EMAGIN CORP
Form S-1/A
January 23, 2018

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As filed with the Securities and Exchange Commission on January 22, 2018

Registration No. 333-222375

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

AMENDMENT NO. 2 TO

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

eMAGIN CORPORATION

(Exact name of Registrant as specified in its charter)

Delaware	**3679**	**56-1764501**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

2070 Route 52
Hopewell Junction, NY 12533
(845) 838-7900

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Andrew G. Sculley
Chief Executive Officer
eMagin Corporation
2070 Route 52
Hopewell Junction, NY 12533
(845) 838-7900

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

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Approximate date of commencement of proposed sale to the public:
As soon as practicable after the effective date of this registration statement.

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, check the following box. ý

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

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. o

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

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 o	Accelerated Filer o	Non-Accelerated Filer o (Do not check if a smaller reporting company)	Smaller Reporting Company ý
			Emerging Growth Company o

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

CALCULATION OF REGISTRATION FEE

Title of each Class of Securities to be Registered	**Proposed Maximum Aggregate Offering Price(1)(2)**	**Amount of Registration Fee(3)**
Common stock, par value $0.001 per share	$11,500,000	$1,431.75
Warrants to purchase shares of common stock(4)	$	
Shares of common stock issuable upon exercise of the warrants	$4,600,000	$572.70
Total	$16,100,000	$2,004.45

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

(2) Includes the offering price of any additional shares of common stock and warrants that the underwriters have an option to purchase to cover over-allotments, if any.

(3)

A registration fee of $1,789.69 was previously paid in connection with the filing of this Registration Statement.

(4) No additional registration fee is payable pursuant to Rule 457(g) under the Securities Act.

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.

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

Subject to Completion, Dated January 22, 2018

PRELIMINARY PROSPECTUS

$10,000,000
6,451,613 Shares of Common Stock
Warrants to Purchase up to 2,580,645 Shares of Common Stock

We are selling 6,451,613 shares of our common stock and warrants to purchase up to 2,580,645 shares of our common stock (and the shares of common stock issuable from time to time upon exercise of these warrants). Each share of common stock is being sold together in a fixed combination with a warrant to purchase four tenths of one share of common stock at an initial exercise price of $ per whole share of common stock for a term of five years. The fixed combination is being sold at a public offering price of $ per share and associated warrant. The shares of common stock and warrants are immediately separate and will be issued separately but can only be purchased together in this offering.

Stillwater Trust LLC, one of our largest stockholders, has expressed an interest in purchasing up to $500,000 of shares of our common stock and warrants to purchase shares of our common stock in a fixed combination at a price equal to the public offering price of $ per share and associated warrant, in a separate private placement that is expected to close concurrently with this offering. The sale of such shares of common stock and warrants in the concurrent private placement will not be registered under the Securities Act of 1933, as amended.

In addition, certain of our directors and executive officers, including our Chief Executive Officer and Chief Financial Officer, have committed to purchase approximately $175,000 of shares of our common stock and warrants to purchase shares of common stock in a fixed combination at a price equal to the public offering price of $ per share and associated warrant in a separate private placement. The sale of such shares of common stock and warrants in the private placement will not be registered under the Securities Act of 1933, as amended, and is subject to stockholder approval in accordance with the rules and regulations of NYSE American. We expect to seek such stockholder approval at the 2018 annual meeting of our stockholders.

The closing of this offering is not conditioned upon the closing of the private placements and the shares of common stock and warrants sold in the private placements will not be subject to any underwriting discounts or commissions.

Our common stock is traded on the NYSE American under the symbol "EMAN." On January 19, 2018, the last reported sale price of our common stock on the NYSE American was $1.55 per share. The public offering price per fixed combination will be determined between us and the underwriters at the time of pricing, and may be at a discount to the then current market price. There is no established public trading market for the warrants, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any national securities exchange or other nationally recognized trading system.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties referenced under the heading "Risk Factors" beginning on page 11 of this prospectus.

	Total

	Per Fixed Combination of Share and Warrant	
Public offering price	$	$
Underwriting discounts and commissions(1)		
Proceeds, before expenses, to us	$	$

(1) We have agreed to reimburse the underwriters for certain of their expenses. See "Underwriting" on page 91 of this prospectus for a description of the compensation to be received by the underwriters.

We have granted the underwriters a 30-day option to purchase up to 967,742 additional shares of common stock and/or additional warrants to purchase up to 387,097 shares of common stock from us at the public offering price, less underwriting discounts and commissions, to cover over-allotments, if any. See "Underwriting" on page 91 of this prospectus for a description of the over-allotment option.

The underwriters expect to deliver the shares and warrants on or about January , 2018.

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.

Sole Book-Running Manager

Craig-Hallum Capital Group

Co-Manager

H.C. Wainwright & Co.

The date of this prospectus is January , 2018.

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ABOUT THIS PROSPECTUS

You should rely only on the information contained in this prospectus or in any free writing prospectus we file with the Securities and Exchange Commission, or the SEC. We and the underwriters have not authorized anyone to provide you with information different from that contained in this prospectus or any free writing prospectus. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus or any related free writing prospectus that we may authorize to be provided to you. You must not rely on any unauthorized information or representation. We and the underwriters are offering to sell, and seeking offers to buy, shares of our common stock and warrants to purchase common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date on the front cover of this prospectus, or other earlier date stated in this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock and warrants to purchase common stock. Our business, financial condition, results of operating and prospects may have changed materially since those dates.

For investors outside of the United States: Neither we nor the underwriters have done anything that would permit this offering outside the United States or to permit the possession or distribution of this prospectus outside the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside of the United States.

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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 or will be filed 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."

INDUSTRY AND MARKET DATA

We obtained the industry and market data in this prospectus from our own research as well as from industry and general publications, surveys and studies conducted by third parties. These data involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the industry in which we operate is necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in "Risk Factors" and elsewhere in this prospectus. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us. See "Cautionary Note Regarding Forward-Looking Statements."

TRADEMARKS

This prospectus includes trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included in this prospectus or any related free writing prospectus are the property of their respective owners.

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PROSPECTUS SUMMARY

This summary highlights selected information from this prospectus, and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus and any related free writing prospectus, including the risks of investing in our securities referred to under the heading "Risk Factors" in this prospectus and any related free writing prospectus. You should also carefully read our financial statements and the related notes included in this prospectus and the exhibits to the registration statement of which this prospectus is a part. Unless otherwise mentioned or unless the context requires otherwise, throughout this prospectus and any related free writing prospectus, the words "eMagin Corporation," "eMagin," "the Company," "we," "us," and "our company" or similar references refer to eMagin Corporation and its wholly owned subsidiary, Virtual Vision, Inc. Unless otherwise stated, all information contained in this prospectus assumes or gives effect to no exercise of the warrants or options to purchase common stock and no exercise by the underwriters of their over-allotment option.

Overview

We are a leader in the manufacture of microdisplays using organic light emitting diode (OLED) technology. We design, develop, manufacture and market OLED miniature displays, which we refer to as OLED-on-silicon microdisplays, virtual imaging products that utilize OLED microdisplays, and related products. We also perform research in the OLED field. Our virtual imaging products integrate OLED technology with silicon chips to produce high-resolution microdisplays one-inch diagonally and smaller, which when viewed through a magnifier, create virtual images that appear comparable in size to that of a computer monitor or a large-screen television. Our products enable our original equipment manufacturer (OEM) customers to develop and market improved or new electronic products, especially products that are mobile and highly portable so that people have immediate access to information and can experience immersive forms of communications and entertainment. We believe that a key growth area for us is the consumer electronic OEM market for augmented reality (AR) and virtual reality (VR) hardware. Our potential channels to this market include licensing of our direct patterning technology and partnering for the mass production of microdisplays. We believe that our direct patterning technology is a key differentiator for enabling next generation AR/VR hardware for the consumer and enterprise segments because of the brightness and the pixel density afforded by the technology. We also develop and manufacture night vision products for the consumer electronics, recreational, law enforcement and first responder markets, including a smart phone attachment and a wearable device.

We believe that our OLED microdisplays offer a number of significant advantages over comparable liquid crystal microdisplays, including higher contrast, greater power efficiency, less weight, more compact size, and negligible image smearing. Using our active matrix OLED technology, many computer and electronic system functions can be built directly into the OLED microdisplay silicon backplane, resulting in compact, high resolution and power efficient systems. Already proven in military and commercial systems, our portfolio of OLED microdisplays deliver high-resolution, flicker-free virtual images that perform effectively even in extreme temperatures and high-vibration conditions. We also believe that our direct patterning technology gives us a substantial advantage over other OLED microdisplays because it allows us to produce microdisplays with the high brightness required for VR and AR. Traditional OLED microdisplays utilize white emitting OLED with color filters that lessen the intensity of emitted light by as much as 85%, significantly reducing brightness. Microdisplays manufactured by direct patterning do not require color filters to achieve color variations and allow for the application of more efficient OLED structures which achieve high brightness.

We have developed our own intellectual property portfolio that includes patents, over 15 years of manufacturing know-how and proprietary technologies to create high performance OLED-on-silicon. We believe our technology, intellectual property portfolio and position in the marketplace give us a leadership position in OLED and OLED-on-silicon microdisplay technology. We believe that we are

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one of only a few companies to market and produce significant quantities of high resolution, small molecule OLED-on-silicon microdisplays.

We derive the majority of our revenue from sales of our OLED microdisplay products. We also earn revenue from government, commercial and consumer product development contracts that may complement and support our internal research and development programs. In addition, we generate sales from optics and microdisplays combined with optics. Beginning in the first quarter of fiscal 2017, we introduced two night vision consumer products, BlazeSpark and BlazeTorch, although revenue from these products to date has been minimal.

Recent Developments

Recent Operating Results (Preliminary and Unaudited)

For the three months and year ended December 31, 2017, we expect total revenues to be between $6.2 million and $6.4 million and $21.8 and $22.0 million, respectively, as compared to total revenues of $4.6 million and $21.4 million for the three months and year ended December 31, 2016, and $4.2 million for the three months ended September 30, 2017. These expected increases compared to 2016 are driven by increases in bookings during the third and fourth quarter of 2017 reflecting military and commercial programs awarded over the past year. As of December 31, 2017, we had cash of $3.5 million and a revolving credit loan balance of $4.0 million, compared to cash of $2.0 million and a revolving credit loan balance of $1.1 million as of September 30, 2017. In addition, as of December 31, 2017, our backlog of open orders scheduled for delivery though December 31 2018 was approximately $9.8 million and we have an additional $3.9 million in orders scheduled for delivery through 2020.

Our consolidated financial statements for the three months and year ended December 31, 2017 are not yet available. The foregoing information reflects our estimate with respect to total revenues based on currently available information, which is preliminary and unaudited, is not a comprehensive statement of our financial results and is subject to completion of our financial closing procedures. While we have not identified any unusual or unique events or trends that occurred during the period that might materially affect this preliminary estimate, our actual results for the three months and year ended December 31, 2017 will not be available until after this offering is completed, may differ materially from our preliminary estimate and are not indicative of the results to be expected for any future period. We have provided an approximate range, rather than a specific amount, for total revenues primarily because our financial closing procedures for the three months and year ended December 31, 2017 are not yet complete and, as a result, our final results upon completion of our closing procedures may vary from the preliminary estimate.

This preliminary estimate has been prepared by and is the responsibility of management. Our independent registered public accounting firm has not conducted a review of and does not express an opinion or any other form of assurance with respect to this preliminary estimate. This information should be read in conjunction with our consolidated financial statements and the related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" for prior periods included in this prospectus.

Our Industry

A microdisplay typically has a screen size that is less than two inches in diagonal. The miniature size enables them to be used in a wide variety of applications that require a screen that takes up small space, like head-mounted displays (HMDs), viewfinders and digital cameras. Microdisplays are used across various industries including consumer electronics, enterprise/industrial, military, defense, aerospace, and healthcare. Microdisplays provide many advantages over other displays where small size is a requirement. Benefits include compact size, high brightness and resolution, low power consumption, and high contrast. Devices incorporating microdisplays include HMDs, smart glasses and

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headset products. Sales of AR and VR gear, which include HMD, smart glasses and headsets, are estimated to exceed $26 billion by 2021, according to Technavio.

Display quality is widely accepted as a key performance driver for ensuring the optimal user experience. We believe that this requirement for better display quality will result in next generation products in consumer electronics, defense, aviation, medical and industrial/enterprise segments of the market which utilize microdisplays.

Our Technology Platforms

Small Molecule, Top-Emitting Active Matrix OLED Technology.

Our microdisplays are currently based upon active matrix small molecule OLED technology, which we refer to as active matrix OLED (AMOLED). Our AMOLED technology uniquely permits millions of individual low-voltage light sources to be built on low-cost, silicon computer chips to produce single color, white or full-color display arrays. Using our OLED technology, many computer and video electronic system functions can be built directly into the silicon chip, under the OLED film, resulting in a compact, integrated system with lower overall system costs relative to alternative technologies. Our OLED microdisplays use less power and deliver much higher contrast and fuller color than liquid crystal microdisplays. We believe that our AMOLED technology provides significant advantages over other microdisplay technologies in our targeted markets. We believe these key advantages include:

High brightness

Sharp contrast

Low power consumption for improved battery life and longer system life;

High-speed performance resulting in clear video images;

Compact form factor and light weight;

Wide angle light emission resulting in large apparent screen size and more immersive experience;

Wide operating temperature range;

Good environmental stability (vibration and humidity); and

Low manufacturing cost at higher volumes.

Prism Optics

We sell high quality, large viewing angle prism optics with a wide range for eye positioning, both of which are essential for using our displays in immersive near-eye systems. We have developed advanced molded plastic prism lenses that permit our AMOLED microdisplays to provide large field of view images that can be viewed for extended periods with reduced eye-fatigue. We have developed an additional prism optic for a project that will pair with our SXGA096 display.

Our Market Opportunities

We target the military, aviation, industrial/medical, and consumer markets although many of our products cater to multiple markets. Within each of these market sectors we believe that our OLED microdisplays, when combined with compact optic lenses, can become a key component for a variety of mobile electronic products. Many of these products employ head-wearable displays that incorporate microdisplays mounted in or on eyeglasses, goggles, simple headbands, helmets, or hardhats, and are often referred to as HMDs or headsets. Head-wearable displays may block out surroundings for a fully immersive experience, or be designed to "see-through" or "see-around" to the user's surroundings.

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They may contain one (monocular) or two (binocular) displays. We have leveraged our experience in developing for military and commercial aviation helmets and believe this experience will allow us to more rapidly introduce displays suitable for specialized/high-end mass market consumer VR/AR applications than our competitors.

Consumer. We believe that the most significant driver of the longer term near-eye virtual imaging microdisplay market is the growing consumer demand for mobile access to larger volumes of information and entertainment in smaller and more affordable packages. This desire for mobility has resulted in the development of mobile video personal viewer products in three general categories: (i) immersive VR headset-application platforms such as accessories for gaming computers, portable digital optical disc (DVD) systems and wearable telepresence systems; (ii) AR electronic viewers incorporated in products such as data glasses and personal viewers for cell phones; and (iii) low cost thermal and low light imaging and scopes for hunting and other outdoor activities. As we manufacture our OLED displays in higher volumes at reduced costs and capitalize on our direct patterning technology, we believe that our products will be increasingly well positioned to compete with and displace liquid crystal displays and cell phone size displays in the rapidly growing consumer market, particularly as demand expands for sophisticated mobile personal viewers offering higher resolution and better image quality for VR and AR applications.

Military/Aviation. Properly implemented, we believe that head-mounted systems incorporating our microdisplays increase the user's effectiveness by allowing hands-free operation and increasing situational awareness with sufficient brightness for use in daylight, yet controllable for nighttime light security. As a COTS (commercial off-the-shelf) component, OLED microdisplays possess performance characteristics important to military and other demanding commercial and industrial applications, including high contrast, wide dimming range, shock and vibration resistance and insensitivity to high G-forces. The design features and performance characteristics of our OLED microdisplays reduce the size, weight, and power required by current and future military systems, while also providing a wide operating temperature range. Our OLED microdisplays have been incorporated into a broad range of U.S. and foreign military tactical programs as well as aviation helmets that require the high brightness of the OLED technology that we have developed.

