agent or fiduciary of the Company, by reason of any action or inaction by them while serving as an officer, director, agent or fiduciary, or by reason of the fact that they were serving at the Company's request as a director, officer, employee, agent or fiduciary of another entity. In the case of an action or proceeding by or in the right of the Company, no indemnification will be provided for any claim where a court

determines that the indemnified party is prohibited from receiving indemnification. We believe that these charter and bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in the Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit the Company and its stockholders. Moreover, a stockholder's investment may be harmed to the extent the Company pays the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Listing of Securities

Our Class A common stock is listed on the Nasdaq Global Select Market under the symbol "LAZR." The applicable prospectus supplement will contain information, where applicable, as to any other listing, if any, on the Nasdaq Global Select Market or any securities market or other exchange of the preferred stock covered by such prospectus supplement.

Transfer Agent and Registrar

The transfer agent and registrar for our Class A common stock is American Stock Transfer & Trust Company, LLC.

DESCRIPTION OF OUR DEBT SECURITIES

We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. Such convertible debt may be exchangeable for and/or convertible into shares of Class A common stock or any of the other securities that may be sold under this prospectus. The debt securities will be issued under one or more separate indentures between us and a designated trustee. We will include in a prospectus supplement the specific terms of each series of senior or subordinated debt securities being offered, including the terms, if any, on which a series of senior or subordinated debt securities may be convertible into or exchangeable for other securities. In addition, the material terms of any indenture, which will govern the rights of the holders of our senior or subordinated debt securities will be set forth in the applicable prospectus supplement.

We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete indenture that contains the terms of the debt securities.

DESCRIPTION OF OUR WARRANTS

We may issue warrants to purchase our debt or equity securities or securities of third parties or other rights, including rights to receive payment in cash or securities based on the value, rate or price of one or more specified commodities, currencies, securities or indices, or any combination of the foregoing. Warrants may be issued independently or together with any other securities and may be attached to, or separate from, such securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a warrant agent. The terms of any warrants to be issued and a description of the material provisions of the applicable warrant agreement will be set forth in the applicable prospectus supplement.

We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the warrants that we may offer under this prospectus, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants.

DESCRIPTION OF OUR UNITS

We may issue units consisting of any combination of the other types of securities offered under this prospectus in one or more series. We may evidence each series of units by unit certificates that we will issue under a separate agreement. We may enter into unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units.

We urge you to read the applicable prospectus supplement and any related free writing prospectus, as well as the complete unit certificate that contains the terms of the units.

PLAN OF DISTRIBUTION

We may sell our securities from time to time in one or more transactions. We may sell our securities to or through agents, underwriters, dealers, remarketing firms or other third parties or directly to one or more purchasers or through a combination of any of these methods. In some cases, we or dealers acting with us or on behalf of us may also purchase our securities and reoffer them to the public. We may also offer and sell, or agree to deliver, our securities pursuant to, or in connection with, any option agreement or other contractual arrangement.

Agents whom we designate may solicit offers to purchase our securities.

- We will name any agent involved in offering or selling our securities, and disclose any commissions that we will pay to the agent, in the applicable prospectus supplement.
- · Unless we indicate otherwise in the applicable prospectus supplement, agents will act on a best efforts basis for the period of their appointment.
- · Agents may be deemed to be underwriters under the Securities Act, of any of our securities that they offer or sell.

We may use an underwriter or underwriters in the offer or sale of our securities.

- If we use an underwriter or underwriters, we will execute an underwriting agreement with the underwriter or underwriters at the time that we reach an agreement for the sale of our securities.
- We will include the names of the specific managing underwriter or underwriters, as well as the names of any other underwriters, and the terms of the transactions, including the compensation the underwriters and dealers will receive, in the applicable prospectus supplement.
- The underwriters will use the applicable prospectus supplement, together with the prospectus, to sell our securities.

We may use a dealer to sell our securities.

- If we use a dealer, we will sell our securities to the dealer, as principal.
- The dealer will then sell our securities to the public at varying prices that the dealer will determine at the time it sells our securities.
- We will include the name of the dealer and the terms of the transactions with the dealer in the applicable prospectus supplement.

We may solicit directly offers to purchase our securities, and we may directly sell our securities to institutional or other investors, as well as to certain persons pursuant to, or in connection with, any commercial agreement or other contractual arrangement. We will describe the terms of direct sales in the applicable prospectus supplement.

We may engage in at-the-market offerings into an existing trading market in accordance with Rule 415(a)(4) of the Securities Act.

We may indemnify agents, underwriters and dealers against certain liabilities, including liabilities under the Securities Act. Agents, underwriters and dealers, or their affiliates, may be customers of, engage in transactions with or perform services for us or our respective affiliates, in the ordinary course of business.

We may authorize agents and underwriters to solicit offers by certain institutions to purchase our securities at the public offering price under delayed delivery contracts.

• If we use delayed delivery contracts, we will disclose that we are using them in the prospectus supplement and will tell you when we will demand payment and when delivery of our securities will be made under the delayed delivery contracts.

- · These delayed delivery contracts will be subject only to the conditions that we describe in the prospectus supplement.
- We will describe in the applicable prospectus supplement the commission that underwriters and agents soliciting purchases of our securities under delayed delivery contracts will be entitled to receive.

Unless otherwise specified in connection with a particular underwritten offering of our securities, the underwriters will not be obligated to purchase offered securities unless specified conditions are satisfied, and if the underwriters do purchase any offered securities, they will purchase all offered securities.

In connection with underwritten offerings of the offered securities and in accordance with applicable law and industry practice, the underwriters in certain circumstances are permitted to engage in certain transactions that stabilize the price of our securities. Such transactions consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of our securities. If the underwriters create a short position in our securities in connection with the offering (i.e., if they sell more securities than are set forth on the cover page of the applicable prospectus supplement), the underwriters may reduce that short position by purchasing our securities in the open market or as otherwise provided in the applicable prospectus supplement. The underwriters may also impose a penalty bid, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if the securities sold by them are repurchased in connection with stabilization transactions. In general, purchases of a security for the purpose of stabilization or to reduce a short position could cause the price of the security to be higher than it might be in the absence of such purchases. The imposition of a penalty bid might also have an effect on the price of our securities to the extent that it were to discourage resales of our securities. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We may effect sales of securities in connection with forward sale, option or other types of agreements with third parties. Any distribution of securities pursuant to any forward sale agreement may be effected from time to time in one or more transactions that may take place through a stock exchange, including block trades or ordinary broker's transactions, or through broker-dealers acting either as principal or agent, or through privately-negotiated transactions, or through an underwritten public offering, or through a combination of any such methods of sale, at market prices prevailing at the time of sale, prices relating to such prevailing market prices or at negotiated or fixed prices.

The specific terms of the lock-up provisions, if any, in respect of any given offering will be described in the applicable prospectus supplement.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Orrick, Herrington & Sutcliffe LLP. Certain attorneys with Orrick, Herrington & Sutcliffe LLP and certain funds affiliated with the firm own and/or have an indirect interest in shares of Class A common stock, which represent less than 1% of our Class A common stock. Any underwriters or agents will be advised about other issues relating to the offering by counsel to be named in the applicable prospectus supplement.

EXPERTS

The financial statements of Luminar Technologies, Inc. as of and for the years ended December 31, 2020 and 2019 incorporated by reference in this prospectus by reference to Luminar Technologies, Inc.'s Annual Report on Form 10–K for the year ended December 31, 2020 have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report. Such financial statements are incorporated by reference in reliance upon the report of such firm given their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

This prospectus is part of a registration statement we filed with the SEC. This prospectus, which constitutes part of the registration statement, does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. For further information with respect to the Company and its securities, reference is made to the registration statement and the exhibits and any schedules filed therewith. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at www.sec.gov.

We are subject to the information reporting requirements of the Exchange Act and we are required to file reports, proxy statements and other information with the SEC. These reports, proxy statements, and other information are available for inspection and copying at the SEC's website referred to above. We also maintain a website at www.luminartech.com, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" the information from other documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus. The information incorporated by reference is considered to be part of this prospectus, and later information that we file with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings (including those made after the date of the initial filing of the registration statement of which this prospectus is a part and prior to the effectiveness of such registration statement) we will make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act until the termination of the offering of the shares covered by this prospectus (other than information furnished under Item 2.02 or Item 7.01 of Form 8–K):

- our Annual Report on Form 10-K for the year ended December 31, 2020, filed with the SEC on April 14, 2021;
- our Quarterly Reports on Form 10–Q for the quarters ended March 31, 2021, June 30, 2021, and September 30, 2021, filed with the SEC on May 14, 2021, August 13, 2021 and November 15, 2021, respectively;
- the information specifically incorporated by reference into our Annual Report on Form 10–K for the year ended December 31, 2020, fron our definitive proxy statement filed with the SEC on April 30, 2021;
- our Current Reports on Form 8–K filed with the SEC on February 3, 2021, February 12, 2021, March 11, 2021, June 10, 2021, December 14, 2021, December 15, 2021, December 17, 2021 and December 23, 2021 (in each case, except for information contained therein which is furnished rather than filed); and
- the description of our Class A common stock in our registration statement on Form 8-A filed with the SEC on January 31, 2019, including any amendments thereto or reports filed for the purpose of updating such description.
- All documents filed by Luminar under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, that are filed (excluding, however, information we furnish to the SEC) (i) by us after the date of the initial registration statement and prior to its effectiveness and (ii) by us after the date of this prospectus and prior to the termination of any offering under this registration statement.

Any statement contained in this prospectus, or in a document all or a portion of which is incorporated by reference, shall be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, any applicable prospectus supplement and any related free writing prospectus or any document incorporated by reference modifies or supersedes such statement. Any such statement so modified or superseded shall not, except as so modified or superseded, constitute a part of this prospectus.

Upon request, we will provide, without charge, to each person, including any beneficial owner, to whom a copy of this prospectus is delivered a copy of the documents incorporated by reference into this prospectus. You may request a copy of these filings, and any exhibits we have specifically incorporated by reference as an exhibit in this prospectus, at no cost by writing or telephoning us at the following:

Luminar Technologies, Inc. 2603 Discovery Drive, Suite 100 Orlando, Florida 32826 Telephone: (407) 900–5259

You may also access these documents, free of charge on the SEC's website atwww.sec.gov or on the "Investors" page of our website at luminartech.com. Information contained on our website is not incorporated by reference into this prospectus, and you should not consider any information on, or that can be accessed from, our website as part of this prospectus or any accompanying prospectus supplement.

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.

We have not authorized anyone to provide you with information other than what is incorporated by reference or provided in this prospectus or any prospectus supplement. We are not making an offer of these securities in any state where such offer is not permitted. You should not assume that the information in this prospectus or in the documents incorporated by reference is accurate as of any date other than the date on the front of this prospectus or those documents.

The information in this preliminary prospectus is not complete and may be changed. The securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, Dated January 31, 2022.

PRELIMINARY PROSPECTUS



Luminar Technologies, Inc.

Up to 7,650,902 Shares of Class A Common Stock

This prospectus relates to the offer and sale from time to time by the selling stockholders (which term as used in this prospectus, includes their respective transferees, pledgees, distributees, donees, and successors—in—interest) named herein of up to 7,650,902 shares of our Class A common stock, par value \$0.0001 per share (the "Class A common stock"), which consists of: (i) up to 1,500,000 shares of Class A common stock that we agreed to issue in connection with entry into our strategic collaboration agreement with Daimler North America Corporation; (ii) 618,924 shares of Class A common stock that were issued in connection with our equity investment in Robotic Research OpCo, LLC; (iii) up to an aggregate of 4,288,074 shares of Class A common stock currently held by or issuable to Jun Hong Heng, a member of our board of directors, or entities affiliated with Mr. Heng, as described under "Selling Stockholders" in this prospectus; (iv) up to 958,060 shares that we agreed to issue in connection with entry into that certain consulting agreement with P3 USA, Inc., (v) up to 257,866 shares that we agreed to issue in connection with entry into that certain agreement with Seraph Consulting, Inc., (vi) up to 22,223 shares that we agreed to issue in connection with entry into that certain consulting agreement with STEER Tech and (vii) up to 5,755 shares of Class A common stock that we agreed to issue to Technical Representatives, Inc. in connection with a consulting arrangement.

The selling stockholders may offer, sell or distribute all or a portion of the securities hereby registered publicly or through private transactions at prevailing market prices or at negotiated prices. We will not receive any of the proceeds from such sales of the shares of Class A common stock. We will bear all costs, expenses and fees in connection with the registration of these securities, including with regard to compliance with state securities or "blue sky" laws. The selling stockholders will bear all commissions and discounts, if any, attributable to their sale of shares of Class A common stock. See "Plan of Distribution" beginning on page 18 of this prospectus.

Our registration of the securities covered by this prospectus does not mean that the selling stockholders will offer or sell any of the securities.

Our Class A common stock is listed on the Nasdaq Global Select Market under the symbol "LAZR". On January 28, 2022, the last reported sales price of our Class A common stock was \$13.03 per share.

Investing in our securities involves risks. See "Risk Factors" beginning on page 7 of this prospectus to read about factors you should consider before buying our securities.

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

The date of this prospectus is , 2022.

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You should rely only on the information provided in this prospectus, as well as the information incorporated by reference into this prospectus and any applicable prospectus supplement. Neither we nor the selling stockholders have authorized anyone to provide you with different information. Neither we nor the selling stockholders are making an offer of these securities in any jurisdiction where the offer is not permitted. You should not assume that the information in this prospectus, any applicable prospectus supplement or any documents incorporated by reference is accurate as of any date other than the date of the applicable document. Since the date of this prospectus and the documents incorporated by reference into this prospectus, our business, financial condition, results of operations and prospects may have changed.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S–3 that we filed with the Securities and Exchange Commission (the "SEC") using the "shelf" registration process. Under this shelf registration process, the selling stockholders may, from time to time, sell the securities offered by them described in this prospectus. We will not receive any proceeds from the sale by such selling stockholders of the securities offered by them described in this prospectus.

Neither we nor the selling stockholders have authorized anyone to provide you with any information or to make any representations other than those contained in this prospectus or any applicable prospectus supplement or any free writing prospectuses prepared by or on behalf of us or to which we have referred you. Neither we nor the selling stockholders take responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. Neither we nor the selling stockholders will make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted.

We may also provide a prospectus supplement to add information to, or update or change information contained in, this prospectus. Any statement contained in this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in such prospectus supplement modifies or supersedes such statement. Any statement so modified will be deemed to constitute a part of this prospectus only as so modified, and any statement so superseded will be deemed not to constitute a part of this prospectus. You should read both this prospectus and any applicable prospectus supplement together with the additional information to which we refer you in the sections of this prospectus entitled "Where You Can Find Additional Information" and "Incorporation of Certain Information by Reference."

Unless the context indicates otherwise, references in this prospectus to the "Company," "Luminar," "we," "us," "our" and similar terms refer to Luminar Technologies, Inc. and its consolidated subsidiaries.

Luminar, the Luminar logo and our other registered or common law trademarks, service marks or trade names appearing in this prospectus are the property of Luminar. Solely for convenience, our trademarks, tradenames and service marks referred to in this prospectus appear without the ®, TM and SM symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights to these trademarks and tradenames. Other trademarks, service marks and trade names used in this prospectus are the property of their respective owners.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and any accompanying prospectus supplement contains forward–looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), that are forward–looking and as such are not historical facts. These forward–looking statements include, without limitation, statements regarding future financial performance, business strategies, expansion plans, future results of operations, estimated revenues, sales estimates/Order Book numbers, losses, projected costs, prospects, plans and objectives of management. These forward–looking statements are based on our management's current expectations, estimates, projections and beliefs, as well as a number of assumptions concerning future events, and are not guarantees of performance. Such statements can be identified by the fact that they do not relate strictly to historical or current facts. When used in this prospectus and any accompanying prospectus supplement, words such as "outlook," "believes," "expects," "potential," "continues," "may," "will," "should," "seeks," "approximately," "predicts," "intends," "plans," "estimates," "anticipates" or the negative version of these words or other comparable words or phrases, may identify forward–looking statements, but the absence of these words does not mean that a statement is not forward–looking. The following factors among others, could cause actual results and future events to differ materially from those set forth or contemplated in the forward–looking statements:

- general economic uncertainty and the effect of general economic conditions on the Company's industry in particular, including the level of demand and financial performance of the autonomous vehicle industry and market adoption of lidar;
- the Company's history of losses and whether it will continue to incur significant expenses and continuing losses for the foreseeable future; the effect of continued pricing pressures, automotive original equipment manufacturers ("OEMs") cost reduction initiatives and the ability of automotive OEMs to re–source or cancel vehicle or technology programs which may result in lower than anticipated margins, or losses, which may adversely affect the Company's business;
- the ability of the Company to protect and enforce its intellectual property rights;
- · whether the Company's lidar products are selected for inclusion in autonomous driving or ADAS systems by automotive OEMs or their suppliers;
- the Company's inability to reduce and control the cost of the inputs on which Luminar relies, which could negatively impact the adoption of its products and its profitability;
- · changes in personnel and availability of qualified personnel;
- the effects of the ongoing coronavirus (COVID-19) pandemic or other infectious diseases, health epidemics, pandemics and natural disasters on Luminar's business;
- · the Company's ability to remediate the material weakness in its internal controls over financial reporting;
- · the Company's ability to transition to an outsourced manufacturing business model;
- · the Company's anticipated investments in and results from sales and marketing and research and development ("R&D");
- · the success of the Company's customers in developing and commercializing products using the Company's solutions;
- the Company's estimated total addressable market;
- · the amount and timing of future sales;

- whether the complexity of the Company's products results in undetected defects
 and reliability issues which could reduce market adoption of its new products,
 damage its reputation and expose the Company to product liability and other claims;
- strict government regulation that is subject to amendment, repeal or new interpretation and the Company's ability to comply with modified or new laws and regulations applying to its business;
- the Company's ability to recognize the anticipated benefits of the recently consummated Business Combination, which may be affected by, among other things, competition, and the ability of the Company to manage its growth and expand its business operations effectively;
- · whether the concentration of the Company's stock ownership and voting power limits the ability of the Company's stockholders to influence corporate matters;
- · the increasingly competitive environment in which the Company operates;
- · the Company's ability to recognize the anticipated benefits of its customer partnerships and the volume of sales to such partners; and
- · any changes in strategy by the Company's President and Chief Executive Officer and the Company's ability to execute on management's strategies for its future.