Our products' military applications primarily fall into three broad areas: (1) helmet-mounted and handheld displays for situational awareness and data; (2) night vision/thermal imaging goggles, rifles and targeting sights, and handheld viewers; and (3) training and simulation devices. These systems are also well suited for demanding operations such as urban security, homeland defense, and fire and rescue.

Situational Awareness. Our OLED microdisplays have been incorporated into a broad range of U.S. and foreign military situational awareness programs. Situational awareness products include head-mounted displays that are used to display images, including digital map, sensor imagery and pilot aviation information. In addition, handheld imagers provide improved situational awareness on the battlefield, as well as in training and simulation. These products can also be combined with a weapon system to give the user the capability to select targets without direct exposure.

Night Vision/Thermal Imaging. We believe the power efficiency and environmental ruggedness of our microdisplay products are strong competitive advantages in night vision and thermal imaging products, particularly for smaller handheld non-cooled systems. Fielded products incorporating our OLED microdisplays include Harris' and L3 Insight's Enhanced Night Vision Goggle II, the Enhanced Night Vision Goggle III, Family of Weapons Sights Individual and Crew Served for the U.S. Army, L-3's Javelin medium-range anti-tank missile system, Northrop Grumman's Lightweight Laser Designator Rangefinders, Thales' SOPHIE handheld thermal imagers, and Thales' MINIE , LUCIE , and MONIE night vision goggles.

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Training and Simulation. Our OLED microdisplays are purchased by OEMs for use with their simulation and training products. The companies that incorporate our OLEDs into their training and simulation applications include Quantum 3D, Rockwell Collins, Intevac Vision Systems, and Sensics, among others. Our displays have been commercialized and prototyped for situational awareness and night vision/thermal imaging applications by military systems integrators, including Elbit, L-3 Communications, Intevac Vision Systems, Nivisys, BAE Systems Technology, DRS, Harris (formerly Excelis/ITT), Intevac Vision Systems, Qioptiq, Rockwell Collins, SA Photonics, Saab, Sagem DS, and Thales, among others.

Commercial, Industrial, and Medical. We believe that a wide variety of commercial and industrial markets offer significant opportunities for our products due to increasing demand for instant data accessibility in mobile workplace environments and due to the benefit of mobile displays to enhance visual performance. Examples of existing and potential microdisplay applications include enhanced visualization for ocular surgery, mobile ultrasound, mobile nondestructive testing, enhanced vision for those with visual impairments, immediate access to inventory or maintenance and construction manuals, routine quality assurance inspection, and real-time viewing of images and data for a variety of applications.

Our Products

OLED Microdisplays. We provide a wide variety of OLED microdisplays to our customers. We offer our products to OEMs and other buyers as both separate components, integrated bundles coupled with our own optics, or complete systems. We also offer engineering support to enable customers to quickly integrate our products into their own product development programs and design customized displays with resolutions or features to meet specific customer requirements.

Lens and Design Reference Kits. We offer a prism optic with mounting brackets or combined with OLED microdisplays to form an optic-display module. We provide design reference kits, which include a microdisplay and associated electronics to help OEMs evaluate our microdisplay products and to assist their efforts to build and test new products incorporating our microdisplays.

Integrated Modules. We provide near-eye virtual imaging modules that incorporate our OLED-on-silicon microdisplays with our lenses and electronic interfaces for integration into OEM products. We have shipped customized modules to several customers, some of which have incorporated our products into their own commercial products.

Headsets. We have developed and demonstrated a new Immersive Head Mounted Display (IHMD) with a different look and superior performance than other VR HMDs. Compared to other VR HMDs, it has four times the resolution, no pixelization, and a much smaller form factor. We entered into a nonexclusive license agreement in 2015 to allow an undisclosed company to use the technology in this IHMD for their own applications and may incorporate our 2K × 2K displays in headsets that use the technology. The retrofit of our latest 2K × 2K microdisplay prototypes into the original design of this IHMD is being considered as a means to showcase their superior performance and higher resolution.

Night Vision Smartphone Camera Attachment and Goggles. In 2016, we announced night vision products for the consumer market and began limited sales in the first quarter of 2017. A smartphone camera attachment allows consumers to see clear, high-resolution images in the dark. A companion application allows users to record and live stream content directly to our social media sites and share with other sites. We also developed a wearable device that utilizes our OLED microdisplay technology to provide hands-free operation for night-time activities with the capability to record and upload content. We are completing the development of these products and pursuing channels of distribution.

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Our Strategy

Our strategy is to strengthen our leadership position as a worldwide supplier of microdisplays and virtual imaging technology solutions for applications in high growth segments of the consumer, military and commercial electronics industry by capitalizing on our experience and expertise in active matrix OLED technology and silicon wafer design. Key elements of our strategy to achieve these objectives include:

- Develop OEM and mass production partnerships in the consumer HMD market.
- Strengthen our technology leadership.
- Optimize microdisplay manufacturing efficiencies while protecting proprietary processes and partner with large volume manufacturers to bring our technology into high volume production.
- Build and maintain strong design capabilities.
- Leverage strategic relationships.
- Enter consumer electronics markets.

Selected Risk Factors

Our business is subject to many risks and uncertainties of which you should be aware before you decide to invest in our common stock and/or warrants to purchase common stock. These risks are discussed more fully under "Risk Factors" in this prospectus. Some of these risks are:

- We have had losses in the past and may incur losses in the future.
- If we are unable to meet our obligations as they become due over the next twelve months, we may not be able to continue our current operations.
- Our operating results have significant fluctuations.
- Our business strategy may fail if we cannot continue to form strategic relationships with companies that manufacture and use products that could incorporate our active matrix OLED technology.
- The manufacture of active matrix OLED microdisplays encompasses several complex processes resulting in irregular production schedules, including production delays and interruptions, which could adversely affect our operating results.
- Several steps of our production processes are dependent upon certain critical machines and tools which could result in delivery interruptions and foregone revenues.
- We may not be successful in protecting our intellectual property and proprietary rights.

The success of the commercial and consumer microdisplay industry is dependent upon widespread acceptance of microdisplay systems products, including their incorporation into AR and VR systems and products.

The microdisplay market is highly competitive with several competing technologies.

Corporate Information

We were formed through the merger of Fashion Dynamics Corporation, which was organized on January 23, 1996 under the laws of the State of Nevada, and FED Corporation, a developer and manufacturer of optical systems and microdisplays for use in the electronics industry. Simultaneous with this merger, we changed our name to eMagin Corporation. We are incorporated in the State of Delaware. The address of our principal executive offices is 2070 Route 52, Hopewell Junction, NY 12533 and our telephone number is (845) 838-7900. Our website address is www.emagin.com. We do not incorporate the information on or accessible through our website into this prospectus, and you should not consider any information on, or that can be accessed through, our website as part of this prospectus.

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THE OFFERING

The following is a brief summary of some of the terms of this offering and is qualified in its entirety by reference to the more detailed information appearing elsewhere in this prospectus. For a more complete description of the terms of our common stock and the warrants, see the "Description of Capital Stock" section in this prospectus.

Common stock offered by us in this offering	6,451,613 shares (or 7,419,355 shares if the underwriters' over-allotment option is exercised in full).
Common stock to be outstanding after this offering	41,472,136 shares (or 42,439,878 shares if the underwriters' over-allotment option is exercised in full).
Warrants offered by us in this offering	We are offering warrants to purchase 2,580,645 shares of common stock (or 2,967,742 shares if the underwriters' over-allotment option is exercised in full). Each warrant has an exercise price of $ per share, is exercisable immediately upon issuance and has a term of five years from the initial exercise date. This prospectus also relates to the offering of the shares of common stock issuable upon exercise of the warrants. There is currently no market for the warrants and none is expected to develop after this offering. We do not intend to list the warrants on any national securities exchange or other trading market. See "Description of Capital Stock" for additional information.
NYSE American symbol	Our common stock is quoted on the NYSE American under the symbol "EMAN."
Use of Proceeds	We estimate that the proceeds from this offering will be approximately $8.9 million (or approximately $10.3 million if the underwriters' over-allotment option is exercised in full) from the sale of the securities offered by us in this offering, based on the assumed combined public offering price of $1.55 per share of common stock and warrant (the last reported sale price of our common stock on the NYSE American on January 19, 2018), and, after deducting underwriting discounts and commissions and estimated offering expenses payable by us for this offering. We intend to use the net proceeds from this offering for working capital and general corporate purposes. See "Use of Proceeds" below.
Risk Factors	Investing in our securities involves significant risks. Please read the information contained under the heading "Risk Factors" beginning on page 11 of this prospectus.

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Private Placements	Stillwater Trust LLC, one of our largest stockholders, has expressed an interest in purchasing up to $500,000 of shares of our common stock and warrants to purchase shares of our common stock in a fixed combination at a price equal to the public offering price of $ per share and associated warrant, in a separate private placement that is expected to close concurrently with this offering. The sale of such shares of common stock and warrants in the concurrent private placement will not be registered under the Securities Act of 1933, as amended, or the Securities Act. In addition, certain of our directors and executive officers, including our Chief Executive Officer and Chief Financial Officer, have committed to purchase approximately $175,000 of shares of our common stock and warrants to purchase shares of common stock in a fixed combination at a price equal to the public offering price of $ per share and associated warrant in a separate private placement. The sale of such shares of common stock and warrants in the private placement will not be registered under the Securities Act and is subject to stockholder approval in accordance with the rules and regulations of NYSE American. We expect to seek such stockholder approval at the 2018 annual meeting of our stockholders. The closing of this offering is not conditioned upon the closing of the private placements and the shares of common stock and warrants sold in the private placements will not be subject to any underwriting discounts or commissions.

The number of shares of common stock shown above to be outstanding after this offering is based on 35,020,523 shares outstanding as of December 31, 2017 and excludes:

- 5,094,515 shares of our common stock issuable upon the exercise of stock options outstanding as of December 31, 2017, at a weighted average exercise price of $2.96 per share;
- 7,545,333 shares of common stock issuable upon conversion of our outstanding Series B Convertible Preferred Stock;
- 2,947,949 shares of our common stock issuable upon the exercise of warrants issued in August 2016 outstanding as of December 31, 2017, at an exercise price of $2.60 per share; 383,500 shares of our common stock issuable upon the exercise of warrants issued in December 2015 outstanding as of December 31, 2017, at an exercise price of $2.05 per share; 100,000 shares of our common stock issuable upon the exercise of warrants issued in March 2017 outstanding as of December 31, 2017, at an exercise price of $2.25 per share and 1,650,000 shares of our common stock issuable upon the exercise of warrants issued in May 2017 outstanding as of December 31, 2017, at an exercise price of $2.45 per share;
- 99,000 shares of our common stock issuable upon the exercise of warrants issued in May 2017 outstanding as of December 31, 2017, at an exercise price of $2.60 per share; and
- 2,580,645 shares of our common stock issuable upon the exercise of warrants offered hereby.

Unless otherwise indicated, all information contained in this prospectus assumes no exercise by the underwriters of their over-allotment option to purchase additional shares of common stock and no exercise of the warrants to purchase additional shares of common stock sold in this offering.

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SUMMARY CONSOLIDATED FINANCIAL DATA

The following tables set forth summary consolidated financial data of our company. The summary consolidated statements of operations data for the years ended December 31, 2015 and 2016 and the consolidated balance sheet data as of December 31, 2016 as set forth below are derived from our audited consolidated financial statements included elsewhere in this prospectus. The summary consolidated statements of operations data for the nine months ended September 30, 2016 and 2017 and the consolidated balance sheet data as of September 30, 2017 have been derived from our unaudited consolidated financial statements included elsewhere in this prospectus. These unaudited financial statements have been prepared on a basis consistent with our audited financial statements and, in the opinion of management, reflect all adjustments, consisting only of normal and recurring adjustments, necessary for a fair presentation of such financial data. The information is only a summary and you should read it in conjunction with our audited consolidated financial statements, including the related notes, and other financial information and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in this prospectus. Historical results are not necessarily indicative of the results for future periods.

Consolidated Statements of Operations Data:

	Years Ended December 31,		Nine Months Ended September 30,	
	2016	2015	2017 (unaudited)	2016 (unaudited)
	(in thousands, except share and per share data)			
Revenues:				
Product	$ 17,265	$ 20,912	$ 13,050	$ 13,612
Contract	3,132	4,230	2,559	2,227
License	1,000			1,000
Total revenues, net	21,397	25,142	15,609	16,839
Cost of revenues:				
Product	12,988	15,466	10,918	9,639
Contract	1,967	2,698	1,346	1,248
License				
Total cost of revenues	14,955	18,164	12,264	10,887
Gross profit	6,442	6,978	3,345	5,952
Operating expenses:				
Research and development	6,362	4,353	3,782	4,468
Selling, general and administrative	8,411	6,687	6,586	6,044
Total operating expenses	14,773	11,040	10,368	10,512
Loss from operations	(8,331)	(4,062)	(7,023)	(4,560)
Other income (expense):				
Interest expense, net	(30)	(43)	(249)	(28)
Other income, net	313		11	8
Total other income (expense), net	283	(43)	(238)	(20)

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	Years Ended December 31,		Nine Months Ended September 30,	
	2016	2015	2017	2016
			(unaudited)	(unaudited)
	(in thousands, except share and per share data)			
Loss before provision for income taxes	(8,048)	(4,105)	(7,261)	(4,580)
Provision for income taxes	(1)			(1)
Net (loss) income	(8,049)	$ (4,105)	(7,261)	$ (4,581)
Loss per share, basic	(0.27)	$ (0.16)	(0.22)	$ (0.15)
Loss per share, diluted	(0.27)	$ (0.16)	(0.22)	$ (0.15)
Weighted average number of shares outstanding:				
Basic	30,172,927	25,296,040	33,214,262	29,689,458
Diluted	30,172,927	25,296,040	33,214,262	29,689,458

Consolidated Balance Sheet Data:

	As of September 30, 2017 (unaudited)	As of December 31, 2016 (unaudited)
	(in thousands)	
Cash, cash equivalents	$ 1,964	$ 5,241
Working capital	10,556	11,198
Total assets	25,122	27,213
Revolving credit facilities, net	920	1,689
Total liabilities	5,523	6,753
Total shareholders' equity	$ 19,599	$ 20,460

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RISK FACTORS

You should carefully consider the following risk factors and the other information included herein as well as the information included in other reports and filings made with the SEC before investing in our common stock. The following factors, as well as other factors affecting our operating results and financial condition, could cause our actual future results and financial condition to differ materially from those projected. The trading price of our common stock could decline due to any of these risks, should they materialize, and you may lose part or all of your investment.

Risks Related To Our Financial Position

We have had losses in the past and may incur losses in the future.

Our accumulated deficit is approximately $226 million as of September 30, 2017. We can give no assurances that we will be profitable in the future. We cannot assure you that if we become profitable that we will be able to sustain profitability or that we will not continue to incur operating losses in the future.

If we are unable to meet our obligations as they become due over the next twelve months, we may not be able to continue our current operations.

Our ability to continue current operations and to execute on our plans is dependent on our ability to generate sufficient cash flows from operations, raise additional capital or refinance our indebtedness to meet our obligations. If adequate funds are not available to us on a timely basis, or at all, we may have to reduce current operations and delay capital expenditures in order to conserve cash.

Based on our current operating plan, we anticipate that, given our current working capital levels, our current financial projections and our ability to borrow under our working capital facility, we will be able to meet our financial obligations as they become due over the next twelve months. We have no additional committed external sources of funds and additional financing may not be available when we need it or may not be available on terms that are favorable to us. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans.

We cannot provide assurance that we would be able to take any of these actions or that any effort to sell additional equity securities or borrow additional funds would be successful or would generate sufficient funds to meet our financial obligations, allow us to continue current operations or that these actions would be permitted under the terms of our existing or future debt agreements. If additional financing is not available when required or is not available on acceptable terms, we may need to delay, modify or abandon our current operations and we may be unable to take advantage of business opportunities or respond to competitive pressures which would likely have a material adverse effect on our product offerings, revenue, results of operations and financial condition.

Our operating results have significant fluctuations.

In addition to the variability resulting from the short-term nature of commitments from our customers, other factors contribute to significant periodic quarterly fluctuations in results of operations. These factors include, but are not limited to, the following:

- the receipt and timing of orders and the timing of delivery of orders;
- the inability to adjust expense levels or delays in adjusting expense levels, in either case in response to lower than expected revenues or gross margins;
- the volume of orders relative to our manufacturing capacity;
- product introductions and market acceptance of new products or new generations of products;

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changes in cost and availability of labor and components;

product mix;

variation in operating expenses; regulatory requirements and changes in duties and tariffs;

pricing and availability of competitive products and services; and

changes, whether or not anticipated, in economic conditions.