The forward–looking statements contained in this prospectus are based on our current expectations and beliefs concerning future developments and their potential effects on our business. There can be no assurance that future developments affecting our business will be those that we have anticipated. These forward–looking statements involve a number of risks, uncertainties (some of which are beyond our control) or other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward–looking statements. These risks and uncertainties include, but are not limited to, those factors described in the section entitled "Risk Factors." 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 such risk factors, nor can we assess the effect of all such risk factors on our business or the extent to which any factor or combination of factors may cause actual results to differ materially from those contained in any forward–looking statements. Should one or more of these risks or uncertainties materialize, or should any of the assumptions prove incorrect, actual results may vary in material respects from those projected in these forward–looking statements.

The forward–looking statements made by us in this prospectus and any accompanying prospectus supplement speak only as of the date of this prospectus and the accompanying prospectus supplement. Except to the extent required under the federal securities laws and rules and regulations of the SEC, we disclaim any obligation to update any forward–looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. In light of these risks and uncertainties, there is no assurance that the events or results suggested by the forward–looking statements will in fact occur, and you are cautioned not to place undue reliance on these forward–looking statements.

PROSPECTUS SUMMARY

The following summary highlights selected information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our securities, you should carefully read this entire prospectus, including all documents incorporated by reference herein and the information set forth under the headings "Risk Factors".

The Company

Our vision is to make autonomous transportation safe and ubiquitous. As a global leader in lidar autonomous driving technology, we are enabling the world's first autonomous solutions for automotive series production in passenger cars and commercial trucks.

Founded in 2012 by President and Chief Executive Officer Austin Russell, we built a new type of lidar from the chip—level up, with technological breakthroughs across all core components. As a result, we have created what we believe is the only lidar sensor that meets the demanding performance, safety, and cost requirements for autonomous vehicles in production bypassing the traditional limitations of legacy lidar technology, while also enabling Advanced Driving Assistance Systems ("ADAS") with our Proactive Safety solution. Integrating this advanced hardware with our custom developed software stack enables a turn—key autonomous solution to accelerate widespread adoption across automakers at series production scale.

Our lidar hardware and software products help set the standard for safety in the industry, and are designed to enable accurate and reliable detection of some of the most challenging "edge cases" that autonomous vehicles can encounter on a regular basis. This is achieved by advancing existing lidar range and resolution to new levels, ensuring hard—to—see objects like a tire on the road ahead or a child that runs into the street are more likely to be detected. Our software is also critical to interpreting the data and informing autonomous and assisted driving decisions.

Corporate Information

We were incorporated in the State of Delaware in August 2018 as a special purpose acquisition company under the name Gores Metropoulos, Inc. On February 5, 2019, we completed our initial public offering. On December 2, 2020, we consummated the business combination (the "Business Combination") pursuant to the Agreement and Plan of Merger (the "Merger Agreement"), dated August 24, 2020, with the pre–Business Combination Luminar Technologies, Inc. ("Legacy Luminar"). Legacy Luminar was incorporated in Delaware on March 31, 2015. In connection with the consummation of the Business Combination, we changed our name from Gores Metropoulos. Inc. to Luminar Technologies. Inc.

Our principal executive offices are located at 2603 Discovery Drive, Suite 100, Orlando, Florida 32826. Our telephone number is (407) 900–5259. Our website address is www.luminartech.com. Information contained on our website or connected thereto does not constitute part of, and is not incorporated by reference into, this prospectus or the registration statement of which it forms a part.

The Offering

Class A common stock offered by the selling stockholders from time to time

Use of proceeds

Risk Factors

Nasdaq Global Select Market Symbol

Up to 7,650,902 shares

We will not receive any proceeds from the sale of shares of Class A common stock by the selling stockholders.

See "Risk Factors" and other information included in this prospectus for a discussion of factors you should consider before investing in our securities.

"LAZR"

Description of Share Issuances

Daimler North America Corporation

We have entered into a strategic collaboration agreement with Daimler North America Corporation ("Daimler") to develop and integrate ourtechnology on its next-generation series production passenger vehicles as well as other defined activities. As part of the collaboration and subject to data privacy laws and customer consent, Daimler will share certain data from development and production vehicles with our lidars to be used for continuous product improvement and updates. In exchange for certain services provided under the strategic collaboration, we agreed to issue 1,500,000 shares of our Class A common stock to Daimler in a private placement transaction, subject to certain mutually agreed vesting conditions, and we will record stock-based compensation expense as vesting milestones are met. This agreement follows a separate prior agreement pursuant to which we are developing our Iris lidar technology with the intent to integrate it in series production vehicles by Daimler, in which we receive non-recurring engineering service fees for certain defined work.

Robotic Research

We entered into a Class A Preferred Unit Purchase Agreement with Robotic Research OpCo, LLC pursuant to which we acquired an equity interest in Robotic Research OpCo, LLC in exchange for 618,924 shares of our Class A common stock we issued in a private placement to that entity.

Jun Hong Heng and Affiliates

Entities affiliated with Jun Hong Heng have acquired (or have a right to receive) up to an aggregate of 4,288,074 shares of our Class A common stock in connection with certain investments prior to the commencement of his service as a member of our board of directors.

P3 USA, Inc.

We entered into a consulting arrangement with P3 USA, Inc., pursuant to which we agreed to issue shares of our Class A common stock in a private placement to P3 USA, Inc. We are registering 958,060 shares of our Class A common stock hereunder in connection therewith.

Seraph Consulting, Inc.

We entered into an agreement with Seraph Consulting, Inc. pursuant to which we agreed to issue up to 257,866 shares of our Class A common stock in a private placement to that entity.

STEER Tech

We entered into a consulting agreement with STEER Tech, Inc. pursuant to which we agreed to issue up to 22,223 shares of our Class A common stock in a private placement to that entity.

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Technical	R	epresentatives.	Inc

We entered into a consulting arrangement with Technical Representatives, Inc., pursuant to which we agreed to issue up to 5,755 shares of our Class A common stock in a private placement to that entity.

We filed the registration statement on Form S-3, of which this prospectus forms a part, to provide for the resale by the selling stockholders of these shares.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the risks and uncertainties described in the documents incorporated by reference in this prospectus and any prospectus supplement, as well as other information we include or incorporate by reference into this prospectus and any applicable prospectus supplement, before making an investment decision. Our business, financial condition or results of operations could be materially adversely affected by the materialization of any of these risks. 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. This prospectus and the documents incorporated herein by reference also contain forward—looking statements that involve risks and uncertainties. Actual results could differ materially from those anticipated in these forward—looking statements as a result of certain factors, including the risks described under the headings "Risk Factors" in the documents incorporated herein by reference, including in our Annual Report on Form 10–K for the year ended December 31, 2020, in any applicable prospectus supplement and any risk factors set forth in our other filings with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, including our Quarterly Reports on Form 10–Q and our Current Reports on Form 8–K, before making an investment decision.

USE OF PROCEEDS

All of the securities offered by the selling stockholders pursuant to this prospectus will be sold by the selling stockholders for their respective accounts. We will not receive any of the proceeds from these sales.

The selling stockholders will pay any underwriting discounts and commissions and expenses incurred by the selling stockholders for brokerage, accounting, tax or legal services or any other expenses incurred by the selling stockholders in disposing of the securities. We will bear the costs, fees and expenses incurred in effecting the registration of the securities covered by this prospectus, including all registration and filing fees, Nasdaq listing fees and fees and expenses of our counsel and our independent registered public accounting firm.

SELLING STOCKHOLDERS

We have prepared this prospectus to allow the selling stockholders to offer and sell from time to time up to 7,650,902 shares of our Class A common stock for their own account.

The following table sets forth (i) the name of each selling stockholder, (ii) the number of shares beneficially owned by each of the respective selling stockholders, including the shares over which the selling stockholder has sole or shared voting power or investment power and also any shares that the selling stockholder has the right to acquire within 60 days of such date through the exercise of any stock options, restricted stock units or other rights, (iii) the number of shares that may be offered under this prospectus, and (iv) the number of shares of our Class A common stock beneficially owned by the selling stockholders assuming all of the shares covered hereby are sold. We do not know how long the selling stockholders will hold the shares before selling them, and we currently have no agreements, arrangements, or understandings with the selling stockholders regarding the sale or other disposition of any shares. To our knowledge, none of the selling stockholders listed in the table below has, or during the three years prior to the date of this prospectus supplement has had, any position, office, or other material relationships with us or any of our affiliates other than as described in the footnotes.

The information set forth in the table below is based upon information obtained from the selling stockholders. Beneficial ownership of the selling stockholders is determined in accordance with Rule 13d–3(d) under the Exchange Act. The percentage of shares beneficially owned prior to, and after, the offering is based on 259,808,501 shares of Class A common stock outstanding and 101,588,670 shares of Class B common stock outstanding as of September 30, 2021. None of the selling stockholders held any Class B common stock prior to, and after, the offering.

As used in this prospectus, the term "selling stockholder" includes the selling stockholder listed in the table below and any of their transferees, pledgees, distributees, donees and successors.

Class A Common Stock Beneficially Owned Prior to the Offering Class A Common Stock Beneficially Owned After the Offering

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Name	Number	Percentage	Voting Power**	Number Registered for Sale Hereby	Number	Percentage	Voting Power**
Daimler North America Corporation ⁽¹⁾	1,500,000	*	*	1,500,000	_	_	_
Robotic Research OpCo, LLC(2)	618,924	*	*	618,924	_	_	_
Jun Hong Heng ⁽³⁾⁽⁴⁾	4,288,074	1.19 %	*	4,288,074	_	_	_
Technical Representatives, Inc. ⁽⁵⁾	5,755	*	*	5,755	_	_	_
Seraph Consulting, Inc. ⁽⁶⁾	257,866	*	*	257,866	_	_	_
STEER Tech ⁽⁷⁾	22,223	*	*	22,223	_	_	_
P3 USA, Inc. ⁽⁸⁾	958,060	*	*	958,060	_	_	_

^{*} Less than 1%.