Accordingly, the results of any past periods should not be relied upon as an indication of our future performance.

We may incur substantial indebtedness which could adversely affect our business and limit our ability to plan for or respond to changes in our business.

Our ability to make payments on our debt obligations and to fund planned capital expenditures depends on our ability to generate cash from our future operations. This, to a certain extent, is subject to financial, competitive, legislative, regulatory and other factors that are beyond our control. In addition, if we cannot service our indebtedness, we may have to take actions such as selling assets, seeking additional equity or reducing or delaying capital expenditures, strategic acquisitions, investments and alliances, any of which could impede the implementation of our business strategy, prevent us from entering into transactions that would otherwise benefit our business and/or negatively affect our financial condition and results of operations. We may not be able to refinance our indebtedness or take such other actions, if necessary, on commercially reasonable terms, or at all.

Our ABL Facility contains various covenants limiting the discretion of our management in operating our business, which could prevent us from capitalizing on business opportunities and taking some corporate actions.

On December 21, 2016 we entered into an asset-based lending agreement with Rosenthal & Rosenthal, Inc., which is referred to herein as the ABL Facility. The ABL Facility imposes operating and financial restrictions on us. These restrictions will limit or restrict, among other things, our ability to:

incur additional indebtedness;

make restricted payments (including paying dividends on, redeeming, repurchasing or retiring our capital stock);

make investments;

create liens;

sell assets;

engage in transactions with affiliates; and

consolidate, merge or sell all or substantially all of our assets.

In addition, the ABL Facility also requires us to maintain compliance with certain financial covenants. These covenants are subject to important exceptions and qualifications. Our ability to comply with these covenants may be affected by events beyond our control, including those described in this "Risk Factors" section. A breach of any of the covenants contained in the ABL Facility could result in an event of default under one or more of the documents governing such obligations which would allow the lenders under the ABL Facility to declare all borrowing outstanding to be due and payable. In the event of an acceleration of payment obligations, we would likely be unable to pay our outstanding indebtedness with our cash and cash equivalents then on hand. We could be required to seek alternative sources of funding, which may not be available on commercially reasonable terms, or

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terms as favorable as our current agreement or at all. If we are unable to provide alternative means of financing our operations, we may be required to reduce our operations or take other actions that are inconsistent with our current business practices or strategy.

Our debt is variable rate debt, and increases in interest rates could adversely affect us by causing us to incur higher interest costs with respect to such variable rate debt.

The ABL Facility subjects us to interest rate risk. The rate at which we pay interest on amounts borrowed under such facility fluctuates with changes in interest rates. Accordingly, with respect to any amounts from time to time outstanding under the ABL Facility, we are and will be exposed to changes in interest rates. If we are unable to adequately manage our debt structure in response to changes in the market, our interest expense could increase, which would negatively affect our financial condition and results of operations. The outstanding borrowings under the ABL Facility as of September 30, 2017 were $0.9 million.

Risks Related To Manufacturing

The manufacture of active matrix OLED microdisplays encompasses several complex processes resulting in irregular production schedules, including production delays and interruptions, which could adversely affect our operating results.

Our product technology and manufacturing processes are evolving which can result in production challenges and difficulties. We cannot assure you that we will be able to produce our products in sufficient quantity and quality to maintain existing customers and attract new customers. In addition, we cannot assure you that we will not experience manufacturing problems which could result in delays in delivery of orders or product introductions.

Several steps of our production processes are dependent upon certain critical machines and tools which could result in delivery interruptions and foregone revenues.

We currently have little equipment redundancy in our manufacturing facility. If we experience any significant disruption in the operation of our manufacturing facility or a serious failure of a critical piece of equipment, we may be unable to supply microdisplays to our customers in a timely manner. Interruptions in our manufacturing could be caused by equipment problems, the introduction of new equipment into the manufacturing process or delays in the delivery of new manufacturing equipment. Lead-time for delivery, installation, testing, repair and maintenance of manufacturing equipment can be extensive. We have experienced production interruptions in the past and no assurance can be given that we will not lose potential sales or be unable to meet production orders due to future production interruptions in our manufacturing line.

We rely on key sole source and limited source suppliers.

We depend on a number of sole source or limited source suppliers for certain raw materials, components, and services. These include silicon wafers, circuit boards, graphic integrated circuits, passive components, materials and chemicals, and equipment support. We maintain several single-source supplier relationships either because alternative sources are not available or because the relationship is advantageous to us due to performance, quality, support, delivery, capacity, or price considerations (or a combination thereof). Even where alternative sources of supply are available, qualification of the alternative suppliers and establishment of reliable supplies could result in delays and a possible loss of sales, which could materially and adversely affect our operating results. We do not manufacture the silicon integrated circuits on which we incorporate our OLED technology. Instead, we provide the design layouts to semiconductor contract manufacturers who manufactures the integrated circuits on silicon wafers. Our inability to obtain sufficient quantities of components and

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other materials or services on a timely basis could result in manufacturing delays, increased costs and ultimately in reduced or delayed sales or lost orders which could materially and adversely affect our operating results. Generally, we do not have long-term contracts or written agreements with our source suppliers but instead operate on the basis of short term purchase orders.

Our results of operations, financial condition and business would be harmed if we were unable to balance customer demand and capacity.

As customer demand for our products changes, and as we enter new markets which may require higher volume mass production, we must be able to ramp up or adjust our production capacity to meet demand or enter into relationships with high volume manufacturing partners. We are continually taking steps to address our manufacturing capacity needs for our products. If we are not able to expand our manufacturing capacity or enter into relationships with high volume manufacturing partners, our prospects may be limited and our business and results of operations could be adversely impacted. If we experience delays or unforeseen costs associated with adjusting our capacity levels, we may not be able to achieve our financial targets. For some of our products, vendor lead times exceed our customers' required delivery time, causing us to order to forecast rather than order based on actual demand. Ordering raw material, building finished goods, and scheduling contract manufacturer production for our consumer products based on forecasts exposes us to numerous risks, including potential inability to service customer demand within an acceptable timeframe, holding excess inventory or having unabsorbed manufacturing overhead.

Variations in our production yields impact our ability to reduce our costs and could cause our margins to decline and our operating results to suffer.

All of our products are manufactured using technologies that are highly complex. The number of usable items, or yield, from our production processes may fluctuate as a result of many factors, including but not limited to the following:

variability in our manufacturing process and repeatability;

changes in manufacturing personnel due to turnover or employee absences;

contamination of the manufacturing environment or equipment;

equipment failure, power outages, or modification to our manufacturing processes;

lack of consistency and adequate quality and quantity of piece parts and other raw materials;

defects in packaging either within or without our control;

any transitions or changes in our production process, planned or unplanned; and

certain customer requirements outside of our normal specifications.

Variations in our production yields impacts our costs and could cause our margins to decline and our operating results to suffer.

We could experience manufacturing interruptions, delays, or inefficiencies if we are unable to timely and reliably procure components from single-sourced suppliers.

We maintain several single-source supplier relationships, either because alternative sources are not available or because the relationship is advantageous due to performance, quality, support, delivery, capacity, or price considerations (or a combination thereof). If the supply of a critical single-source material or component is delayed or curtailed, we may not be able to ship the related product in desired quantities and in a timely manner. Even where alternative sources of supply are available, qualification of the alternative suppliers and establishment of reliable supplies could result in delays

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and a possible loss of sales, which would harm our operating results. Further, we utilize single source contract manufacturers to assemble our night vision consumer products. Inadequate line capacity or production capacity commitments to other products could affect our ability to build sufficient quantities of products to meet demand.

Risks Related To Our Intellectual Property

We may not be successful in protecting our intellectual property and proprietary rights.

We rely on a combination of patents, trade secret protection, licensing agreements and other arrangements to establish and protect our proprietary technologies. If we fail to successfully enforce our intellectual property rights, our competitive position could suffer, which could harm our operating results. Patents may not be issued for our current patent applications; third parties may challenge, invalidate or circumvent any patent issued to us; unauthorized parties could obtain and use information that we regard as proprietary despite our efforts to protect our proprietary rights; rights granted under patents issued to us may not afford us any competitive advantage; others may independently develop similar technology or design around our patents; and protection of our intellectual property rights may be limited in certain foreign countries. On April 30, 2007, the U.S. Supreme Court, in *KSR International Co. vs. Teleflex, Inc.*, mandated a more expansive and flexible approach towards a determination as to whether a patent is obvious and invalid, which may make it more difficult for patent holders to secure or maintain existing patents. Any future infringement or other claims or prosecutions we may bring against third parties based on our intellectual property could have a material adverse effect on our business. Any such claims could be time consuming to assert, result in costly litigation, divert management's attention and resources, or result in our entering into royalty or licensing agreements. Protection of intellectual property has historically been a large yearly expense for us. For a period prior to 2008, we were not in a financial position to properly protect all of our intellectual property, and may not be in a position to properly protect our position or stay ahead of competition in new research and the protecting of the resulting intellectual property.

In addition to patent protection, we also rely on trade secrets and other non-patented proprietary information relating to our product development and manufacturing activities. We try to protect this information through appropriate efforts to maintain its secrecy, including requiring employees and third parties to sign confidentiality agreements. We cannot be sure that these efforts will be successful or that the confidentiality agreements will not be breached. We also cannot be sure that we would have adequate remedies for any breach of such agreements or other misappropriation of our trade secrets or that our trade secrets and proprietary know-how will not otherwise become known or be independently discovered by others.

Third parties may assert claims against us which could harm our business.

We may face third party claims that our business practices or products infringe adversely held intellectual property rights. We may face third party claims that our employees or contractors have misappropriated and unlawfully disclosed to us for our benefit third party trade secrets or other proprietary information. Furthermore, we have agreed to indemnify customers for certain intellectual property claims brought against them. Defending any such claims, whether or not meritorious, would cause us to incur costs and may divert the attention of management and technical personnel. Resolution of any such claims by litigation or settlement may entail payment of damages, changes to our business practices or products, and changes in our relationships with our customers, employees, or contractors.

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Risks Related To The Microdisplay Industry

The success of the commercial and consumer microdisplay industry is dependent upon widespread acceptance of microdisplay systems products, including their incorporation into AR and VR systems and products.

The market for microdisplays is still emerging. Our long-term success will depend on widespread consumer acceptance of microdisplays as well as the success of the commercialization of the microdisplay market for consumer applications. As an OEM supplier, our customers' products must also be well accepted. At present, it is difficult to assess or predict with any assurance the potential size, timing and viability of market opportunities for our technology in this market.

Procurement of microdisplays for military systems is subject to changes in federal budget priorities and if government funding is discontinued or reduced, our ability to develop or enhance products could be limited and our business results, operations and financial conditions could be adversely affected.

Historically, a large portion of our revenue is from military contracts. Procurement of microdisplays for military systems is subject to changes in federal budget priorities. Government programs are subject to authorization, appropriation and allocation of funding on an annual basis. Additionally, funding can be shifted to other programs if the government changes budget priorities, such as in a time of war or for other reasons. Government contracts are also subject to the risk that the government may not appropriate and allocate all funding contemplated by the contract. Government contracts generally permit the contracting authority to terminate the contract for the convenience of the government and in the event of a premature termination of a contract, the full value of such contract will not be realized.

The research and development and product procurement contracts of the customers we supply may be similarly impacted by government budget decisions. If the government funding is discontinued or reduced, our ability to develop or enhance products could be limited and our business results, operations and financial conditions could be adversely affected.

In addition, we must comply with certain laws and regulations relating to the administration and performance of federal government contracts. These laws and regulations affect how we conduct business under our federal government contracts, including in our role as a subcontractor. In complying with these laws and regulations, we may incur additional costs, and non-compliance may lead to the assessment of fines and penalties, including contractual damages or the loss of business.

The microdisplay market is highly competitive with several competing technologies.

We do business in intensely competitive markets that are characterized by rapid technological change, changes in market requirements and competition from both other suppliers and our potential OEM customers. Such markets are typically characterized by price erosion. This intense competition could result in pricing pressures, lower sales, reduced margins, and lower market share. Our ability to compete successfully will depend on a number of factors, both within and outside our control. We expect these factors to include the following:

- our success in designing, manufacturing and delivering expected new products, including those implementing new technologies on a timely basis;
- our ability to address the needs of our customers;
- the quality, performance, reliability, features, ease of use and pricing of our products;
- successful expansion of our manufacturing capabilities;
- our efficiency of production, and ability to manufacture and ship products on time;
- the rate at which OEM customers incorporate our product solutions into their own products;

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the market acceptance of our customers' products; and

product or technology introductions by our competitors.

In addition, our customers may be reluctant to rely on a relatively small company such as eMagin for a critical component. We cannot assure you that we will be able to compete successfully against current and future competition, and the failure to do so would have a materially adverse effect upon our business, operating results and financial condition.

The display industry may be subject to cyclical demand and overcapacity.

Our business strategy is dependent on OEM manufacturers' building and selling products that incorporate our OLED displays as components into those products. Industry-wide fluctuations in demand could cause significant harm to our business. The OLED microdisplay sector may experience overcapacity if additional capacity comes on line which could lead to pricing pressures and a difficult market in which to sell our products.

Our competitors have many advantages over us.

As the microdisplay market develops, we expect to experience intense competition from numerous domestic and foreign companies, including well-established corporations possessing worldwide manufacturing and production facilities, greater name recognition and significantly greater financial, technical and marketing resources than us, as well as from emerging companies who may be subsidized by their governments. We cannot assure you that we will be able to compete successfully against current and future competition, and the failure to do so would have a materially adverse effect upon our business, operating results and financial condition.

Our products are subject to lengthy OEM development periods.

We sell most of our microdisplays to OEMs who will incorporate them into products they sell. OEMs determine during their product development phase whether they will incorporate our products. The time elapsed between initial sampling of our products by OEMs, the custom design of our products to meet specific OEM product requirements, and the ultimate incorporation of our products into OEM consumer products is significant, often with a duration of between one and three years. If our products fail to meet our OEM customers' cost, performance or technical requirements or if unexpected technical challenges arise in the integration of our products into OEM consumer products, our operating results could be significantly and adversely affected. Long delays in achieving customer qualification and incorporation of our products also could adversely affect our business.

In order to increase or maintain our profit margins we may have to continuously develop new products, product enhancements and new technologies.

In some markets, prices of established products tend to decline over time. In order to increase or maintain our profit margins over the long-term, we believe that we will need to continuously develop new products, product enhancements and new technologies that will either slow price declines of our products or reduce the cost of producing and delivering our products. While we anticipate many opportunities to reduce production costs over time, there can be no assurance that these cost reduction plans will be successful, that we will have the resources to fund the expenditures necessary to implement certain cost-saving measures, or that our costs can be reduced as quickly as any reduction in unit prices. We may also attempt to offset the anticipated decrease in our average selling price by introducing new products with higher selling prices that may or may not offset price declines in more mature products. If we fail to do so successfully, our results of operations could be materially and adversely affected.

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Risks Related To The Consumer Night Vision Products Industry

The commercial success of the consumer night vision industry depends on the widespread market acceptance of consumer night vision products.

The commercial market, if any, for consumer night vision products is still emerging. The success of our BlazeTorch and BlazeSpark night vision products may depend on the consumer acceptance of these products as well as the success of the commercialization of the night vision market. The existing nonmilitary night vision market is more narrowly focused on tactical, hunting, law enforcement and first responder markets. In order to achieve the sales levels necessary to achieve our plans in this area, we need to expand beyond these existing markets into broader based consumer acceptance, including hobbyists, outdoor sports enthusiasts, and social media users interested in capturing nighttime activities, who may not exist in sufficient numbers to make the consumer market viable for us.

The Company has limited experience in the consumer electronics industry and this is a highly competitive industry.

With the introduction of the consumer night vision products, we are seeking to do business in intensely competitive consumer-focused markets that are characterized by rapid technological change, changes in market requirements, price erosion and competition from other manufacturers and distributors. This intense competition is likely to result in pricing pressures, lower sales, reduced margins, and lower market share. Our ability to compete successfully will depend on a number of factors, both within and outside our control. We expect these factors to include the following:

our success in designing, manufacturing and delivering expected new products, including those implementing new technologies on a timely basis;

our ability to address the needs of our customers and the quality of our customer services;

the ability to effectively market and advertise our products;

the quality, performance, reliability, features, ease of use and pricing of our products;

the ability to market successfully to law enforcement, utility and first responder customers

the capacity of our outsourced production facilities, and ability to manufacture and ship products on time;

our ability to comply with country specific regulatory certifications for consumer products; and

product or technology introductions by our competitors.

Risks Related To Our Business

Our success depends on attracting and retaining highly skilled and qualified technical and consulting personnel.

We must hire highly skilled technical personnel as employees and as independent contractors in order to develop our products. The competition for skilled technical employees is intense and we may not be able to retain or recruit such personnel. We must compete with companies that possess greater financial and other resources than we do, and that may be more attractive to potential employees and contractors. To be competitive, we may have to increase the compensation, including salaries, bonuses, stock options and other fringe benefits, offered to employees in order to attract and retain such personnel. The costs of attracting and retaining new personnel may have a materially adverse effect on our business and our operating results.

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Our success depends in a large part on the continuing service of key personnel.

Changes in management could have an adverse effect on our business. We are dependent upon the active participation of several key management personnel and will also need to recruit additional management in order to expand according to our business plan. The failure to attract and retain additional management or personnel could have a material adverse effect on our operating results and financial performance.

Our operating results are substantially dependent on the development and acceptance of new products and technology innovations.

Our future success may depend on our ability to develop new and lower cost solutions for existing and new markets and for customers to accept those solutions. We must introduce new products in a timely and cost-efficient manner, and we must secure production orders for those products from our customers. The development of new products is a highly complex process, and we historically have experienced delays in completing the development and introduction of new products. Some or all of those technologies or products may not successfully make the transition from the research and development phase. Even when we successfully complete a research and development effort with respect to a particular product or technology, it may fail to gain market acceptance. The successful development and introduction of these products depends on a number of factors, including the following:

- achievement of technology advances required to make commercially viable devices;
- the accuracy of our predictions of market requirements;
- acceptance of our new product designs;
- acceptance of new technology in certain markets;
- the availability of qualified research and development and product development personnel;
- our timely completion of product designs and development;
- our ability and available resources to expand sales;
- our ability to develop repeatable processes to manufacture new products in sufficient quantities and at low enough costs for commercial sales;
- our customers' ability to develop competitive products incorporating our products; and
- acceptance of our customers' products by the market.

If any of these or other factors become problematic, we may not be able to develop and introduce these new products in a timely or cost-effective manner.

If government agencies or companies discontinue or curtail their funding for our research and development programs, our business may suffer.

Changes in federal budget priorities could adversely affect our contract and display product revenue. Historically, U.S. government agencies have funded a significant part of our research and development activities. Our funding has the risk of being redirected to other programs when the government changes budget priorities, such as in time of war or for other reasons. Government contracts are also subject to

the risk that the government agency may not appropriate and allocate all funding contemplated by the contract. In addition our government contracts generally permit the contracting authority to terminate the contract for the convenience of the government. The full value of the contracts would not be realized if they were prematurely terminated. We may be unable to incur sufficient allowable costs to generate the full estimated contract values. Furthermore, the research and

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development and product procurement contracts of the customers we supply may be similarly impacted. If the government funding is discontinued or reduced, our ability to develop or enhance products could be limited and our business results or operations and financial conditions could be adversely affected.

Our business depends on new products and technologies.

The market for our products is characterized by rapid changes in product, design and manufacturing process technologies. Our success depends to a large extent on our ability to develop and manufacture new products and technologies to match the varying requirements of different customers in order to establish a competitive position and become profitable. Furthermore, we must adapt our products and processes to technological changes and emerging industry standards and practices on a cost-effective and timely basis. Our failure to accomplish any of the above could harm our business and operating results.

We generally do not have long-term contracts with our customers.

Our business has primarily operated on the basis of short-term purchase orders. We receive some longer term purchase agreements and procurement contracts, but we cannot guarantee that we will continue to do so. Our current purchase agreements, depending on the circumstances, can be cancelled or revised without penalty. We plan production primarily on the basis of internally generated forecasts of demand based on communications with customers, and available industry data which makes it difficult to accurately forecast revenues. If we fail to accurately forecast operating results, our business may suffer and the market price of our shares may decline.

Our business strategy may fail if we cannot continue to form strategic relationships with companies that manufacture and use products that could incorporate our active matrix OLED technology.

Our prospects could be significantly affected by our ability to develop strategic alliances with high volume manufacturers and with OEMs for incorporation of our active matrix OLED microdisplay technology into their products. While we intend to continue to establish strategic relationships with manufacturers of electronic consumer products, personal computers, chipmakers, lens makers, equipment makers, material suppliers and/or systems assemblers, there is no assurance that we will be able to continue to establish and maintain strategic relationships on commercially acceptable terms, or that the alliances we do enter into will realize their objectives. Failure to do so could have a material and adverse effect on our business.

Our business depends to some extent on international transactions.

We purchase needed materials and subcontract manufacturing processes from companies located abroad and may be adversely affected by political and currency risk, as well as the additional costs of doing business with foreign entities. Some customers in other countries have longer receivable periods as is customary in those countries. In addition, many of the foreign OEMs that are the most likely long-term purchasers of our microdisplays expose us to additional political and currency risk. We may find it necessary to locate manufacturing facilities abroad to be closer to our customers which could expose us to various risks, including management of a multi-national organization, the complexities of complying with foreign laws and customs, political instability and the complexities of taxation in multiple jurisdictions.

Our business may expose us to product liability claims.

Our business may expose us to potential product liability claims. Although no such claims have been brought against us to date, and to our knowledge no such claim is threatened or likely, we may face liability to product users for damages resulting from the faulty design or manufacture of our products. While we plan to maintain product liability insurance coverage, there can be no assurance

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that product liability claims will not exceed coverage limits, fall outside the scope of such coverage, or that such insurance will continue to be available at commercially reasonable rates, if at all.

Our business is subject to environmental regulations and possible liability arising from potential employee claims of exposure to harmful substances used in the development and manufacture of our products.

We are subject to various governmental regulations related to toxic, volatile, experimental and other hazardous chemicals used in our design and manufacturing process. Our failure to comply with these regulations could result in the imposition of fines or in the suspension or cessation of our operations. Compliance with these regulations could require us to acquire costly equipment or to incur other significant expenses. We develop, evaluate and utilize new chemical compounds in the manufacture of our products. While we attempt to ensure that our employees are protected from exposure to hazardous materials, we cannot assure you that potentially harmful exposure will not occur or that we will not be liable to employees as a result.

Provisions in certain of our commercial agreements and our military business may prevent or delay an acquisition of our Company, which could decrease the market value of our common stock.

Provisions in certain of our commercial agreements may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable. In addition, as a contractor and subcontractor to the U.S. federal government, we are subject to and must comply with various government regulations that impact our operating costs, profit margins and the internal organization and operation of our business. As a result, these provisions and business could limit the price that strategic investors may be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our company, thereby reducing the likelihood that you could receive a premium for your common stock in an acquisition.

Some of our business is subject to U.S. government procurement laws and regulations.

We must comply with certain laws and regulations relating to the formation, administration and performance of federal government contracts, including the Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR). These laws and regulations affect how we conduct business under our federal government contracts, including the business that we do as a subcontractor. In complying with these laws and regulations, we may incur additional costs, and non-compliance may lead to the assessment of fines and penalties, including contractual damages, or the loss of business.

Our international sales and operations are subject to export laws and regulations.

We must comply with all applicable export control laws, including the EAR and ITAR. Certain of our products may be deemed to be controlled for export by the U.S. Commerce Department's Bureau of Industry and Security under the EAR or by the U.S. State's Directorate of Defense Trade Controls (DDTC) under the ITAR. We believe certain of our new products with both high brightness and high resolution will be classified as defense articles and licenses from the DDTC will be required for exports. Failure to comply with these export control laws can lead to severe penalties, both civil and criminal, and can include debarment from contracting with the U.S. government.

Economic conditions may adversely impact our business, operating results and financial condition.

Economic conditions and market instability may affect our customers and suppliers. Any adverse financial or economic impact to our customers may impact their ability to pay timely, or result in their inability to pay. It may also impact their ability to fund future purchases, or increase the sales cycles which could lead to a reduction in revenue and accounts receivable. Our suppliers may increase their prices or may be unable to supply needed raw materials on a timely basis which could result in our

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inability to meet customers' demand or affect our gross margins. Our suppliers may also impose more stringent payment terms on us. The timing and nature of any recovery in the credit and financial markets remains uncertain, and there can be no assurance that market conditions will improve in the near future or that our results will not be materially and adversely affected.

We may be affected by recent tax legislation.

On December 22, 2017, the President signed into law an extensive overhaul of the U.S. federal tax code called the Tax Cuts and Jobs Act, or the Tax Legislation. The Tax Legislation makes significant changes to the taxation of individuals and corporations, which could significantly affect our business, our operations, our financial condition, or the taxation of our stockholders and warrant holders. Potential investors should consult their tax advisors about the Tax Legislation and its potential impact on making an investment in the Company.

Risks Related To This Offering And Our Common Stock And The Warrants

The market price of our common stock may be volatile.

The market price of our common stock has been subject to wide fluctuations. During our four most recently completed fiscal quarters, the closing price of our stock ranged from a high of $2.85 in January 2017 to a low of $1.55 in December 2017. The market price of our common stock in the future is likely to continue to be subject to wide fluctuations in response to various factors, including, but not limited to, the following:

- variations in our operating results and financial conditions;
- actual or anticipated announcements of technical innovations, commercial partnerships, new product developments, or design wins by us or our competitors;
- general conditions in the semiconductor and flat panel display industries; and
- worldwide economic and financial conditions.

In addition, the public stock markets have experienced extreme price and volume fluctuations that have particularly affected the market price for many technology companies and that have often been unrelated to the operating performance of these companies. The broad market fluctuations and other factors may continue to adversely affect the market price of our common stock.

There is no public market for the warrants to purchase common stock being offered in this offering.

There is no established public trading market for the warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any national securities exchange or other trading market. Without an active market, the liquidity of the warrants will be limited.

Holders of our warrants will have no rights as a common stockholder until such holders exercise their warrants and acquire our common stock.

Until you acquire shares of our common stock upon exercise of your warrants, you will have no rights with respect to the shares of our common stock underlying such warrants, except as set forth in the warrants. Upon exercise of your warrants, you will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

The warrants may never have any value.

The warrants comprising part of the fixed combinations being sold in this offering, which have an exercise price of $ per whole share of common stock, will expire on the five year anniversary of

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the initial exercise date. In the event our common stock price does not exceed the per share exercise price of the warrants during the period when the warrants are exercisable, the warrants will not have any value.

The market price of our common stock may be adversely affected by market conditions affecting the stock markets in general, including price and trading fluctuations on the NYSE American.

Market conditions may result in volatility in the level of, and fluctuations in, market prices of stocks generally and, in turn, our common stock and sales of substantial amounts of our common stock in the market, in each case being unrelated or disproportionate to changes in our operating performance. Concerns over global stability and economic conditions in the United States and abroad have contributed to the extreme volatility of the markets which may have an effect on the market price of our common stock.

The substantial number of shares that are or will be eligible for sale could cause our common stock price to decline even if we are successful.

Sales of significant amounts of common stock in the public market, or the perception that such sales may occur, could materially affect the market price of our common stock. These sales might also make it more difficult for us to sell equity or equity-linked securities in the future at a time and price that we deem appropriate. As of September 30, 2017, we have outstanding common shares of 34,972,589 plus (i) options to purchase 5,142,448 shares, (ii) warrants to purchase 5,081,449 shares and (iii) convertible preferred stock to acquire 7,545,333 shares of common stock. If a significant number of our outstanding options are exercised, our stockholders may experience a substantial dilution in their percentage ownership of our company.

You will experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.

Since the offering price per fixed combination of the securities being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the assumed offering price of $1.55 per fixed combination and the sale of shares of our common stock in this offering and attributing no value to the warrants sold in this offering, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of $0.87 per share in the net tangible book value of the common stock. In the event that you exercise your warrants, you will experience additional dilution to the extent that the exercise price of those warrants is higher than the book value per share of our common stock. See the section entitled "Dilution" below for a more detailed discussion of the dilution you would incur if you purchase securities in this offering.

Future issuances of our common stock could lower our stock price and dilute the interests of existing stockholders.

We may issue additional shares of our common stock in the future, including shares of our common stock in connection with acquisitions, strategic partnerships or joint ventures that we believe will allow us to complement our growth strategy, increase market share in our current markets and expand into adjacent markets, broaden our technology and intellectual property, and strengthen our relationships with distributors and OEMs. Any future issuances of shares of our common stock, including in connection with any future acquisition, partnership or joint venture, may result in the dilution of existing stockholders to the extent we are required to issue equity securities.

The issuance of a substantial amount of common stock could have the effect of substantially diluting the interests of our current stockholders. In addition, the sale of a substantial amount of

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common stock in the public market, either in the initial issuance or in a subsequent resale by investors who acquired such common stock in a private placement, could have a material adverse effect on the market price of our common stock.

Concentration of ownership of our stock may enable one stockholder or a small number of stockholders to significantly influence matters requiring stockholder approval.

As of December 31, 2017, Stillwater Holdings LLC (f/k/a Stillwater LLC) owned approximately 16% of our outstanding voting stock, Flat Creek Fiduciary Management, as trustee of a trust which the sole member of Stillwater Holdings LLC has investment control, owned approximately 10% of our outstanding voting stock, Stillwater Trust LLC owned 5% of our outstanding voting stock and the sole member of Stillwater Holdings LLC is the investment manager of Rainbow Gate Corporation, which owned approximately 4% of our outstanding voting stock. Together such stockholders owned approximately 36% of our outstanding voting stock. As a result, these stockholders, if they act together, may be able to exert a significant degree of influence over matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. Further, if these stockholders act together with another stockholder, Ginola Limited, which has common directors with Mount Union Corp., Chelsea Trust Company and Crestflower Corporation, as of December 31, 2017, they would collectively have represented approximately 42% of our outstanding voting stock. This concentration of ownership may facilitate or hinder a change of control and might affect the market price of our common stock. Furthermore, the interests of this concentration of ownership may not always coincide with our interests or the interests of other stockholders. Nevertheless, the ability to influence the election of our Board of Directors or otherwise have influence does not modify the fiduciary duties of our Board of Directors to represent the interests of all stockholders.

We will have broad discretion in how we use the net proceeds of this offering. We may not use these proceeds effectively, which could affect our results of operations and cause our stock price to decline.

We will have considerable discretion in the application of the net proceeds of this offering. We currently intend to use the net proceeds from this offering for working capital, capital expenditure and general corporate purposes. We have not yet determined the amount of net proceeds to be used specifically for any particular purpose or the timing of these expenditures. Accordingly, our management will have significant discretion and flexibility in applying the net proceeds from this offering. Pending any use, as described above, we intend to invest the net proceeds in high-quality, short-term, interest-bearing securities.

As a result, investors will be relying upon management's judgment with only limited information about our specific intentions for the use of the net proceeds of this offering. We may use the net proceeds for purposes that do not yield a significant return or any return at all for our stockholders. In addition, pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value.

We do not intend to pay cash dividends. We last paid a dividend on our capital stock in 2012 and we do not anticipate paying any dividends in the foreseeable future. Consequently, any gains from an investment in our securities will likely depend on whether the price of our common stock increases.

We have not paid dividends on any of our capital stock since 2012. We currently intend to retain our future earnings, if any, to fund the development and growth of our business. In addition, our ABL Facility prohibits us from paying cash dividends on our common stock. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future. Consequently, in the foreseeable future, you will likely only experience a gain from your investment in our securities if the price of our common stock increases.

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A provision in our certificate of incorporation and by-laws may prevent or delay an acquisition of our Company, which could decrease the market value of our common stock.

Provisions of Delaware law, our certificate of incorporation and our by-laws may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable. These provisions may also prevent or delay attempts by stockholders to replace or remove our current management or members of our Board of Directors. These provisions include:

limitations on the removal of directors;

advance notice requirements for stockholder proposals and nominations;

the inability of stockholders to act by written consent or to call special meetings;

the ability of our Board of Directors to make, alter or repeal our by-laws; and

the authority of our Board of Directors to issue preferred stock with such terms as our Board of Directors may determine.