^{***} Percentage of total voting power represents voting power with respect to all shares of Class A common stock and Class B common stock, as a single class. Each share of Class B common stock is entitled to ten votes per share and each share of Class A common stock is entitled to one vote per share. For more information about the voting rights of common stock, see the section below titled "Description of Our Capital Stock."

⁽¹⁾ The address for Daimler North America Corporation is 36455 Corporate Dr., Farmington Hills, MI 48331.

⁽²⁾ The address for Robotic Research OpCo, LLC is 22601 Gateway Center Dr., Clarksburg, MD 20871.

⁽³⁾ Includes (i) 1,599,427 shares of Class A common stock held by Press Room LLC, an entity managed by Mr. Heng, and (ii) 463,902 shares of Class A common stock held by Heng Zhao JT Revocable Trust, a trust in which Mr. Heng is a co-trustee. Mr. Heng may be deemed to hold voting and dispositive power over the shares held by these entities. Mr. Heng is a member of our board of directors. The address for Mr. Heng is c/o Luminar Technologies, Inc., 2603 Discovery Drive, Suite 100, Orlando, FL 32826.

⁽⁴⁾ Includes (i) 40,130 shares of Class A common stock held by CC Holdings I LLC; (ii) 853,995 shares of Class A common stock held by Crescent Cove Capital II, LP; (iii) 262,705 shares of Class A common stock held by Crescent Cove Opportunity Foreign Intermediary, LLC; (iv) 675,435 shares of Class A common stock held by Crescent Cove Opportunity Fund, LP; (v) 143,423 shares of Class A common stock held by CC Holdings IV, LLC; (vi) 34,786 shares of Class A common stock held by Crescent Cove LTI-SPV, LP; (vii) 41,412 shares

of Class A common stock held by Crescent Cove Luminar SPV, LLC; (viii) 17,018 shares of Class A common stock held by Crescent Cove Capital LP.; and (ix) 7,107 shares of Class A common stock held by CC Holdings IX Co-Invest Fund, LP. Crescent Cove Capital GP, LLC, Crescent Cove Capital II GP, LLC, and Crescent Cove Opportunity GP, LP (collectively "General Partner") are the general partner of the stockholders named herein. Crescent Cove Capital Management, LLC and Crescent Cove Advisors, LP (collectively "Investment Manager") are the investment manager of such stockholders. Also includes 18,559 shares held directly by Mr. Heng and up to 130,175 shares of Class A common stock issuable in the aggregate to certain entities affiliated with Mr. Heng as earn out consideration pursuant to the Merger Agreement. Mr. Heng, a member of our board of directors, is the managing member of the General Partner and the Investment Manager of such stockholders, and therefore, may be deemed to hold voting and dispositive power over the shares held by the stockholders named herein. The address for these selling stockholders is c/o Crescent Cove Capital Management, LLC, 530 Bush Street, Suite 703, San Francisco, CA 94108.

- (5) The address for Technical Representatives, Inc. is 1608 Stowe Rd., Reston, VA 20194.
- (6) The address for Seraph Consulting, Inc. is 5800 Crooks Rd., Suite 101, Troy, Michigan 48098.
- (7) The address for STEER Tech is 10840 Guilford Rd., #401-402, Annapolis Junction, MD 20701.
- (8) The address for P3 USA, Inc. is One North Main Street, 4th Floor Greenville, SC 29601.

DESCRIPTION OF OUR CAPITAL STOCK

The following description summarizes the most important terms of our capital stock. Because it is only a summary, it does not contain all of the information that may be important to you, and is qualified by reference to our Second Amended and Restated Certificate of Incorporation and our Amended and Restated Bylaws, which are exhibits to the registration statement of which this prospectus is a part. We urge you to read each of the Second Amended and Restated Certificate of Incorporation and the Amended and Restated Bylaws in their entirety for a complete description of the rights and preferences of our securities.

General

Pursuant to the terms of the Second Amended and Restated Certificate of Incorporation, our authorized capital stock consists of:

- 715,000,000 shares of Class A common stock, \$0.0001 par value per share ("Class A common stock");
- 121,000,000 shares of Class B common stock, \$0.0001 par value per share ("Class B common stock");
- 0 shares of Class F common stock, \$0.0001 par value per share ("Class F common stock"); and
- 10,000,000 shares of undesignated Preferred Stock, \$0.0001 par value per share ("Preferred Stock").

As of September 30, 2021, the Company had 259,808,501 and 101,588,670 shares of Class A and Class B common stock issued and outstanding, respectively.

Common Stock

Voting Power

Holders of Class A common stock are entitled to one vote per share and holders of Class B common stock are entitled to ten votes per share, on all matters submitted to a vote of stockholders. The holders of Class A common stock and Class B common stock will generally vote together as a single class on all matters submitted to a vote of stockholders, unless otherwise required by Delaware law or the Second Amended and Restated Certificate of Incorporation. Delaware law could require either holders of Class A common stock or Class B common stock to vote separately as a single class in the following circumstances:

- if we were to seek to amend the Second Amended and Restated Certificate of Incorporation to increase or decrease the par value of a class of the capital stock, then that class would be required to vote separately to approve the proposed amendment; and
- if we were to seek to amend the Second Amended and Restated Certificate of Incorporation in a manner that alters or changes the powers, preferences, or special rights of a class of capital stock in a manner that affected its holders adversely, then that class would be required to vote separately to approve the proposed amendment.

The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws established a classified board of directors that is divided into three classes with staggered three-year terms. Only the directors in one class will be subject to election by a plurality of the votes cast at each annual meeting of stockholders, with the directors in the other classes continuing for the remainder of their respective three-year terms. The Second Amended and Restated Certificate of Incorporation does not provide for cumulative voting for the election of directors.

Conversion

Each outstanding share of Class B common stock is convertible at any time at the option of the holder into one share of Class A common stock. In addition, each share of Class B common stock will convert automatically into one share of Class A common stock upon any transfer, whether or not for value, except for certain permitted transfers described in the paragraph that immediately follows this paragraph and further described in the Second

Amended and Restated Certificate of Incorporation. Once converted into Class A common stock, the Class B common stock will not be reissued.

A transfer of Class B common stock will not trigger an automatic conversion of such stock to Class A common stock if it is a permitted transfer. A permitted transfer is a transfer by certain holders of Class B common stock to any of the persons or entities listed in clauses "(i)" through "(v)" below, each referred to herein as a "Permitted Transferee", and from any such Permitted Transferee back to such holder of Class B common stock and/or any other Permitted Transferee established by or for such holder of Class B common stock: (i) to a trust for the benefit of the holder of Class B common stock and over which such holder of Class B common stock retains sole dispositive power and voting control, provided the holder of Class B common stock does not receive consideration in exchange for the transfer (other than as a settlor or beneficiary of such trust); (ii) to a trust for the benefit of persons other than the holder of Class B common stock so long as the holder of Class B common stock retains sole dispositive power and voting control, provided the holder of Class B common stock does not receive consideration in exchange for the transfer (other than as a settlor or beneficiary of such trust); (iii) to a trust under the terms of which such holder of Class B common stock has retained a "qualified interest" within the meaning of Section 2702(b)(1) of the U.S. Tax Code, and/or a reversionary interest so long as the holder of Class B common stock retains sole dispositive power and exclusive voting control with respect to the shares of Class B common stock held by such trust; (iv) to an Individual Retirement Account, as defined in Section 408(a) of the U.S. Tax Code, or a pension, profit sharing, stock bonus, or other type of plan or trust of which such holder of Class B common stock is a participant or beneficiary and which satisfies the requirements for qualification under Section 401 of the U.S. Tax Code, so long as such holder of Class B common stock retains sole dispositive power and exclusive voting control wit

Each share of Class B common stock will convert automatically, without further action by the Company or the holder thereof, into one fully paid and nonassessable share of Class A common stock, upon: (a) the receipt by the Company of a written request for such conversion from the holders of a majority of the Class B common stock then outstanding, or, if later, the effective date for conversion specified in such request or (b) the occurrence of a transfer, other than a permitted transfer, of such share of Class B common stock.

Each outstanding share of Class B common stock held by a natural person or their Permitted Transferee will convert automatically into one share of Class A common stock upon the death or permanent disability of such holder.

Dividend Rights

Subject to preferences that may apply to any shares of Preferred Stock outstanding at the time, the holders of Class A common stock and Class B common stock are entitled to receive dividends out of funds legally available if the Board, in its discretion, determines to issue dividends and then only at the times and in the amounts that the Board may determine.

No Preemptive or Similar Rights

Class A common stock and Class B common stock will not be entitled to preemptive rights, and are not subject to conversion (except as noted above), redemption or sinking fund provisions.

Right to Receive Liquidation Distributions

If the Company becomes subject to a liquidation, dissolution or winding—up, the assets legally available for distribution to the stockholders would be distributable ratably among the holders of Class A common stock and Class B 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.

Fully Paid and Non-Assessable

All of the outstanding shares of Class A common stock and Class B common stock will be fully paid and non-assessable.