In addition, we are subject to the provisions of Section 203 of the Delaware General Corporation Law, which limits business combination transactions with stockholders of 15% or more of our outstanding voting stock that our Board of Directors has not approved. These provisions and other similar provisions make it more difficult for stockholders or potential acquirers to acquire us without negotiation. These provisions may apply even if some stockholders may consider the transaction beneficial to them. As a result, these provisions could limit the price that investors are willing to pay in the future for shares of our common stock. These provisions might also discourage a potential acquisition proposal or tender offer, even if the acquisition proposal or tender offer is at a premium over the then current market price for our common stock.

We are subject to significant corporate regulation as a public company and failure to comply with all applicable regulations could subject us to liability or negatively affect our stock price.

As a publicly traded company, we are subject to a significant body of regulation, including the Sarbanes-Oxley Act of 2002. While we have developed and instituted a corporate compliance program based on what we believe are the current best practices in corporate governance and continue to update this program in response to newly implemented or changing regulatory requirements, we cannot provide assurance that we are or will be in compliance with all potentially applicable corporate regulations. For example, we cannot provide assurance that, in the future, our management will not find a material weakness in connection with its annual review of our internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act. We also cannot provide assurance that we could remediate any such weakness; our failure to do so would prevent our management from concluding that our internal control over financial reporting as of the end of our fiscal year is effective. If we fail to comply with any of these regulations, we could be subject to a range of regulatory actions, fines or other sanctions or litigation. If we must disclose any material weakness in our internal control over financial reporting, our stock price could decline.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus 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, or the Exchange Act, that are based on our management's belief and assumptions and on information currently available to our management. Although we believe that the expectations reflected in these forward-looking statements are reasonable, 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.

In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "continue" or the negative of these terms or other comparable terminology. These statements are only predictions. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties and other factors, which are, in some cases, beyond our control and which could materially affect our results. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under the heading "Risk Factors" in this prospectus and in any free writing prospectus. If one or more of these risks or uncertainties occur, or if our underlying assumptions prove to be incorrect, actual events or results may vary significantly from those implied or projected by the forward-looking statements. No forward-looking statement is a guarantee of future performance. You should read this prospectus and any free writing prospectus, including the documents that we have filed as exhibits to the registration statement, of which this prospectus is part, completely and with the understanding that our actual future results may be materially different from any future results expressed or implied by these forward-looking statements. In particular, forward-looking statements in this prospectus or any free writing prospectus about:

- our ability to successfully develop and market our products to customers;
- our ability to generate customer demand for our products in our target markets;
- the development of our target markets and market opportunities, including our entry in the consumer market;
- our potential exposure to product liability claims;
- our ability to manufacture suitable products at competitive costs;
- our ability to successfully implement new equipment on our manufacturing line;
- market pricing for our products and for competing products;
- the extent of increasing competition;
- technological developments in our target markets and the development of alternate, competing technologies in them;
- our anticipated cash needs and our estimates regarding our capital requirements;
- our needs for additional financing, as well as our ability to obtain such additional financing on reasonable terms; and
- other risks and uncertainties referenced under "Risk Factors" above and in any applicable free writing prospectus.

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Forward-looking statements contained in this prospectus or any free writing prospectus represents our views only as of the respective dates on which such statements were made. We anticipate that subsequent events and developments may cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. Therefore, these forward-looking statements do not represent our views as of any date other than the date on which they were made.

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USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately $8.9 million (or approximately $10.3 million if the underwriters' over-allotment option is exercised in full) from the sale of the securities offered by us in this offering, based on the assumed combined public offering price of $1.55 per share of common stock and warrant (the last reported sale price of our common stock on the NYSE American on January 19, 2018), and after deducting underwriting discounts and commissions and estimated offering expenses payable by us for this offering. We intend to use the net proceeds from this offering for working capital and general corporate purposes.

We have not yet determined the amount of net proceeds to be used specifically for any particular purpose or the timing of these expenditures. Accordingly, our management will have significant discretion and flexibility in applying the net proceeds from this offering. Pending any use, as described above, we intend to invest the net proceeds in high-quality, short-term, interest-bearing securities.

Each $1.00 increase (decrease) in the assumed public offering price of $1.55 per share would increase (decrease) the net proceeds to us from this offering by approximately $6.0 million, after deducting underwriting discounts and commissions and estimated offering expenses payable by us for this offering, assuming that the number of shares and warrants to purchase shares of common stock offered by us in this offering remains the same.

PRICE RANGE OF COMMON STOCK

Our common stock trades on the NYSE American under the symbol "EMAN". The following table shows the high and low sale prices per share of our common stock as reported on NYSE American for the periods indicated.

	High	Low
Year ending December 31, 2018		
First quarter (through January 19, 2018)	$ 1.95	$ 1.55
Year ending December 31, 2017		
First quarter	$ 2.85	$ 2.10
Second quarter	3.00	2.25
Third quarter	2.65	1.95
Fourth quarter	2.30	1.55
Year ended December 31, 2016		
First quarter	2.08	1.31
Second quarter	2.03	1.68
Third quarter	3.07	1.97
Fourth quarter	2.79	1.95

On January 19, 2018, the last reported sale price for our common stock on NYSE American was $1.55 per share. As of January 17, 2018, there were approximately 250 record holders of our common stock. This does not include persons whose stock is in nominee or "street name" accounts through brokers.

DIVIDEND POLICY

We do not anticipate paying any dividends in the foreseeable future. Future decisions to pay cash dividends are at the discretion of our Board of Directors. We currently intend to retain any future profits for use in the development and expansion of our business and for general corporate purposes. In addition, our ABL Facility prohibits us from paying cash dividends on our common stock.

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CAPITALIZATION

The following table sets forth our cash and capitalization as of September 30, 2017:

- on an actual basis; and
- on an as adjusted basis to give effect to our sale in this offering of shares of common stock and warrants to purchase shares of common stock at the assumed public offering price of $1.55 per combination and after deducting underwriting discounts and commissions and estimated offering expenses payable by us for this offering.

You should read this table in conjunction with "Use of Proceeds" as well as our "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements, including the related notes, included in this prospectus.

	As of September 30, 2017	
	Actual	As Adjusted
	(unaudited) (amounts in thousands, except share data)	
Cash, cash equivalents	$ 1,964	$ 10,886
Revolving credit facilities, net	920	920
Stockholders' equity:		
Series B Convertible Preferred stock, (liquidation preference of $5,659,000) stated value $1,000 per share, $.001 par value: 10,000 shares designated and 5,659 issued and outstanding as of September 30, 2017, actual and as adjusted		
Common stock, $.001 par value: authorized 200,000,000 shares, issued 34,972,589 shares as of September 30, 2017(1)	35	41
Additional paid-in capital	246,312	255,228
Accumulated deficit	(226,248)	(226,248)
Treasury stock, 162,066 shares as of September 30, 2017	(500)	(500)
Total stockholders' equity	19,599	28,521
Total capitalization	$ 20,519	$ 29,441

(1) The number of shares of our common stock in the table above excludes:

- 5,142,448 shares of our common stock issuable upon the exercise of stock options outstanding as of September 30, 2017, at an average exercise price of $2.96 per share;
- 7,545,333 shares of common stock issuable upon conversion of our outstanding Series B Convertible Preferred Stock;

2,947,949 shares of our common stock issuable upon the exercise of warrants issued in August 2016 outstanding as of September 30, 2017, at an average exercise price of $2.60 per share; 383,500 shares of our common stock issuable upon the exercise of warrants issued in December 2015 outstanding as of September 30, 2017, at an average exercise price of $2.05 per share; 100,000 shares of our common stock issuable upon the exercise of warrants issued in March 2017 outstanding as of September 30, 2017, at an average exercise price of $2.25 per share and 1,650,000 shares of our common stock issuable upon the exercise of warrants issued in May 2017 outstanding as of September 30, 2017, at an average exercise price of $2.45 per share;

99,000 shares of our common stock issuable upon the exercise of warrants issued in May 2017 outstanding as of September 30, 2017, at an exercise price of $2.60 per share; and

2,580,645 shares of our common stock issuable upon the exercise of warrants offered hereby.

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DILUTION

If you invest in our common stock and warrants, you will experience dilution to the extent of the difference between the public offering price per fixed combination (attributing no value to the warrants) and the net tangible book value per share of our common stock immediately after this offering.

Our net tangible book value as of September 30, 2017, was approximately $19.5 million, or $0.56 per share of our common stock, based upon shares of our common stock outstanding as of that date. Net tangible book value per share is determined by dividing our total tangible assets, less total liabilities, by the number of shares of our common stock outstanding as of September 30, 2017. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock and warrants in this offering and the net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of 6,451,613 shares of our common stock and warrants to purchase up to 2,580,645 shares of common stock in this offering at the assumed public offering price of $1.55 per fixed combination and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us for this offering, and excluding the proceeds, if any, from the exercise of warrants in this offering, our as adjusted net tangible book value as of September 30, 2017, would have been approximately $28.4 million, or $0.68 per share. This represents an immediate increase in net tangible book value of $0.12 per share to existing stockholders and immediate dilution in net tangible book value of $0.87 per share to new investors purchasing our common stock and warrants in this offering at the public offering price. The following table illustrates this dilution on a per share basis:

	(unaudited) (amounts in thousands except share data)	
Assumed public offering price per fixed combination		$ 1.55
Net tangible book value per share as of September 30, 2017	$ 0.56	
Increase in net tangible book value per share attributable to new investors	$ 0.12	
As adjusted net tangible book value per share as of September 30, 2017 after giving effect to this offering		$ 0.68
Dilution in net tangible book value per share to investors in this offering		$ 0.87

Each $0.10 increase (decrease) in an assumed public offering price of $1.55 per share, the last reported sale price of our common stock on the NYSE American on January 19, 2018, would increase (decrease) dilution per share to new investors by approximately $0.01 after deducting underwriting discounts and commissions and estimated offering expenses payable by us for this offering.

If the underwriters exercise in full their over-allotment option at an assumed public offering price of $1.55 per share, the last reported sale price of our common stock on the NYSE American on January 19, 2018, the as adjusted net tangible book value after this offering would be $0.70 per share of our common stock, representing an increase of as adjusted net tangible book value of $0.14 per share to our existing stockholders and an immediate dilution of $0.85 per share to new investors purchasing shares in this offering.

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The foregoing table and discussion is based on 34,972,589 shares outstanding as of September 30, 2017 and excludes:

- 5,142,448 shares of our common stock issuable upon the exercise of stock options outstanding as of September 30, 2017, at an average exercise price of $2.96 per share;

- 7,545,333 shares of common stock issuable upon conversion of our outstanding Series B Convertible Preferred Stock;

- 2,947,949 shares of our common stock issuable upon the exercise of warrants issued in August 2016 outstanding as of September 30, 2017, at an average exercise price of $2.60 per share; 383,500 shares of our common stock issuable upon the exercise of warrants issued in December 2015 outstanding as of September 30, 2017, at an average exercise price of $2.05 per share; 100,000 shares of our common stock issuable upon the exercise of warrants issued in March 2017 outstanding as of September 30, 2017, at an average exercise price of $2.25 per share and 1,650,000 shares of our common stock issuable upon the exercise of warrants issued in May 2017 outstanding as of September 30, 2017, at an average exercise price of $2.45 per share;

- 99,000 shares of our common stock issuable upon the exercise of warrants issued in May 2017 outstanding as of September 30, 2017, at an exercise price of $2.60 per share; and

- 2,580,645 shares of our common stock issuable upon the exercise of warrants offered hereby.

The above illustration of dilution per share to investors participating in this offering assumes no exercise of outstanding options to purchase our common stock or outstanding warrants to purchase shares of our common stock. The exercise of outstanding options and warrants having an exercise price less than the offering price will increase dilution to new investors. In addition, we may choose to raise additional capital depending on market conditions, our capital requirements and strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Introduction

The following discussion should be read in conjunction with our financial statements and notes thereto. Our fiscal year ends December 31. This prospectus contains certain forward-looking statements including, among others, anticipated trends in our financial condition and results of operations and our business strategy. These forward-looking statements are based largely on our current expectations and are subject to a number of risks and uncertainties. See the "Risk Factors" section of this prospectus. Actual results could differ materially from these forward-looking statements. Important factors to consider in evaluating such forward-looking statements include changes in external factors or in our internal budgeting process which might impact trends in our results of operations; unanticipated working capital or other cash requirements; changes in our business strategy or an inability to execute our strategy due to unanticipated changes in the industries in which we operate; and various competitive market factors that may prevent us from competing successfully in the marketplace.

Overview

We design, develop, manufacture and market organic light emitting diode (OLED) miniature displays, which we refer to as OLED-on-silicon-microdisplays, and microdisplay modules for virtual imaging, primarily for incorporation into the products of other manufacturers. Microdisplays are typically smaller than many postage stamps, but when viewed through a magnifier they can contain all of the information appearing on a high-resolution personal computer screen. Our microdisplays use organic OLEDs, which emit light themselves when a current is passed through the device. Our technology permits OLEDs to be coated onto silicon chips to produce high resolution OLED-on-silicon microdisplays.

We believe that our OLED-on-silicon microdisplays offer a number of advantages in near to the eye applications over other current microdisplay technologies, including higher contrast, lower power requirements, less weight, fast video speed without flicker, wide operating temperature and wider viewing angles. In addition, many computer and video electronic system functions can be built directly into the OLED-on-silicon microdisplay, resulting in compact systems with lower expected overall system costs relative to alternate microdisplay technologies. We also believe that our direct patterning technology gives us a substantial advantage over other OLED microdisplays because it allows us to produce microdisplays with the high brightness required for VR and AR. Traditional OLED microdisplays utilize white emitting OLED with color filters that lessen the intensity of emitted light by as much as 85%, significantly reducing brightness. Microdisplays manufactured by direct patterning do not require color filters to achieve color variations and allow for the application of more efficient OLED structures which achieve high brightness.

We have devoted significant resources to the development and commercial launch of our OLED microdisplay products into military, aviation, consumer, enterprise, industrial and medical applications. First sales of our SVGA+ microdisplay began in May 2001 and we launched the SVGA-3D microdisplay in February 2002. In 2008, the SXGA microdisplay became our first digital display and in 2011, we introduced the VGA OLED-XL, our lowest powered microdisplay, and the WUXGA OLED-XL which exceeds 1080p HD (High Definition) resolution.

We introduced new products throughout 2014, including a digital SVGA microdisplay and in 2016, a smaller pixel SXGA 096 display that provides for higher resolutions and increased functionality at the same compact size as the SVGA+ microdisplay. Other products such as the SXGA120 and WUXGA have also undergone upgrades improving image quality and manufacturability in 2016 and 2017, while remaining directly compatible with their earlier generation microdisplays.

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These products are being applied or considered for near-eye and headset applications in products such as thermal imagers, night vision goggles, aviation helmets, virtual reality and augmented reality devices to be manufactured by original equipment manufacturer (OEM) customers. In addition to marketing OLED-on-silicon microdisplays as components, we also offer microdisplays as an integrated package, which we call microviewer that includes a compact lens for viewing the microdisplay and electronic interfaces to convert the signal from our customer's product into a viewable image on the microdisplay.

We have developed our own intellectual property portfolio that includes patents, over 15 years of manufacturing know-how and proprietary technologies to create high performance OLED-on-silicon. We believe our technology, intellectual property portfolio and position in the marketplace give us a leadership position in OLED and OLED-on-silicon microdisplay technology. We believe that we are one of only a few companies to market and produce significant quantities of high resolution, small molecule OLED-on-silicon microdisplays.

We believe that a key growth opportunity for us is the consumer electronic OEM market. Our strategy for this segment is to secure channels to this market, including licensing of our direct patterning technology and partnering in the mass production of microdisplays. We believe that our direct patterning technology is a key differentiator for enabling next generation AR/ VR hardware for the consumer and enterprise segments because of the brightness and the pixel density afforded by the technology.

Our direct patterning technology is being optimized and significant improvements have been achieved during 2017, including lowering the power consumption by 20 percent for the same brightness and also demonstrating a maximum brightness of more than 5,300 cd/m2 on a new advanced backplane 2Kx2K microdisplay. We believe that this high brightness OLED-on-silicon technology is gaining attention in the AR/VR industry, which requires high brightness displays, and has contributed to our signing an agreement with a Tier One consumer electronics company in October 2017.

During 2016, we developed handheld and wearable products that provide consumers' night vision capability at prices we believe are attractive to the mass market. Two products, BlazeSpark and BlazeTorch, were introduced in early 2017. The BlazeSpark is a smart phone attachment that provides for night vision of activities and, through a companion application, allows the user to record and live stream the content. The BlazeTorch is a wearable device that will utilize our advanced OLED microdisplay technology to provide hands-free operation during night-time activities with the capability to record the content. We have established the supply chain utilizing a variety of domestic and international suppliers and two contract manufacturers located in Asia.

We continue to make progress on our multi-year yield improvement initiative as we strengthen production resources, make key managerial and process engineering hires, and implement production equipment. We believe this initiative will enable us to increase production capacity, lower unit costs and achieve greater operating efficiencies, positioning us to meet expanding customer demand and earning higher gross profits. As part of our yield improvement initiative, we made capital equipment acquisitions over the past several quarters which we are currently implementing and qualifying. We expect that these additions will reduce our dependency on critical equipment at key stages of the production process and provide greater operating flexibility which we believe will permit us to address the increasingly demanding needs of our customers without compromising throughput volumes or unit profitability.

New Business

During 2017, we made progress towards our goals of securing new U.S. military programs while expanding our presence in foreign military, commercial and industrial markets. Under the U.S. Army's Enhanced Night Vision Goggle III (ENVG III) and Family of Weapon Sight-Individual (FWS-I)

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programs, delivery of displays for the Low Rate Initial Production (LRIP) phase of both programs began in the fourth quarter of 2016 and has continued into 2017. ENVG III is scheduled to be in production through 2021 with follow-on sustaining orders through 2032. FWS-I is scheduled to be in production through 2020 with follow-on sustaining orders through 2031. We also delivered displays for prototype systems for FWS-Crew Served program to two defense prime contractors.

During 2016 and 2017, we achieved the following:

Awarded a follow-on contract worth over $3.7 million for the U.S. Army's Enhanced Night Vision Goggle III (ENVGIII) and Family of Weapons Sight-Individual (FWS-I) programs.

Received a multi-year $1.7 million order from a European military prime contractor to provide displays for a see-through, AR head-mounted displays to support airborne and ground missions' requirements.

Received a $1.5 million order to support the Light Weight Thermal Sight (LWTS) program with deliveries expected to begin in December 2017 and continuing through 2018.

Received funding for the design and development of support hardware that will be integral to new system designs utilizing eMagin's 2K × 2K microdisplays with the hardware anticipated to be available to defense and commercial integrators in mid-2018.

Completed a Critical Design Review (CDR) in October 2017 with a major aviation prime contractor for an OLED upgrade to a fixed wing production helmet.

Continued to support a major U.S. Army helicopter helmet upgrade program to retrofit high brightness microdisplays into the current fielded helmet. CDR was completed in August of 2017 and Testing Readiness Review (TRR) was completed in December 2017. Additional OLED display, taper, and lens assemblies were delivered for integration and testing in December 2017.

Received a production order from a foreign aviation prime contractor to supply high brightness microdisplays to upgrade an existing fixed wing helmet. It is expected that this will be a multi-year program with initial displays delivered in November 2017 and continuing through the fourth quarter of 2018.

Delivered high brightness 2K × 2K microdisplays to another major foreign contractor for use in a prototype aviation helmet.

Signed a multi-year agreement with a major European defense company that is expected to exceed $3.5 million in display sales through 2018. Additionally, we have been in discussions with a company design staff with respect to a new display to meet requirements of a future defense system. Prototype displays were delivered during the first quarter of 2017.

Continued to deliver displays for a major U.S. Marine Corps contract in support of a common laser range finder program. This contract extends into 2020 and replaces currently fielded equipment that provides 24-hour observation capability.

Delivered our HD-plus resolution WUXGA display to a major medical device company for use in prototyping in their next generation surgical equipment. Prototyping was extended through 2017 with production decision likely in early 2018.

Supplied displays for a large commercial rifle scope manufacturer which has a leading line of thermal weapon sights and thermal monoculars. We continue to work closely with their production development team to offer higher resolution displays for future products.

Designed and developed two night-vision products for the consumer and commercial markets: BlazeSpark, a smart-phone camera attachment that allows consumers to see clear, high-resolution images in the dark, and BlazeTorch, a wearable device that utilizes our OLED

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microdisplay technology to provide hands-free operation for night-time activities with the capability to record and upload content.

In addition, our development work under the Defense Manufacturing, Science and Technology program progressed during 2016 and the first nine months of 2017. We have met all milestones for the Office of Secretary of Defense-sponsored thirty-month program and believe we are on track to provide essential display technology for all service branches following the program's completion which is expected in May 2018.

On the commercial front, we entered into strategic agreements with multiple Tier One consumer product companies for the design and development of microdisplays for consumer head mounted devices and, together with these companies, negotiated with mass production manufacturers for higher volume production capabilities.

During the nine months ended September 2017, we made significant progress in our negotiations with multiple major consumer electronics companies to enter into strategic partnerships to develop displays for these companies' next generation VR/AR applications. We are pursuing what we believe to be the best paths to commercializing our direct patterning technology and establishing ourselves as the industry leader in microdisplays for the consumer market.

Our overarching goal is to secure partnerships with industry leaders in consumer electronics who can help us capitalize on our technology to meet the needs of end users from a cost and performance standpoint. Our partnership initiatives encompass scaling our product technology, entering into mass production agreements with manufacturing companies which possess capital resources and high volume production capability to enable us to manufacture the volumes required for the consumer market, and securing sales and distribution channels to end users.

During the nine months ended September 30, 2017, we experienced an improvement in booking activity as we made progress towards our goals of securing new, and expanding existing, U.S. and foreign military programs while expanding our presence in foreign military, commercial and industrial markets. We expect these efforts to result in greater bookings during the second half of 2017 as a whole than were achieved during the first half of 2017. As of December 31, 2016, we had a backlog of approximately $6.4 million in products ordered for delivery through December 31, 2017. As of December 22, 2017, we had a backlog in products ordered for delivery in 2018 of $11.1 million. Backlog consists of non-binding purchase orders and purchase agreements.

New Technology Development

We are continuing to make progress in our development of very high brightness full-color microdisplays incorporating our proprietary direct patterning technology. Recent improvements in the equipment and further optimization of the processes have led to brightness levels that surpass the threshold requirements for VR/AR applications for Tier One companies and satisfy the requirements of several pending military programs. Our demonstration of more than 5,300 cd/m2 maximum brightness was a milestone towards the application of eMagin's microdisplays to AR/VR headsets.

In conjunction with our development work on direct patterning, we have upgraded our production equipment to further improve display performance and achieve higher production volumes. The upgraded equipment is currently being used to produce parts for various customers.

New Product Development

We continue to develop both small pixel and large area microdisplay architectures for wearable consumer applications. These efforts are being driven by consumer electronics companies and are aimed at leveraging our direct patterning technology for cost effective, large volume production systems.

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Our product development efforts on the 2K × 2K full color RGB microdisplay project that was initiated in 2015 produced functional samples, which were delivered to a leading consumer product company for evaluation in December 2016. This is our largest microdisplay design and expands our product offerings for the consumer and commercial marketplaces. We supplied these 2k × 2k displays to other customers during 2017.

Qualification of our 2K × 2K microdisplay is progressing as planned with expected completion in the first quarter 2018. In concert with this effort, we are developing a compact interface for the 2K × 2K microdisplay that will facilitate the integration of the display into optical solutions. This hardware is targeted to be completed and introduced to the market during the second quarter 2018.

Results of Operations

Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

Revenues

	Year Ended December 31,		
	2016	**2015**	**Change**
	(in thousands)		
Product	$ 17,265	$ 20,912	$ (3,647)
Contract	$ 3,132	$ 4,230	$ (1,098)
License	$ 1,000	$	$ 1,000
Total revenue, net	$ 21,397	$ 25,142	$ (3,745)

Revenues decreased approximately $3.7 million to revenues of approximately $21.4 million for the year ended December 31, 2016 from approximately $25.1 million for the year ended December 31, 2015, representing a 15% decrease.

Product revenues are comprised primarily of sales of displays, as well as sales of other hardware. In 2016, product revenues decreased approximately $3.6 million to revenues of approximately $17.3 million for the year ended December 31, 2016 from approximately $20.9 million for the year ended December 31, 2015, representing a 17% decrease. The decrease in product revenues in 2016 was primarily due to lower demand from maturing military programs, and a larger proportion of sales of displays with a lower average unit price, partially offset by lower product returns.

Contract revenues are comprised of revenues from research and development (R&D) or non-recurring engineering (NRE) contracts. In 2016, contract revenues decreased $1.1 million to revenues of approximately $3.1 million for the year ended December 31, 2016 from approximately $4.2 million for the year ended December 31, 2015, representing a 26% decrease. The decrease in contract revenues was a result of a decrease in the number of active R&D contracts and the work completed on such contracts.

License revenues for 2016 was comprised of revenue from a $1.0 million non-exclusive intellectual property license for our VR headset technology. In connection with the license agreement, we provided in late 2016 the licensee engineering samples of our 2K × 2K pixel full-color displays for evaluation in their next generation headset development efforts. We had no license revenues in 2015.

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Cost of Revenues

	Year Ended December 31,		
	2016	2015	Change
	(in thousands)		
Product	$ 12,988	$ 15,466	$ (2,478)
Contract	$ 1,967	$ 2,698	$ (731)
License			
Total cost of revenues	$ 14,955	$ 18,164	$ (3,209)

Total cost of revenues are comprised of costs of product revenues and contract revenues. Cost of product revenue includes materials, labor and manufacturing overhead, warranty costs and depreciation related to our products. Cost of contract revenue includes direct and allocated indirect costs associated with performance on the contracts. Total cost of revenues for the year ended December 31, 2016 was $15.0 million as compared to $18.2 million for the year ended December 31, 2015, a decrease of $3.2 million primarily due to the decrease in product and contract revenues. Cost of goods sold as a percentage of revenues was 70% for the year ended December 31, 2016, down slightly from 72% for the year ended December 31, 2015, primarily reflecting the product mix. In addition, there was no cost of revenues in 2016 associated with the license revenues.

The following table outlines product, contract and total gross profit and related gross margins for the years ended December 31, 2016 and 2015:

	Year Ended December 31,	
	2016	2015
	($ in thousands)	
Product revenues gross profit	$ 4,277	$ 5,446
Product revenues gross margin	25%	26%
Contract revenues gross profit	$ 1,165	$ 1,532
Contract revenues gross margin	37%	36%
License revenues gross profit	1,000	
License revenues gross margin	100%	%
Total gross profit	$ 6,442	$ 6,978
Total gross margin	30%	28%

In 2016, total gross profit decreased approximately $0.5 million or 8%. Total gross margin was 30% for the year ended December 31, 2016 an increase from 28% for the year ended December 31, 2015, primarily due to $1.0 million in license revenue that had no associated current year's cost.

Product gross profit decreased approximately $1.2 million, primarily reflecting a 17% decrease in 2016 revenues and a slight decrease in average display selling prices due to product mix.

Product gross margin decreased from 26% in 2015 to 25% in 2016, reflecting deceased revenues in 2016 and a slight decrease in average display selling prices.

Contract gross profit decreased approximately $0.4 million as a result a decrease in 2016 revenues of $1.1 million. Contract gross margin increased slightly from 36% in 2015 to 37% in 2016. Contract gross margin is dependent upon the mix of internal versus external third party costs, with the external third party costs causing a lower gross margin and reducing the contract gross profit.

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Operating Expenses

	Year Ended December 31,		
	2016	2015	Change
	($ in thousands)		
Research and development expense	$ 6,362	$ 4,353	$ 2,009
Percentage of net revenue	30%	17%	
Selling, general and administrative expense	$ 8,411	$ 6,687	$ 1,724
Percentage of net revenue	39%	27%	
Total operating expenses	$ 14,773	$ 11,040	$ 3,733
Percentage of net revenue	69%	44%	

Research and Development Expenses

Research and development (R&D) expenses include salaries, development materials and other costs specifically allocated to the development of new microdisplay products, OLED technologies and production processes. Research and development expenses for the year ended December 31, 2016 were $6.4 million as compared to $4.4 million for the year ended December 31, 2015, an increase of $2.0 million. The increase in company-funded R&D expenses was due to lower allocations of salary costs to contracts due to lower revenues, costs incurred for the development of a night vision consumer products and hiring additional engineers to support product and process development.

Selling, General and Administrative Expenses

Selling, general and administrative expenses (SG&A) consist primarily of personnel expenses, professional services fees, as well as other marketing, general corporate and administrative expenses. Selling, general and administrative expenses for the year ended December 31, 2016 were $8.4 million as compared to $6.7 million for the year ended December 31, 2015, an increase of approximately $1.7 million. The increase in SG&A for 2016 was primarily due to higher spending for administrative expenses associated with our night vision consumer product activities, higher legal expenses, higher stock-based compensation costs and nonrecurring administrative transition costs associated with the consolidation of the Company's finance and procurement functions to our New York location.

Other Income (Expense)

Other income (expense), net primarily consists of interest expense, interest income on cash balances and other adjustments. Other income for 2016 is comprised of interest expense of $30 thousand, interest income on cash balances of $13 thousand, a reversal of a $271 thousand liability and other adjustments of $29 thousand. During the fourth quarter of 2016, we determined the statute of limitation had expired for potential claims related to liquidated damages payable under a 2008 registration rights agreement and reversed a related liability of $271 thousand. For the year ended December 31 2015, interest expense net of capitalization was $43 thousand and interest income was $4 thousand, net of other expenses of $4 thousand.

Income Tax Expense (Benefit)

For the years ended December 31, 2016 and 2015, income tax expense was approximately $0, respectively. We have a full valuation allowance as we have determined that it was not more likely than not that we would generate sufficient future taxable income to realize the deferred tax assets.

Net Loss

As a result of the above, net loss was approximately $8.0 million and $4.1 million for the years ended December 31, 2016 and 2015, respectively.

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Nine Months Ended September 30, 2017 Compared To Nine Months Ended, September 30, 2016

Revenues

	Nine Months Ended September 30,		
	2017	2016	Change
	(in thousands)		
Product	$ 13,050	$ 13,612	$ (562)
Contract	$ 2,559	$ 2,227	$ 332
License	$	$ 1,000	$ (1,000)
Total revenue, net	$ 15,609	$ 16,839	$ (1,230)

Revenues for the nine months ended September 30, 2017 were $15.6 million as compared to $16.8 million for the nine months ended September 30, 2016.

Product revenue is comprised primarily of sales of displays, as well as sales of other hardware. For the nine months ended September 30, 2017, product revenue decreased by $0.6 million as compared to the nine months ended September 30, 2016. This decrease was primarily due to lower demand from maturing military programs, and a larger proportion of sales of displays with lower average unit prices. Product revenue in the 2017 period was favorably impacted by sales of $0.3 million of newly-developed direct patterned displays supported by R&D efforts.

Contract revenue is comprised of revenue from R&D, commercial contracts, or NRE contracts. For the nine months ended September 30, 2017, contract revenue increased by $0.3 million as compared to the nine months ended September 30, 2016, primarily due to the addition of commercial contracts with several major consumer electronics companies in 2017.

License revenue for the nine months ended September 30, 2016 was comprised of revenue from a $1.0 million non-exclusive intellectual property license for our VR headset technology. We produced engineering samples of our 2K × 2K pixel full-color displays in the fourth quarter of 2016 and expect that the licensee will use our 2K × 2K pixel full-color displays in their headsets upon their successful development.

Cost of Revenues

	Nine Months Ended September 30,		
	2017	2016	Change
	(in thousands)		
Product	$ 10,918	$ 9,639	$ 1,279
Contract	$ 1,346	$ 1,248	$ 98
License	$	$	$
Total cost of revenues	$ 12,264	$ 10,887	$ 1,377

Total cost of revenues is comprised of costs of product and contract revenues. Cost of product revenue includes materials, labor and manufacturing overhead, warranty costs and depreciation related to our products. Cost of contract revenue includes direct and allocated indirect costs associated with performance of deliverables under contracts. Total cost of revenues for the nine months ended September 30, 2017 increased by $1.4 million as compared to the nine months ended September 30, 2016. Total cost of revenues as a percentage of revenues was 79% for the nine month period ended September 30, 2017 as compared to 65% for the nine month period ended September 30, 2016. Revenues for the nine months ended September 30, 2016 included $1.0 million of license revenue that had no associated cost of revenues.