Preferred Stock

Our board of directors (the "Board") is authorized, subject to limitations prescribed by Delaware law, to issue Preferred Stock in one or more series, to establish from time to time the number of shares to be included in each series, and to fix the designation, vesting, powers, preferences, and rights of the shares of each series and any of its qualifications, limitations, or restrictions, in each case without further vote or action by the stockholders. The Board can also increase or decrease the number of shares of any series of Preferred Stock, but not below the number of shares of that series then outstanding, without any further vote or action by the stockholders.

The Board may authorize the issuance of Preferred Stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of Class A common stock and Class B common stock. The issuance of Preferred Stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring, or preventing a change in control of the Company and may adversely affect the market price of Class A common stock and the voting and other rights of the holders of Class A common stock and Class B common stock.

Anti-Takeover Provisions

Some provisions of Delaware law, the Second Amended and Restated Certificate of Incorporation, and Amended and Restated Bylaws contain provisions that could make the following transactions more difficult: an acquisition of the Company by means of a tender offer; an acquisition of the Company by means of a proxy contest or otherwise; or the removal of incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in the Company's best interests, including transactions that provide for payment of a premium over the market price for the Company's shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of the Company to first negotiate with the Board. We believe that the benefits of the increased protection of the Company's potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure the Company outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Delaware Law

The Company is subject to the provisions of Section 203 of the DGCL regulating corporate takeovers. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years following the date on which the person became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, (i) shares owned by persons who are directors and also officers and (ii) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

• at or subsequent to the date of the transaction, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction or series of transactions together resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock. We expect the existence of this provision to have an anti–takeover effect with respect to transactions the Board does not approve in advance. We also anticipate that Section 203 may also discourage attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws provisions

The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws include a number of provisions that could deter hostile takeovers or delay or prevent changes in control of the Company's management team, including the following:

- Dual Class Common Stock. The Second Amended and Restated Certificate of Incorporation provides for a dual class common stock structure pursuant to which
 holders of Class B common stock will have the ability to control the outcome of matters requiring stockholder approval (even if they own significantly less than a
 majority of the shares of outstanding Class A common stock), including the election of directors and significant corporate transactions, such as a merger or other sale of
 the Company or its assets. Directors, executive officers, and employees, and their respective affiliates, may have the ability to exercise significant influence over those
 matters.
- Board of Directors Vacancies. The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws authorize only the Board to fill
 vacant directorships, including newly created seats. In addition, the number of directors constituting the Board is permitted to be set only by a resolution adopted by a
 majority vote of the Whole Board (as defined in the Second Amended and Restated Certificate of Incorporation). These provisions prevent a stockholder from increasing
 the size of the Board and then gaining control of the Board by filling the resulting vacancies with its own nominees. This makes it more difficult to change the
 composition of the Board but promotes continuity of management.
- Classified Board. The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws provide that the Board is divided into three classes of directors. The existence of a classified board of directors could discourage a third–party from making a tender offer or otherwise attempting to obtain control of the Company as it is more difficult and time consuming for stockholders to replace a majority of the directors on a classified board of directors.
- Directors Removed Only for Cause. The Second Amended and Restated Certificate of Incorporation provides that stockholders may remove directors only for cause.
- Supermajority Requirements for Amendments of The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws. The Second Amended and Restated Certificate of Incorporation further provides that the affirmative vote of holders of at least two—thirds of the voting power of all of the then—outstanding shares of voting stock will be required to amend certain provisions of the Second Amended and Restated Certificate of Incorporation, including provisions relating to the classified Board, the size of the Board, removal of directors, special meetings, actions by written consent, and designation of Preferred Stock. In addition, the affirmative vote of holders of 75% of the voting power of each of the then—outstanding Class A common stock and Class B common stock, voting separately by class, is required to amend the provisions of the Second Amended and Restated Certificate of Incorporation relating to the terms of the Class B common stock. The affirmative vote of holders of at least two—thirds of the voting power of all of the then—outstanding shares of voting stock is required to amend or repeal the

Amended and Restated Bylaws, although the Amended and Restated Bylaws may be amended by a simple majority vote of the Board.

- Stockholder Action; Special Meeting of Stockholders. The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws provide that special meetings of stockholders may be called only by a majority of the Whole Board, the chairman of the Board, or the chief executive officer, thus prohibiting a stockholder from calling a special meeting. The Second Amended and Restated Certificate of Incorporation provides that the stockholders may not take action by written consent, but may only take action at annual or special meetings of stockholders. As a result, holders of capital stock are not able to amend the Amended and Restated Bylaws or remove directors without holding a meeting of stockholders called in accordance with the Amended and Restated Bylaws. These provisions might delay the ability of stockholders to force consideration of a proposal or for stockholders to take any action, including the removal of directors.
- Notice Requirements for Stockholder Proposals and Director Nominations. The Amended and Restated Bylaws provide advance notice procedures for stockholders seeking to bring business before the annual meeting of stockholders or to nominate candidates for election as directors at the annual meeting of stockholders. The Amended and Restated Bylaws also specify certain requirements regarding the form and content of a stockholder's notice. These provisions might preclude stockholders from bringing matters before the annual meeting of stockholders or from making nominations for directors at the annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions might also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of the Company.
- No Cumulative Voting. The DGCL provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless a corporation's certificate of incorporation provides otherwise. The Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws do not provide for cumulative voting.
- Issuance of Undesignated Preferred Stock The Board will have the authority, without further action by the stockholders, to issue up to 10,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by the Board. The existence of authorized but unissued shares of Preferred Stock will enable the Board to render more difficult or to discourage an attempt to obtain control of the Company by means of a merger, tender offer, proxy contest, or other means.
- Choice of Forum. The Second Amended and Restated Certificate of Incorporation provides that the Chancery Court (or, if and only if the Chancery Court lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (1) any derivative action or proceeding brought on behalf of the Company; (2) any action or proceeding asserting a claim of breach of a fiduciary duty owed by any current or former director, officer, or other employee of the Company or any stockholder; (3) any action or proceeding asserting a claim against the Company or any current or former director, officer or other employee of the Company or any stockholder; capacity as such arising out of or pursuant to any provision of the DGCL, the Second Amended and Restated Certificate of Incorporation or the Amended and Restated Bylaws; (4) any action or proceeding any right, obligation or remedy thereunder); (5) any action or proceeding as to which the DGCL confers jurisdiction to the Chancery Court; and (6) any action asserting a claim against the Company or any director, officer or other employee of the Company or any stockholder, governed by the internal affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants. The provisions would not apply to suits brought to enforce a duty or liability created by the Securities Act, the Exchange Act, or any other claim for which the U.S. federal courts have

exclusive jurisdiction. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, the Second Amended and Restated Certificate of Incorporation provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions. In such instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of the Second Amended and Restated Certificate of Incorporation. This may require significant additional costs associated with resolving such action in other jurisdictions and there can be no assurance that the provisions will be enforced by a court in those other jurisdictions.

Limitation of Liability and Indemnification

The Amended and Restated Bylaws provide that the Company will indemnify its directors and officers, and may indemnify its employees and other agents, to the fullest extent permitted by Delaware law.

Delaware law prohibits the Second Amended and Restated Certificate of Incorporation from limiting the liability of the Company's directors for the following:

- any breach of the director's duty of loyalty to the Company or to its stockholders;
- · acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- · unlawful payment of dividends or unlawful stock repurchases or redemptions; and
- · any transaction from which the director derived an improper personal benefit.

If Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director, then the liability of the Company's directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. The Second Amended and Restated Certificate of Incorporation does not eliminate a director's duty of care and, in appropriate circumstances, equitable remedies, such as injunctive or other forms of non-monetary relief, remain available under Delaware law. This provision also does not affect a director's responsibilities under any other laws, such as the federal securities laws or other state or federal laws. Under the Amended and Restated Bylaws, the Company can purchase insurance on behalf of any person whom it is required or permitted to indemnify.

In addition to the indemnification required in the Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, the Company has entered into an indemnification agreement with each member of the Board and each of its officers. These agreements provide for the indemnification of the Company's directors and officers for certain expenses and liabilities incurred in connection with any action, suit, proceeding or alternative dispute resolution mechanism, or hearing, inquiry or investigation that may lead to the foregoing, to which they are a party or other participant, or are threatened to be made a party or other participant, by reason of the fact that they are or were a director, officer, employee, agent or fiduciary of the Company, by reason of any action or inaction by them while serving as an officer, director, agent or fiduciary, or by reason of the fact that they were serving at the Company's request as a director, officer, employee, agent or fiduciary of another entity. In the case of an action or proceeding by or in the right of the Company, no indemnification will be provided for any claim where a court determines that the indemnified party is prohibited from receiving indemnification. We believe that these charter and bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in the Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws may discourage stockholders from bringing a lawsuit against

directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit the Company and its stockholders. Moreover, a stockholder's investment may be harmed to the extent the Company pays the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Listing of Securities

Our Class A common stock is listed on the Nasdaq Global Select Market under the symbol "LAZR." The applicable prospectus supplement will contain information, where applicable, as to any other listing, if any, on the Nasdaq Global Select Market or any securities market or other exchange of the preferred stock covered by such prospectus supplement.

Transfer Agent and Registrar

The transfer agent and registrar for our Class A common stock is American Stock Transfer & Trust Company, LLC.

PLAN OF DISTRIBUTION

The selling stockholders may offer and sell, from time to time, their respective shares of Class A common stock covered by this prospectus. The selling stockholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. Such sales may be made on one or more exchanges or in the over-the-counter market or otherwise, at prices and under terms then prevailing or at prices related to the then current market price or in negotiated transactions. The selling stockholders may sell their securities by one or more of, or a combination of, the following methods:

- purchases by a broker-dealer as principal and resale by such broker-dealer for its own account pursuant to this prospectus;
- ordinary brokerage transactions and transactions in which the broker—dealer solicits purchasers;
- block trades in which the broker-dealer so engaged will attempt to sell the shares or warrants as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- an over–the–counter distribution in accordance with the rules of Nasdag;
- through trading plans entered into by a selling stockholder pursuant to Rule 10b5—1 under the Exchange Act that are in place at the time of an offering pursuant to this prospectus and any applicable prospectus supplement hereto that provide for periodic sales of their securities on the basis of parameters described in such trading plans;
- · distribution to employees, members, partners or stockholders of the selling stockholders;
- · in privately negotiated transactions; and
- · through a combination of any of the above methods of sale, as described below, or any other method permitted pursuant to applicable law.

The selling stockholders may also sell all or any shares in open market transactions under Rule 144 under the Securities Act or Section 4(a)(1) under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other broker dealers to participate in sales. The selling stockholders and any broker-dealers or agents 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 or agents 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 stockholders have informed us that, except as set forth below, none of them have any agreement or understanding, directly or indirectly, with any person to distribute the Class A common stock. If any selling stockholder notifies us that a material arrangement has been entered into with a broker–dealer for the sale of shares through a block trade, special offering or secondary distribution or a purchase by a broker or dealer, to the extent required, our Class A common stock to be sold, the respective purchase prices and public offering prices, the names of any agent, dealer or underwriter, and any applicable discounts, commissions, concessions or other compensation with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post–effective amendment to the registration statement that includes this prospectus.

A selling stockholder that is an entity may elect to make an in–kind distribution of Class A common stock to its members, partners or shareholders pursuant to the registration statement of which this prospectus is a part by delivering a prospectus. To the extent that such members, partners or shareholders are not affiliates of ours, such members, partners or shareholders would thereby receive freely tradable shares of Class A common stock pursuant to the distribution through a registration statement.

In order to comply with the securities laws of certain states, if applicable, the securities must be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states the securities may

not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of securities in the market and to the activities of the selling stockholders and their affiliates. In addition, we will make copies of this prospectus available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the securities against certain liabilities, including liabilities arising under the Securities Act.

Certain agents, underwriters and dealers, and their associates and affiliates, may be customers of, have borrowing relationships with, engage in other transactions with, or perform services, including investment banking services, for us or one or more of our respective affiliates and/or the selling stockholders or one or more of its respective affiliates in the ordinary course of business for which they receive compensation.

There can be no assurance that any selling stockholder will sell any or all of the shares of Class A common stock registered pursuant to the shelf registration statement, of which this prospectus forms a part. We are required to pay all fees and expenses incident to the registration of the shares. We have agreed to indemnify certain of the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act. We may be indemnified by the selling stockholders against civil liabilities, including liabilities under the Securities Act that may arise from written information furnished to us by the selling stockholders specifically for use in this prospectus.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Orrick, Herrington & Sutcliffe LLP. Certain attorneys with Orrick, Herrington & Sutcliffe LLP and certain funds affiliated with the firm own and/or have an indirect interest in shares of Class A common stock, which represent less than 1% of our Class A common stock. Any underwriters or agents will be advised about other issues relating to the offering by counsel to be named in the applicable prospectus supplement.

EXPERTS

The financial statements of Luminar Technologies, Inc. as of and for the years ended December 31, 2020 and 2019 incorporated by reference in this prospectus by reference to Luminar Technologies, Inc.'s Annual Report on Form 10–K for the year ended December 31, 2020 have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report. Such financial statements are incorporated by reference in reliance upon the report of such firm given their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S–3 under the Securities Act with respect to the shares of Class A common stock offered hereby. This prospectus, which constitutes part of the registration statement, does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. For further information with respect to the Company and its Class A common stock, reference is made to the registration statement and the exhibits and any schedules filed therewith. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at www.sec.gov.

We are subject to the information reporting requirements of the Exchange Act and we are required to file reports, proxy statements and other information with the SEC. These reports, proxy statements, and other information are available for inspection and copying at the SEC's website referred to above. We also maintain a website at www.luminartech.com, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" the information from other documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus. The information incorporated by reference is considered to be part of this prospectus, and later information that we file with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings (including those made after the date of the initial filing of the registration statement of which this prospectus is a part and prior to the effectiveness of such registration statement) we will make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act until the termination of the offering of the shares covered by this prospectus (other than information furnished under Item 2.02 or Item 7.01 of Form 8–K):

- our Annual Report on Form 10-K for the year ended December 31, 2020, filed with the SEC on April 14, 2021;
- our Quarterly Reports on Form 10–Q for the quarters ended March 31, 2021, June 30, 2021, and September 30, 2021, filed with the SEC on May 14, 2021, August 13, 2021 and November 15, 2021, respectively;
- the information specifically incorporated by reference into our Annual Report on Form 10–K for the year ended December 31, 2020, fron our definitive proxy statement filed with the SEC on April 30, 2021;
- our Current Reports on Form 8–K filed with the SEC on February 3, 2021, February 12, 2021, March 11, 2021, June 10, 2021, December 14, 2021, December 15, 2021, December 17, 2021 and December 23, 2021 (in each case, except for information contained therein which is furnished rather than filed); and
- the description of our Class A common stock in our registration statement on Form 8-A filed with the SEC on January 31, 2019, including any amendments thereto or reports filed for the purpose of updating such description.
- All documents filed by Luminar under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, that are filed (excluding, however, information we furnish to the SEC) (i) by us after the date of the initial registration statement and prior to its effectiveness and (ii) by us after the date of this prospectus and prior to the termination of any offering under this registration statement.

Any statement contained in this prospectus, or in a document all or a portion of which is incorporated by reference, shall be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, any applicable prospectus supplement and any related free writing prospectus or any document incorporated by reference modifies or supersedes such statement. Any such statement so modified or superseded shall not, except as so modified or superseded, constitute a part of this prospectus.

Upon request, we will provide, without charge, to each person, including any beneficial owner, to whom a copy of this prospectus is delivered a copy of the documents incorporated by reference into this prospectus. You may request a copy of these filings, and any exhibits we have specifically incorporated by reference as an exhibit in this prospectus, at no cost by writing or telephoning us at the following:

Luminar Technologies, Inc. 2603 Discovery Drive, Suite 100 Orlando, Florida 32826 Telephone: (407) 900–5259

You may also access these documents, free of charge on the SEC's website atwww.sec.gov or on the "Investors" page of our website at luminartech.com. Information contained on our website is not incorporated by reference into this prospectus, and you should not consider any information on, or that can be accessed from, our website as part of this prospectus or any accompanying prospectus supplement.

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.

We have not authorized anyone to provide you with information other than what is incorporated by reference or provided in this prospectus or any prospectus supplement. We are not making an offer of these securities in any state where such offer is not permitted. You should not assume that the information in this prospectus or in the documents incorporated by reference is accurate as of any date other than the date on the front of this prospectus or those documents.

Part II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following is an estimate of the expenses (all of which are to be paid by the registrant) that we may incur in connection with the securities being registered hereby.

SEC registration fee (1)	\$ 28,142
Legal fees and expenses	*
Accounting fees and expenses	*
Miscellaneous	*
Total	\$ *

^{*} These fees are calculated based on the securities offered and the number of issuances and accordingly cannot be defined at this time.

Item 15. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law (the "DGCL") provides that a corporation may indemnify directors and officers as well as other employees and individuals against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with any threatened, pending or completed actions, suits or proceedings in which such person is made a party by reason of such person being or having been a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise. The DGCL provides that Section 145 is not exclusive of other rights to which those seeking indemnification may be entitled under any bylaws, agreement, vote of stockholders or disinterested directors or otherwise. The registrant's Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws provide for indemnification by the registrant of its directors and officers to the fullest extent permitted by the DGCL.

Section 102(b)(7) of the DGCL permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (1) for any breach of the director's duty of loyalty to the corporation or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) for unlawful payments of dividends or unlawful stock repurchases, redemptions or other distributions or (4) for any transaction from which the director derived an improper personal benefit. The registrant's Second Amended and Restated Certificate of Incorporation provides for such limitation of liability to the fullest extent permitted by the DGCL.

The registrant has entered into, and expects to continue to enter into, indemnification agreements with each of its directors and executive officers. These agreements provide that the registrant will indemnify each of its directors and such officers to the fullest extent permitted by law.

Any underwriting agreement or distribution agreement that the registrant enters into with any underwriters or agents involved in the offering or sale of any securities registered hereby may require such underwriters or dealers to indemnify the registrant, some or all of its directors and officers and its controlling persons, if any, for specified liabilities, which may include liabilities under the Securities Act.

The registrant also maintains standard policies of insurance under which coverage is provided to its directors and officers against loss arising from claims made by reason of breach of duty or other wrongful act, while acting in their capacity as directors and officers of the registrant.

⁽¹⁾ Of this amount, \$21,667 was previously paid.

Item 16. Exhibits and Financial Statement Schedules.

(a)Exhibits.