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The following table outlines product, contract and license total gross profit and related gross margins for the nine month period ended September 30, 2017 and 2016 (dollars in thousands):

	Nine Months Ended September 30,	
	2017	2016
	($ in thousands)	
Product revenues gross profit	$ 2,132	$ 3,973
Product revenues gross margin	16%	29%
Contract revenues gross profit	$ 1,213	$ 979
Contract revenues gross margin	47%	44%
License revenues gross profit	$	$ 1,000
License revenues gross margin	%	6%
Total gross profit	$ 3,345	$ 5,952
Total gross margin	21%	35%

Total gross profit is a function of revenues less cost of revenues. The total gross profit for the nine months ended September 30, 2017 decreased $2.6 million as compared to the nine months ended September 30, 2016 primarily reflecting a decrease in product revenue gross profit in the nine month period. The gross margin of 21% for the nine months ended September 30, 2017 as compared to 35% for the prior year period primarily reflects the favorable impact of the $1.0 million of license revenue in the first quarter of 2016 that had no associated costs of goods sold.

The product gross profit for the nine months ended September 30, 2017, decreased $1.8 million as compared to the prior year period. Product gross margins of 16% for the nine months ended September 30, 2017 decreased from 29% in the prior year period due to lower average selling prices for certain product types in the current period and the favorable impacts of higher production volume in the first nine months of 2016.

Contract revenue gross profit of $1.2 million and gross margin of 47% for the nine months ended September 30, 2017 increased from $1.0 million and 44% in the comparable prior year period. Increased contract revenue gross profit in the first nine months of 2017 was due to a higher proportion of commercial contract work performed in the current period and to changes in the nature of both the individual contracts and the work completed during each period.

Operating Expenses

	Nine Months Ended September 30,		
	2017	2016	Change
	($ in thousands)		
Research and development expense	$ 3,782	$ 4,468	$ (686)
Percentage of net revenue	24%	27%	
Selling, general and administrative expense	$ 6,586	$ 6,044	$ 542
Percentage of net revenue	42%	36%	
Total operating expenses	$ 10,368	$ 10,512	$ (144)
Percentage of net revenue	66%	62%	

Research and Development (R&D). R&D expenses are company-funded and include salaries and related benefits, development materials and other costs specifically allocated to the development of new technologies and microdisplay products, OLED materials and subsystems. R&D related costs associated with fulfilling contracts are categorized as contract cost of revenues. R&D expenses decreased on a percentage basis for the nine months ended September 30, 2017 compared to the prior year period. R&D costs in the current year reflected a decrease in consumer product R&D partially offset by the

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work performed on the Company's direct patterning technology, including product development and process development associated with the manufacture of the direct patterned displays.

Selling, General and Administrative (SG&A). SG&A expenses consist principally of salaries and related benefits, professional services fees and marketing, general corporate, and administrative expenses. SG&A expenses for the nine months ended September 30, 2017, increased $0.5 million compared to the comparable prior year period.

The increase in SG&A for the nine months ended September 30, 2017 over the prior year period was largely due to higher spending on professional services, legal, and travel expenses associated with our negotiations with prospective consumer electronics and volume manufacturing partners, and promotional expenses related to our night vision consumer product activities.

Other Income (Expense), net. Other income (expense), net consists primarily of interest income earned on cash balances and interest expense. Other expense, net for the nine months ended September 30, 2017 of $238 thousand reflects the write off of $158 thousand of debt issuance costs related to our financing arrangement with Stillwater Trust LLC in May 2017 upon the termination of this financing arrangement.

Off-Balance Sheet Arrangements

We have no off balance sheet arrangements that are expected to have a current or future effect on our financial condition, revenues, results of operations, liquidity or capital expenditures.

Liquidity and Capital Resources

As of September 30, 2017, we had $2.0 million of cash and cash equivalents, as compared to $5.2 million as of December 31, 2016. The $3.2 million decrease in cash during the nine months ended September 30, 2017 was primarily due to cash used in operating activities of $6.9 million and investing activities of $1.2 million, partially offset by cash provided by financing activities of $4.8 million. The $4.1 million decrease in cash from 2015 to 2016 was primarily due to cash used in operating activities of $8.6 million and investing activities of $1.4 million, partially offset by cash provided by financing activities of $6.0 million.

Cash flow used in operating activities during the nine months ended September 30, 2017 was $6.9 million, attributable to net loss of $7.3 million partially offset by a net change in operating assets and liabilities of $1.8 million and non-cash expenses of $2.2 million. Cash flow used in operating activities during the nine months ended September 30, 2016 was $5.7 million. For the year ended December 31, 2016, operating activities used $8.6 million in cash, which was attributable to our net loss of $8.0 million and changes in operating assets and liabilities of $2.8 million primarily related to inventory for our consumer products launch, partially offset by the change in net non-cash expenses of $2.2 million.

Cash used in investing activities during the nine months ended September 30, 2017 was $1.2 million related to equipment purchases primarily to improve manufacturing yields and production capacity. As of September 30, 2017, we had outstanding commitments to purchase approximately $0.2 million in capital expenditures, and expect to make additional capital expenditures during 2017 to improve our manufacturing and R&D capabilities. Cash used in investing activities during the nine months ended September 30, 2016 was $1.0 million for equipment purchases. For the year ended December 31, 2016, investing activities used $1.4 million in cash for equipment purchases primarily for upgrading our production line.

Cash provided by financing activities during the nine months ended September 30, 2017 of $4.8 million included net repayments under our credit facility of $0.9 million partially offset by $69 thousand from the exercise of stock options, and proceeds of $5.8 million from a public offering.

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There were no financing activities during the nine months ended September 30, 2016. For the year ended December 31, 2016, financing activities provided approximately $6.0 million in cash of which approximately $4.3 million was net proceeds from the exercise of warrants to purchase common stock, $1.7 million from net borrowings under a new credit facility, net of debt issuance costs, and $45 thousand of proceeds from the exercise of stock options.

If we are not able to reach our anticipated level of profitability and cash flows over the twelve months commencing on January 1, 2018, it may be necessary to take actions to maintain our current levels of operations, including additional borrowings under our credit facilities, raising capital though issuance of equity, debt or equity linked securities, or to reduce our current levels of operations and implement cost reductions or restructuring activities. As of September 30, 2017, we had cash and working capital of $2.0 million and $10.6 million, respectively, and borrowing availability under the ABL Facility, net of borrowings of $0.9 million, of $3.7 million.

Underwritten Public Offering

On May 24, 2017, we completed an underwritten offering of 3,300,000 shares of its common stock at an offering price of $2.00 per share and warrants to purchase up to 1,650,000 shares of common stock and realized net proceeds of $5.8 million dollars after underwriting discounts and offering expenses. The shares and warrants were purchased by a single institutional investor and by Stillwater Trust LLC. The warrants have an exercise price of $2.45 per common share and a term of five years.

The underlying shares of common stock and warrants issued in the May 2017 offering completed the allotment of shares allowable for issuance pursuant to a shelf registration statement filed in 2014. In June 2017, we filed a replacement shelf registration statement that will provide us with the flexibility, subject to certain limitations as a result of our current unaffiliated market capitalization, to raise capital over the next three years from the offering of common stock, preferred stock, warrants, units and debt securities, or any combination of these securities, in one or more future offerings.

Warrant Transaction

On August 18, 2016, we entered into letter agreements with certain of our warrant holders pursuant to which they agreed to exercise warrants to purchase a total of 2,216,500 shares of our common stock, at an exercise price of $2.05 per share, which they acquired in December 2015.

On August 24, 2016, in consideration for the exercise of the 2,216,500 warrant shares, we issued new common stock purchase warrants to purchase 2,947,949 shares of our common stock or 1.33 new warrant share for each warrant share exercised, with an exercise price of $2.60 per share, the approximate market price of the Company's shares at the date of the letter agreement. The terms of the warrants are substantially similar to the warrants issued in December 2015. Similar to the earlier warrants, they are not exercisable for six months from the date of issuance; and have a term of five and a half years from the issuance date.

We raised approximately $4.3 million in net proceeds from the transaction, which was used for general corporate purposes.

ABL Facility

On December 21, 2016, we entered into an asset based revolving credit facility with a lender that provides for up to a maximum amount of $5 million based on a borrowing base equivalent of 85% of eligible accounts receivable plus the lesser of $2 million or 50% of eligible inventory. The interest on the ABL Facility is equal to the Prime Rate plus 3% but may not be less than 6.5% with a minimum monthly interest payment of $2,000. We are obligated to pay the lender a monthly administrative fee of $1,000 and an annual facility fee equal to 1% of the maximum amount borrowable under the facility.

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The ABL Facility will automatically renew on December 31, 2019 for a one-year term unless written notice to terminate the financing agreement relating to the ABL Facility is provided by either party.

The ABL Facility is secured by a lien on all receivables, property and the proceeds thereof, credit insurance policies and other insurance relating to the collateral, books, records and other general intangibles, inventory and equipment, proceeds of the collateral and accounts, instruments, chattel paper, and documents. The ABL Facility contains customary representations and warranties, affirmative and negative covenants and events of default, including a provision that we maintain a minimum tangible net worth of $13 million and a minimum working capital balance of $4 million. As of September 30, 2017, we had borrowings of $0.9 million outstanding under the ABL Facility and had unused borrowing availability of $3.7 million under the ABL Facility. We were in compliance with all debt covenants.

Unsecured Financing Arrangement

On March 24, 2017, we entered into an unsecured debt financing arrangement with Stillwater Trust LLC. This arrangement expired on May 24, 2017 upon the completion of an equity offering as provided under the terms of the financing agreement. Under the financing agreement, through June 30, 2018, we could borrow up to $2 million for general working capital purposes and up to an additional $3 million should our lender not provide borrowing availability under its normal terms and conditions through its ABL Facility. Pursuant to the financing agreement, the agreement would expire and borrowings become due upon the earlier of June 30, 2020; the completion of one or a series of equity financings which raise collectively $5 million or greater; or an event of default, as defined in the agreement. Amounts borrowed under the financing agreement, once repaid, could not be reborrowed.

The amounts drawn on the line accrued interest at 6% per annum payable at maturity, and were subject to an upfront drawdown fee of 2% of the amount drawn and a quarterly interest surcharge of 2% paid upfront and due commencing on the 180-day anniversary of each draw regardless of whether the draw was still outstanding and then a 2% quarterly interest surcharge until the draws were repaid. In connection with the financing commitment, the investor received a $50,000 commitment fee and a warrant to purchase 100,000 shares of common stock at an exercise price of $2.25 per share, the closing market price of our common stock on the date the financing agreement was executed. In connection with the facility, we, our lender and the investor entered into an intercreditor agreement.

Upon termination of this facility, the Company wrote off $158 thousand of related debt issuance costs, and recorded a charge to interest expense in the second quarter of 2017.

Mr. Christopher Brody, a member of our board of directors, is also the President and Managing Director of Stillwater Holdings LLC, which is our largest stockholder, and is the Vice President of Stillwater Trust LLC. The decision of Stillwater Trust LLC to enter into the financing arrangement was made independently of Mr. Brody and the financing was not required or suggested by Mr. Brody. The terms of the financing were determined solely by negotiation among us and Stillwater Trust LLC. Mr. Brody did not participate in the deliberations of our board or the special committee of our board formed to review the terms of the financing with respect to the approval of the financing and abstained from voting thereon.

Former Credit Facility

Our former credit facility with a lender expired on August 31, 2016 and was not renewed. The facility provided for up to a maximum of $3 million in borrowings based on 75% of eligible accounts receivable, as defined in the agreement. The interest on the credit facility was equal to the prime rate plus 4% but could not be less than 7.25% with a minimum monthly interest payment of $1 thousand. The credit facility contained customary representations and warranties as well as affirmative and negative covenants. We were in compliance with all debt covenants. We did not draw on the credit

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facility at any time since its inception in September 2010 and there was no outstanding balance at the expiration date.

Evaluation of Ability to Maintain Current Level of Operations

In connection with preparing our consolidated financial statements for the year ended December 31, 2016, and for the nine months ended September 30, 2017, we evaluated whether there were conditions and events, considered in the aggregate, that raised substantial doubt about our ability to maintain our current level of operations for twelve months following the issuance of the respective dates covered by the financial statements.

For the consolidated financial statements for the year ended December, 31, 2016, we considered the following:

- Our projections for 2017 and 2018 compared to the operating losses we incurred during 2016 and the first nine months of 2017;
- Our recurring operating losses and negative cash flow from operating activities during 2016 and the first nine months of 2017;
- Our working capital requirements for 2017 and the first quarter 2018 compared to our working capital requirements for 2016 and the first nine months of 2017, giving consideration to our cash expenditures in 2016 and the first nine months of 2017 to build our infrastructure and to build inventory of our consumer products which were launched in the first quarter of 2017; and
- The availability of cash and cash equivalents, including our borrowing capacity, to fund our requirements through 2017 and the first quarter of 2018.

As part of this evaluation, we considered the following:

- The projected level of product revenues during 2017 and the first quarter 2018 compared to 2016 as we ramp up shipments to new military programs following the wind down in 2016 of other military programs from which we have historically achieved a higher level of revenues;
- Contract revenues in 2017 and first quarter 2018 from fulfillment of existing and expected R&D contracts with several Tier One consumer technology companies in comparison to no revenues from such companies in 2016;
- Anticipated revenues from the introduction in the first quarter of 2017 of our night vision products for the consumer market; and
- The availability to borrow under our ABL Facility and our credit facility with our largest investor.

Upon completion of its evaluation, management believed that the Company could generate sufficient cash from operations and borrow sufficient funds from its credit facilities to satisfy its obligations for at least the next twelve months from the issuance of its 2016 financial statements on or about March 28, 2017.

Management planned to take one or more of the following actions if the Company's cash flow projections were not accurate:

- Increase its borrowings under its ABL Facility and borrow from the credit facility;

Raise additional capital through a private placement or public offering of its equity securities; and/or

Implement cost reductions or restructure our operations.

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At December 31, 2016, the Company had $5.2 million in cash and cash equivalents, $11.2 million of working capital, $1.9 million of borrowings under its ABL Facility and unused borrowing availability of $2.0 million under its ABL Facility.

For the consolidated financial statements for the nine months ended September 30, 2017, we evaluated whether the conditions above raised substantial doubt about our ability to continue as a going concern. As part this evaluation, we also considered our ability to continue current operations, which was dependent on our existing cash and working capital balances and the ability to generate sufficient cash flows from operations. We expected that we may need additional capital to fund our operations over the next twelve months from the date of issuance of these financial statements. If we were unable to raise additional capital or obtain debt when required or on acceptable terms, we considered that we may have to reduce or delay operating expenses as deemed appropriate in order to conserve cash.

On March 24, 2017, we entered into an unsecured debt financing arrangement with Stillwater Trust LLC, a significant investor in the Company. Under the financing agreement, through June 30,2018, we may borrow up to $2 million for general working capital purposes and up to an additional $3 million should our lender not provide borrowing availability under its normal terms and conditions through its ABL Facility. In accordance with the terms of the unsecured debt financing agreement, this arrangement expired on May 24, 2017 upon the completion of an equity offering.

On May 24, 2017, we completed an underwritten offering of 3,300,000 shares of our common stock and warrants to purchase up to 1,650,000 shares of common stock and realized net proceeds of $5.8 million dollars after underwriting discounts and offering expenses.

Upon completion of its evaluation, management believed that the Company's current operating plan, current working capital levels, including proceeds from its May public offering, current financial projections, and the ability to borrow under its ABL Facility, had alleviated substantial doubt about its ability to continue as a going concern.

As of September 30, 2017, the Company had an accumulated deficit of $226.2 million. The Company incurred a net loss of $7.3 million and used cash in operating and investing activities of $8.1 million during the first nine months of 2017. In addition, at September 30, 2017, the Company had cash and cash equivalents of $2.0 million, $0.9 million of borrowings under its ABL Facility and unused borrowing availability of $3.7 million under its ABL Facility.

Dividends and Stock Repurchase Plan

In the years ended December 31, 2016 and 2015, no dividends were declared or paid. It is our intention to retain any future profits for use in the development and expansion of our business and for general corporate purposes. Future decisions to pay cash dividends are at the discretion of our Board of Directors.