Incorporation by Reference Exhibit/Appendix Exhibit Number Description Form File Number Reference Filing Date Filed Herewith Form of Underwriting Agreement 1.1* 1.2 Form of Subscription Agreement S-3 333-262250 1.2 1/20/22 Second Amended and Restated Certificate of Incorporation of the Company 3.1 8-K/A001 - 387913.1 12/8/203.2 Amended and Restated By-Laws of the Company 8-K/A 001-38791 3.2 12/8/20 4 1 Specimen Class A Common Stock Certificate 8-K/A 001-38791 4 1 12/8/20 4.2* Form of any certificate of designation with respect to any preferred stock issued hereunder and the related form of preferred stock certificate 4.3* Form of any warrant agreement with respect to each particular series of warrants issued hereunder 4.4* Form of any unit agreement with respect to any unit issued hereunder 4.5 Form of Indenture S-3 333-262250 4.5 1/20/22 Form of Note 4.6* Opinion of Orrick, Herrington & Sutcliffe LLP 5.1 X 23.1 X Consent of Deloitte & Touche LLP 23.2 Consent of Orrick, Herrington & Sutcliffe LLP. X (included in Exhibit 5.1) 1/20/22 S-3 333-262250 24.1 24.1 Power of Attorney 25.1** Statement of Eligibility on Form T-1 under the Trust Indenture Act of 1939, as amended of the Trustee under the Indenture 107 Filing Fee Disclosure and Payments Methods X

^{*} To be filed, if necessary, subsequent to the effectiveness of this registration by an amendment to this registration statement or incorporation by reference pursuant to a Current Report on Form 8–K in connection with an offering of securities.

^{**} To be filed as an exhibit to a Current Report on Form 8-K or pursuant to Section 305(b)(2) of the Trust Indenture Act of 1939 and incorporated herein by reference.

Item 17. Undertakings.

- (a) 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 of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the 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 the 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 20% 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 the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i), (ii) and (iii) above 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 that are incorporated by reference in the registration statement or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, 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 of 1933 to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. 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 first use, 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 date of first use.
- (5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the 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, the 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 the 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 the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the 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.
- (c) The undersigned registrant hereby undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the Commission under section 305(b)(2) of the Trust Indenture Act.
- (d) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, 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 of 1933 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 of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Amendment No. 1 to the registration statement to be signed on behalf by the undersigned, thereunto duly authorized in the City of Orlando, State of Florida, January 31, 2022.

LUMINAR TECHNOLOGIES, INC.

By: /s/ Thomas J. Fennimore

Thomas J. Fennimore Chief Financial Officer

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Amendment No. 1 to the registration statement to be signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date		
* Austin Russell	President, Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)	January 31, 2022		
/s/ Thomas J. Fennimore Thomas J. Fennimore	Chief Financial Officer (Principal Financial and Accounting Officer)	January 31, 2022		
* Alec E. Gores	- Director	January 31, 2022		
* Jun Hong Heng	- Director	January 31, 2022		
* Mary Lou Jepsen, PhD	- Director	January 31, 2022		
* Shaun Maguire, PhD	- Director	January 31, 2022		
* Katharine A. Martin	- Director	January 31, 2022		
* Matthew J. Simoncini	- Director	January 31, 2022		

*By /s/ Thomas J. Fennimore
Thomas J. Fennimore
Attorney-in-fact

Calculation of Filing Fee Tables

Form S-3 (Form Type)

Luminar Technologies, Inc. (Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Type	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
					Newly Regi	stered Securities						
Fees to be Paid	Equity	Common Stock	Other	5,531,978(1)	\$12.625(2)	\$69,841,223(2)	\$92.70	\$6,475				
Fees Previously Paid	Equity	Common Stock										
	Equity	Preferred Stock										
	Debt	Debt Securities										
	Other	Warrants										
	Other	Units										
	Unallocated (Universal) Shelf	_	457(o)	(3)	(4)	\$204,000,000		\$18,911				
	Equity	Common Stock	Other	2,118,924(1)	\$14.03(5)	\$29,728,504(5)		\$2,756				
					Carry For	ward Securities						
Carry Forward Securities	_	_	_	_		_			_	_	_	_
	Total Offering Amounts				\$303,569,727		\$28,142					
	Total Fees Previously Paid							\$21,667				
	Total Fees Offsets							_				
	Net Fee Due							\$6,475				

- (1) Pursuant to Rule 416 under the Securities Act, the shares of Class A common stock being registered hereunder include such indeterminate number of shares of Class A common stock as may be issuable with respect to the shares being registered hereunder as a result of stock splits, stock dividends or similar transactions.
- (2) The proposed maximum offering price per security for the secondary offering was determined pursuant to Rule 457(c) under the Securities Act based on the average high and low prices reported for the Registrant's Class A common stock on January 28, 2022.
- (3) There are being registered hereunder such indeterminate amount of the securities of each identified class as may from time to time be offered hereunder by the Registrant at indeterminate prices which shall have an aggregate initial offering price not to exceed \$204,000,000. The securities being registered hereunder also include such indeterminate amount of securities as may be issued upon exercise, settlement, exchange or conversion securities offered or sold hereunder, or pursuant to the antidilution provisions of any such securities. If any debt securities are issued at an original issue discount, then the principal amount of such debt securities shall be in such greater amount as shall result in an aggregate initial offering price not to exceed \$204,000,000, less the aggregate dollar amount of all securities previously issued hereunder. Any securities registered under this registration statement may be sold separately or as units with other securities registered under this registration
- (4) The proposed maximum offering price per security for the primary offering will be determined, from time to time, by the Registrant in connection with the issuance by the Registrant of the securities registered hereunder and is not specified as to each class of security pursuant to General Instruction II.D. of Form S–3 under the Securities Act.
- (5) The proposed maximum offering price per security for the secondary offering was determined pursuant to Rule 457(c) under the Securities Act based on the average high and low prices reported for the Registrant's Class A common stock on January 19, 2022 (which was within 5 business days of the date that this registration statement was first filed).

Table 2: Fee Offset Claims and Sources

	Registrant or Filer Name	Form or Filing Type	File Number	Initial Filing Date	Filing Date	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
					Rules	457(b) and 0-11(a)(2))				
Fee Offset Claims		_	_	_		_					
Fee Offset Sources	_		_								_
	•	•			•	Rules 457(p)	•			•	
Fee Offset Claims	_		_	_		_					
Fee Offset Sources	_	_	_		_						_

Table 3: Combined Prospectuses

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
_	_	_				_



Orrick, Herrington & Sutcliffe LLF The Orrick Building 405 Howard Street San Francisco, CA 94105-2669 +1-415-773-5700 orrick com

January 31, 2022

Luminar Technologies, Inc. 2603 Discovery Drive, Suite 100 Orlando, Florida 32826

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Luminar Technologies, Inc., a Delaware corporation (the "Company"), in connection with the filing by the Company of a Registration Statement on Form S-3 (the "Registration Statement") with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), containing (i) a base prospectus (the "Base Prospectus") and (ii) a prospectus covering the resale by the selling stockholders named therein (the "Resale Prospectus") of up to 7,650,902 shares of the Company's Class A common stock, par value \$0.0001 per share (the "Class A common stock"). The Base Prospectus provides that it will be supplemented in the future by one or more prospectus supplements (each, a "Prospectus Supplement").

The Registration Statement, including the Base Prospectus (as supplemented from time to time by one or more Prospectus Supplements) and the Resale Prospectus, will provide for the registration of: (A) pursuant to the Base Prospectus, the offering by the Company of up to \$204,000,000 aggregate dollar amount of any combination of (i) shares of Class A common stock ("Company Shares"), including shares of Class A common stock that may be issued upon the conversion of Preferred Stock or Debt Securities (each as defined below) or the exercise of Warrants (as defined below); (ii) shares of preferred stock of the Company, \$0.0001 par value per share ("Preferred Stock"), which may be issued in one or more series, including Preferred Stock that may be issued upon the conversion of Debt Securities or the exercise of Warrants; (iii) debt securities of the Company, which may be senior or subordinated, and which may be issued in one or more series ("Debt Securities"); (iv) warrants to purchase Class A Common Stock, Preferred Stock or Debt Securities, or other securities, currencies or commodities ("Warrants"); and (v) units consisting of Class A Common Stock, Preferred Stock, Debt Securities or Warrants, in any combination ("Units"); and (B) pursuant to the Resale Prospectus, the resale of up to 7,650,902 shares of Class A common stock, consisting of (i) 4,776,823 shares of Class A common stock, (the "Resale Shares") currently held by certain selling stockholders named in the Resale Prospectus and (ii)(1) up to 1,500,000 shares of Class A common stock issuable in a private placement pursuant to a certain Strategic Collaboration Agreement dated November 17, 2021 (the "Strategic Collaboration Agreement") between the Company and Daimler North America Corporation, (2) up to 130,175 shares of Class A common stock issuable as earn out consideration pursuant to a certain Merger Agreement dated August 24, 2020 (the "Merger Agreement") by and among the Company, the pre-business combination Luminar Technologies, Inc. and the other par



stock issuable in a private placement pursuant to a certain consulting agreement dated September 14, 2021 between the Company and P3 USA, Inc. (the "P3 Consulting Agreement"), (4) up to 257,866 shares of Class A common stock issuable in a private placement pursuant to a certain Statement of Work dated December 10, 2021 between the Company and Seraph Consulting, Inc. (the "Seraph SOW"), (5) up to 22,223 shares of Class A common stock issuable in a private placement pursuant to a certain consulting agreement dated September 4, 2021 between the Company and STEER Tech (the "STEER Consulting Agreement") and (6) up to 5,755 shares of Class A common stock issuable in a private placement pursuant to a certain consulting agreement dated December 6, 2021 (the "TRI Consulting Agreement") between the Company and Technical Representative, Inc. The Company Shares, Preferred Stock, Debt Securities, Warrants and Units are collectively referred to herein as the "Securities". The Strategic Collaboration Agreement, the Merger Agreement, the P3 Consulting Agreement, the Seraph SOW, the STEER Consulting Agreement and the TRI Consulting Agreement are collectively referred to herein as the "Transaction Shares". The Securities, the Resale Shares and the Transaction Shares are being registered for offer and sale from time to time pursuant to Rule 415 under the Securities Act.

The offering of the Securities will be as set forth in the Base Prospectus, as supplemented by one or more Prospectus Supplements. The preferences, limitations and relative rights of shares of any series of Preferred Stock will be set forth in a Certificate of Designation (a "Certificate of Designation"). The Debt Securities may be issued pursuant to an indenture between the Company and a bank or trust company to be appointed in the future and duly qualified under the Trust Indenture Act of 1939, as amended (the "Trust Indenture Act"), as trustee (a "Trustee"), in the form filed as Exhibit 4.5 to the Registration Statement and one or more board resolutions, supplements thereto or officer's certificates thereunder (such indenture, together with the applicable board resolution, supplement or officer's certificate pertaining to the applicable series of Debt Securities, the "Indenture"). The Warrants may be issued pursuant to a warrant agreement (a "Warrant Agreement") to be entered into between the Company and a bank or trust company to be named, as warrant agent. The Units may be issued pursuant to a Unit Agreement (a "Unit Agreement") to be entered into between the Company and a bank or trust company to be named, as unit agent.

We have examined and relied upon (a) the Registration Statement, the Base Prospectus and the Resale Prospectus, (b) the Company's certificate of incorporation and bylaws, each as amended and restated through the date hereof, and (c) originals or copies, certified or otherwise, identified to our satisfaction, of such records of the Company, such certificates of public officials, officers of the Company and other persons, and such other documents, agreements and instruments as we have deemed relevant and necessary for the purpose of rendering our opinions set forth below.

In such examination, we have assumed the following: (i) the authenticity of original documents and the genuineness of all signatures; (ii) the conformity to the originals of all documents submitted to us as



copies; (iii) the legal competence of all signatories to such documents; and (iv) the truth, accuracy and completeness of the information, factual matters, representations and warranties contained in the records, certificates, documents, agreements and instruments we have reviewed.

We have also assumed that: (i) the Registration Statement and any amendments thereto (including post-effective amendments) will have become effective under the Securities Act and such effectiveness shall not have been terminated or rescinded (ii) one or more Prospectus Supplements or term sheets describing the Securities offered thereby will have been prepared, delivered and filed with the Commission and will comply with all applicable laws; (iii) the Board of Directors of the Company, or a duly authorized committee thereof, shall have taken such action as may be necessary to authorize the issuance and sale of such Securities, and if applicable, establish the relative rights and preferences of such Securities, or other terms of such Securities, in each case as set forth in or contemplated by the Registration Statement, the Base Prospectus and any Prospectus Supplement relating to such Securities; (iv) all Securities will be issued and sold in compliance with applicable federal and state securities laws and in the manner stated in the Registration Statement, the Base Prospectus and the applicable Prospectus Supplement; (v) there shall not have occurred any change in law affecting the legality or enforceability of such Securities; (vi) a definitive purchase, underwriting or similar agreement with respect to any Securities offered or issued will have been duly authorized and validly executed and delivered by the Company and the other parties thereto; (vii) the Indenture will be duly qualified under the Trust Indenture Act and the applicable Trustee is qualified to act as trustee under the Indenture; (viii) any Securities issuable upon conversion, exchange, or exercise of any Securities being offered or issued will be duly authorized, created, and, if appropriate, reserved for issuance upon such conversion, exchange, or exercise; (ix) after the issuance of any Securities offered pursuant to the Registration Statement, the total number of issued shares of Class A common stock or Preferred Stock, as applicable, together with the total number of shares of such stock issuable upon the exercise, exchange, conversion or settlement, as the case may be, of any exercisable, exchangeable or convertible security (including without limitation any Unit), as the case may be, then outstanding, will not exceed the total number of authorized shares of Class A common stock or Preferred Stock, as applicable, available for issuance under the Company's certificate of incorporation as then in effect; (x) the consideration received for the issuance and sale of Company Shares or Preferred Stock, as applicable, will be in an amount that is not less than the par value per share of such stock; (xi) at the time of the issuance and sale of the Securities, the Company will be validly existing as a corporation and in good standing under the laws of the State of Delaware; (xii) except as specifically covered in the opinions set forth below, each of the Debt Securities, Warrants, Units and the applicable Indenture, Warrant Agreement and Unit Agreement constitute valid and binding obligations of each party thereto; (xiii) any Warrant Agreement or Unit Agreement will be governed by the laws of the State of New York; and (xiv) none of the terms of any Securities to be established subsequent to the date hereof, nor the issuance and delivery of such Securities, nor the compliance by the Company with the terms thereof, will result in the violation of any applicable law, result in a default under or breach of any agreement or instrument then binding upon the Company or result in the violation of any restriction imposed by any court or governmental body having jurisdiction over the Company.



Our opinion herein is limited to the General Corporation Law of the State of Delaware and, with respect to the opinions set forth in paragraphs (3) through (5) below, the laws of the State of New York.

Based upon and subject to the foregoing, we are of opinion that:

- 1. The Company Shares will be validly issued, fully paid and nonassessable at such time as: (a) the terms of the issuance and sale of the Company Shares have been duly authorized by appropriate action of the Company; and (b) the Company Shares have been duly issued and paid for as contemplated by the Registration Statement, the Base Prospectus and any Prospectus Supplement relating thereto.
- 2. The Preferred Stock will be validly issued, fully paid and nonassessable at such time as: (a) the terms of the issuance and sale of the Preferred Stock have been duly authorized by appropriate action of the Company; (b) a Certificate of Designation relating to the applicable series of Preferred Stock has been filed with the Secretary of State of the State of Delaware in the form and manner required by law; and (c) the Preferred Stock has been duly issued and paid for as contemplated by the Registration Statement, the Base Prospectus and any Prospectus Supplement relating thereto.
- 3. The Debt Securities will constitute valid and binding obligations of the Company at such time as: (a) the applicable Indenture has been duly authorized, executed and delivered by the Company and the Trustee; (b) the forms and the terms of the Debt Securities and their issuance and sale have been duly established in conformity with the applicable Indenture and approved by appropriate action of the Company; (c) the Debt Securities have been duly executed and delivered by the Company and authenticated by the Trustee in accordance with the applicable Indenture; and (d) the Debt Securities have been issued and paid for as contemplated by the Registration Statement, the Base Prospectus and any Prospectus Supplement relating thereto.
- 4. The Warrants will constitute valid and binding obligations of the Company at such time as: (a) the applicable Warrant Agreement relating to the Warrants has been duly authorized, executed and delivered by the Company and the applicable warrant agent; (b) the forms and the terms of the Warrants and their issuance and sale have been duly established in conformity with the applicable Warrant Agreement and approved by appropriate action of the Company; (c) the Warrants have been duly executed and delivered by the Company and authenticated by the applicable warrant agent in accordance with the applicable Warrant Agreement; and (d) the Warrants have been issued and paid for as contemplated by the Registration Statement, the Base Prospectus and any Prospectus Supplement relating thereto.
- 5. The Units will constitute valid and binding obligations of the Company at such time as: (a) the applicable Unit Agreement relating to the Units has been duly authorized, executed and delivered by the Company and the applicable unit agent; (b) the terms of the Units (including the Securities underlying



the Units) and their issuance and sale have been duly established in conformity with the applicable Unit Agreement and approved by appropriate action of the Company; (c) the Units (and the Securities underlying the Units) have been duly executed and delivered by the Company and authenticated by the applicable unit agent in accordance with the applicable Unit Agreement; and (d) the Units have been issued and paid for as contemplated by the Registration Statement, the Base Prospectus and any Prospectus Supplement relating thereto.

- 6. The Resale Shares have been validly issued and are fully paid and non-assessable.
- 7. The Transaction Shares will be, when issued and paid for in accordance with the terms of the respective Transaction Agreement, validly issued, fully paid and nonassessable.

The opinions set forth in paragraphs (3) through (5) above are subject, as to enforcement, to (a) the effect of bankruptcy, insolvency, liquidation, receivership, moratorium, reorganization, fraudulent conveyance or similar laws relating to or affecting the rights of creditors generally; (b) general principles of equity, including, without limitation, concepts of materiality, reasonableness, good faith, fair dealing, and the rules governing the availability of specific performance or injunctive relief, whether enforcement is sought in a proceeding in equity or at law; and (c) provisions of law that require that a judgment for money damages rendered by a court in the United States be expressed only in United States dollars.

We consent to the filing of this opinion letter as an exhibit to the Registration Statement and to the use of our name under the caption "Legal Matters" in the Base Prospectus and Resale Prospectus included in the Registration Statement. In giving such consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act, or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ ORRICK, HERRINGTON & SUTCLIFFE LLP

ORRICK, HERRINGTON & SUTCLIFFE LLP

We consent to the incorporation by reference in this Registration Statement on Form S-3 (Registration No. 333-262250) of our report dated April 14, 2021 relating to the financial statements of Luminar Technologies, Inc, appearing in the Annual Report on Form 10-K of Luminar Technologies, Inc for the year ended December 31, 2020. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ Deloitte & Touche LLP

San Jose, California January 31, 2022