In August 2011, our Board of Directors approved a stock repurchase plan authorizing us to repurchase our common stock not to exceed $2.5 million in total value. No shares were repurchased subsequent to September 2012. As of December 31, 2016, authorization to repurchase $2.0 million in value of our common stock remained under this plan.

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Contractual Obligations

The following chart describes the outstanding contractual obligations of the Company as of December 31, 2016 (in thousands):

	Payments Due by Period				
	Total	1 Year	2 - 3 Years	4 - 5 Years	Thereafter
Operating lease obligations	$ 6,869	$ 970	$ 1,822	$ 1,830	$ 2,247
Revolving credit facility(a)	1,852	1,852			
Equipment purchase obligations	630	630			
Purchase obligations(b)	3,829	3,829			
Total	$ 13,180	$ 7,281	$ 1,822	$ 1,830	$ 2,247

(a) The Company's revolving credit facility matures in 2019 and is classified as a current liability

(b) The majority of purchase orders outstanding contain no cancellation fees except for minor re-stocking fees or reimbursements due to contract manufacturers for components purchased in anticipation of a scheduled production run that are subsequently cancelled.

Critical Accounting Policies

The SEC defines "critical accounting policies" as those that require application of management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain and may change in subsequent periods. Not all of the accounting policies require management to make difficult, subjective or complex judgments or estimates. However, the following policies could be deemed to be critical within the SEC definition.

Revenue and Cost Recognition

Revenue on product sales is recognized when persuasive evidence of an arrangement exists, such as when a purchase order or contract is received from the customer; the price is fixed; title and risk of loss to the goods has changed and there is a reasonable assurance of collection of the sales proceeds. We obtain written purchase authorizations from our customers for a specified amount of product at a specified price and consider delivery to have occurred at the time of shipment.

Revenues from research and development activities relating to firm fixed-price contracts and cost-type contracts are generally recognized on the percentage-of-completion method of accounting as costs are incurred (cost-to-cost basis). Progress is generally based on a cost-to-cost approach; however, an alternative method may be used such as physical progress, labor hours or others depending on the type of contract. Physical progress is determined as a combination of input and output measures as deemed appropriate by the circumstances. Contract costs include all direct material, labor and subcontractor costs and an allocation of allowable indirect costs as defined by each contract, as periodically adjusted to reflect revised agreed upon rates. These rates are subject to audit by the other party.

Product Warranty

We offer a one-year product replacement warranty. In general, our standard policy is to repair or replace the defective products. We accrue for estimated returns of defective products at the time revenue is recognized based on historical activity as well as for specific known product issues. The determination of these accruals requires us to make estimates of the frequency and extent of warranty activity and estimate future costs to replace the products under warranty. If the actual warranty activity

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and/or repair and replacement costs differ significantly from these estimates, adjustments to cost of revenue may be required in future periods.

Use of Estimates

In accordance with accounting principles generally accepted in the United States of America, management utilizes certain estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an on-going basis, management evaluates its estimates and judgments related to, among others, allowance for doubtful accounts, warranty reserves, inventory reserves, stock-based compensation expense, deferred tax asset valuation allowances, fair value of financial instruments, litigation and other loss contingencies. Management bases its estimates and judgments on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results could differ from those estimates.

Fair Value of Financial Instruments

The Company's cash, cash equivalents, accounts receivable, short-term investments, and accounts payable are stated at cost which approximates fair value due to the short-term nature of these instruments.

Stock-based Compensation

We maintain several stock equity incentive plans.

The 2008 Incentive Stock Plan, which is referred to herein as the 2008 Plan, adopted and approved by the Board of Directors on November 5, 2008 provides for grants of common stock and options to purchase shares of common stock to employees, officers, directors and consultants. The 2008 Plan has an aggregate of 2 million shares. In 2016, there were 221,024 options granted from this plan.

The 2011 Incentive Stock Plan adopted and approved by the stockholders on November 3, 2011 provides for grants of common stock and options to purchase shares of common stock to employees, officers, directors and consultants. On June 7, 2012, at the annual meeting of our stockholders, the stockholders approved an Amended and Restated 2011 Incentive Stock Plan, which is referred to herein as the 2011 Plan. The 2011 Plan has an aggregate of 1.4 million shares. In 2016, there were 458,000 options granted from this plan.

The 2013 Incentive Stock Plan, which is referred to herein as the 2013 Plan, adopted and approved by the stockholders on May 17, 2013 provides for grants of common stock and options to purchase shares of common stock to employees, officers, directors and consultants. The 2013 Plan has an aggregate of 1.5 million shares. In 2016, there were 635,097 options granted from this plan.

During 2016, the Company also granted 125,000 options under the 2017 Incentive Stock Plan, which was adopted and approved by the stockholders on May 25, 2017. The plan provides for grants of common stock and options to purchase shares of common stock to employees, officers, directors and consultants.

We account for the measurement and recognition of compensation expense for all share-based payment awards made to employees and directors by estimating the fair value of stock awards at the date of grant using the Black-Scholes option valuation model. Stock-based compensation expense is reduced for estimated forfeitures and is amortized over the vesting period using the straight-line method. For a further discussion on stock-based compensation, see Note 10 to our consolidated financial statements appearing elsewhere in this prospectus.

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Income Taxes

We are required to estimate income taxes in each of the jurisdictions in which we operate. The process involves estimating our current tax expense together with assessing temporary differences resulting from the differing treatment of items for accounting and tax purposes. These differences result in deferred tax assets and liabilities. Operating losses and tax credits, to the extent not already utilized to offset taxable income also represent deferred tax assets. We must assess the likelihood that any deferred tax assets will be realized from future taxable income, and to the extent we believe that realization is not likely, we must establish a valuation allowance. Significant judgment is required in determining our provision for income taxes, deferred tax assets and liabilities and any valuation allowance recorded against our deferred tax assets.

In determining future taxable income, assumptions are made to forecast operating income, the reversal of temporary timing differences and the implementation of tax planning strategies. Management uses significant judgment in the assumptions it uses to forecast future taxable income which are consistent with the forecasts used to manage the business. Realization of the deferred tax asset is dependent upon future earnings, with respect to which there is uncertainty as to the timing.

In assessing the realizability of deferred tax assets, we evaluate both positive and negative evidence that may exist and consider whether it is more likely than not that some portion or all of the deferred tax assets will be realized. At December 31, 2016 and 2015, we provided a full valuation allowance against our deferred tax assets as we determined that it was more likely than not that none of the deferred tax assets would be realized.

Our effective income tax rate was 0% in 2016 and 2015.

Effect of Recently Issued Accounting Pronouncements

For a full description of recent accounting pronouncements, including the expected dates of adoption and estimated effects on results of operations and financial condition, see Note 2 of our consolidated financial statements appearing elsewhere in this prospectus.

Quantitative and Qualitative Disclosures About Market Risk

Market Rate Risk

We are exposed to market risk related to changes in interest rates.

Interest Rate Risk

We hold our cash in cash and cash equivalents and certificates of deposits. We do not hold derivative financial instruments or equity securities. At December 31, 2016, we had $1.9 million of borrowings under our ABL Facility. A hypothetical 10% increase in borrowing interest rates at December 31, 2016 would not have had a material effect on our consolidated financial position, results of operations, or cash flows in the year ended December 31, 2016.

Foreign Currency Exchange Rate Risk

We do not have any material foreign currency exchange rate risk because the majority of our transactions are denominated in U.S. dollars.

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BUSINESS

Overview

We are a leader in the manufacture of microdisplays using organic light emitting diode (OLED) technology. We design, develop, manufacture and market OLED miniature displays, which we refer to as OLED-on-silicon microdisplays, virtual imaging products that utilize OLED microdisplays, and related products. We also perform research in the OLED field. Our virtual imaging products integrate OLED technology with silicon chips to produce high-resolution microdisplays one-inch diagonally and smaller, which when viewed through a magnifier, create virtual images that appear comparable in size to that of a computer monitor or a large-screen television. Our products enable our original equipment manufacturer (OEM) customers to develop and market improved or new electronic products, especially products that are mobile and highly portable so that people have immediate access to information and can experience immersive forms of communications and entertainment. We believe that a key growth area for us is the consumer electronic OEM market. Our potential channels to this market include licensing of our direct patterning technology and partnering for the mass production of microdisplays. We believe that our direct patterning technology is a key differentiator for enabling next generation AR/VR hardware for the consumer and enterprise segments because of the brightness and the pixel density afforded by the technology. We also develop and manufacture night vision products for the consumer electronics, recreational, law enforcement and first responder markets, including a smart phone attachment and a wearable device.

We believe that our OLED microdisplays offer a number of significant advantages over comparable liquid crystal microdisplays, including higher contrast, greater power efficiency, less weight, more compact size, and negligible image smearing. Using our active matrix OLED technology, many computer and electronic system functions can be built directly into the OLED microdisplay silicon backplane, resulting in compact, high resolution and power efficient systems. Already proven in military and commercial systems, our portfolio of OLED microdisplays deliver high-resolution, flicker-free virtual images that perform effectively even in extreme temperatures and high-vibration conditions. We also believe that our direct patterning technology gives us a substantial advantage over other OLED microdisplays because it allows us to produce microdisplays with the high brightness required for VR and AR. Traditional OLED microdisplays utilize white emitting OLED with color filters that lessen the intensity of emitted light by as much as 85%, significantly reducing brightness. Microdisplays manufactured by direct patterning do not require color filters to achieve color variations and allow for the application of more efficient OLED structures which achieve high brightness.

We have developed our own intellectual property portfolio that includes patents, over 15 years of manufacturing know-how and proprietary technologies to create high performance OLED microdisplays. We believe our technology, intellectual property portfolio and position in the marketplace give us a leadership position in OLED and OLED-on-silicon microdisplay technology. We believe that we are one of only a few companies to market and produce significant quantities of high resolution, small molecule OLED-on-silicon microdisplays.

We derive the majority of our revenue from sales of our OLED microdisplay products. We also earn revenue from government, commercial and consumer product development contracts that may complement and support our internal research and development programs. In addition, we generate sales from optics and microdisplays combined with optics. Beginning in the first quarter of fiscal 2017, we introduced two consumer night vision products, BlazeSpark and BlazeTorch, although revenue from these products to date has been minimal.

Our Industry

A microdisplay typically has a screen size that is less than two inches in diagonal. The miniature size enables them to be used in a wide variety of applications that require a screen that takes up small

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space, like head-mounted displays (HMDs), viewfinders and digital cameras. Microdisplays are used across various industries including consumer electronics, enterprise/industrial, military, defense, aerospace, and healthcare. Microdisplays provide many advantages over other displays where small size is a requirement. Benefits include compact size, high brightness and resolution, low power consumption, and high contrast. Devices incorporating microdisplays include HMDs, smart glasses and headset products. Sales of AR and VR gear, which include HMD, smart glasses and headsets, are estimated to exceed $26 billion by 2021, according to Technavio.

Display quality is widely accepted as a key performance driver for ensuring the optimal user experience. We believe that this requirement for better display quality will result in next generation products in consumer electronics, defense, aviation, medical and industrial/enterprise segments of the market which utilize microdisplays.

Our Technology Platforms

Small Molecule, Top-Emitting Active Matrix OLED Technology

Our microdisplays are currently based upon active matrix small molecule OLED technology, which we refer to as active matrix OLED (AMOLED). Our AMOLED technology uniquely permits millions of individual low-voltage light sources to be built on low-cost, silicon computer chips to produce single color, white or full-color display arrays. Using our OLED technology, many computer and video electronic system functions can be built directly into the silicon chip, under the OLED film, resulting in a compact, integrated system with lower overall system costs relative to alternative technologies.

OLEDs are thin films of stable organic materials that emit light of various colors when a voltage is impressed across them. OLEDs are emissive devices, which means that they create their own light, as opposed to liquid crystal displays, which require a separate light source. As a result, our OLED microdisplays use less power and deliver much higher contrast and fuller color than liquid crystal microdisplays. Unlike liquid crystal displays which use crossed polarizers to generate black level, OLED displays exhibit an extremely high contrast ratio which results in very vivid images. Because the light they emit is Lambertian, which means that it appears equally bright from most forward directions, a moderate movement in the eye does not change the image brightness or color as it does in other technologies.

Our technology is based on integrating a proprietary OLED device with a specially designed silicon backplane to produce efficient and high performance AMOLED microdisplays. Our OLED displays incorporate a proprietary, top-emitting structure for our OLED devices that enables OLED displays to be built on opaque silicon integrated circuits rather than only on glass. Our OLED microdisplays emit full visible spectrum (white) light that is isolated with color filters to create color images. Our microdisplays have a brightness that can be greater than that of a typical notebook computer and can have a potential useful life of over 50,000 operating hours in certain applications. New processes and device improvements, such as our OLED-XLS technology, offer even better performance for brightness, efficiency, and lifespan. We have developed extremely bright OLED microdisplays using our patented and copyrighted direct patterning (dPd) technology and have demonstrated color high resolution (WUXGA) microdisplays with brightness in excess of 5,000 nits, which is the world's highest resolution and brightness. In addition to our AMOLED technology, we have developed compact optic and lens enhancements, which when coupled with the microdisplay, provide the high quality large screen appearance that we believe a large proportion of the marketplace demands.

We believe that our AMOLED technology provides significant advantages over other microdisplay technologies in our targeted markets. We believe these key advantages include:

High brightness

Sharp contrast

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Low power consumption for improved battery life and longer system life;

High-speed performance resulting in clear video images;

Compact form factor and light weight;

Wide angle light emission resulting in large apparent screen size and more immersive experience;

Wide operating temperature range;

Good environmental stability (vibration and humidity); and

Low manufacturing cost at higher volumes.

Prism Optics

We sell high quality, large viewing angle prism optics with a wide range for eye positioning, both of which are essential for using our displays in immersive near-eye systems. We have developed advanced molded plastic prism lenses that permit our AMOLED microdisplays to provide large field of view images that can be viewed for extended periods with reduced eye-fatigue. We have developed an additional prism optic for a project that will pair with our SXGA096 display.

Our Market Opportunities

We target the military, aviation, industrial/medical, and consumer markets although many of our products cater to multiple markets. Within each of these market sectors we believe that our OLED microdisplays, when combined with compact optic lenses, can become a key component for a variety of mobile electronic products. Many of these products employ head-wearable displays that incorporate microdisplays mounted in or on eyeglasses, goggles, simple headbands, helmets, or hardhats, and are often referred to as head-mounted displays (HMDs) or headsets. Head-wearable displays may block out surroundings for a fully immersive experience, or be designed to "see-through" or "see-around" to the user's surroundings. They may contain one (monocular) or two (binocular) displays. We have leveraged our experience in developing for military and commercial aviation helmets and believe this experience will allow us to more rapidly introduce displays suitable for specialized/high-end mass market consumer VR/AR applications than our competitors.

Consumer

We believe that the most significant driver of the longer term near-eye virtual imaging microdisplay market is the growing consumer demand for mobile access to larger volumes of information and entertainment in smaller and more affordable packages. This desire for mobility has resulted in the development of mobile video personal viewer products in three general categories: (i) immersive VR headset-application platforms such as accessories for gaming computers, portable digital optical disc (DVD) systems and wearable telepresence systems; (ii) AR electronic viewers incorporated in products such as data glasses and personal viewers for cell phones; and (iii) low cost thermal and low light imaging and scopes for hunting and other outdoor activities.

As we manufacture our OLED displays in higher volumes at reduced costs and capitalize on our direct patterning technology, we believe that our products will be increasingly well positioned to compete with and displace liquid crystal displays and cell phone size displays in the rapidly growing consumer market, particularly as demand expands for sophisticated mobile personal viewers offering higher resolution and better image quality for VR and AR applications. Users of VR HMD's are demanding a fully immersive experience. We believe our direct patterning technology addresses the critical performance parameters for next generation VR HMDs, including higher brightness, sharper resolution, lower power consumption and longer life. Our strategy for addressing the consumer mass

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market includes developing partnerships with both Tier One consumer companies and high volume production manufacturing companies.

Potential applications for these personal viewers include handheld personal computers and mobile devices, such as smartphones, whose small, direct view screens limit the amount of information that can be displayed but which are now capable of running more complex software applications. Examples encompass applications where hands-free viewing is desired such as maintenance activities; entertainment and gaming video headset systems; and night time or thermal imaging devices for hunting, camping, and other outdoor activities. Current commercial products equipped with our OLED microdisplays in these sectors include those produced by Trijicon (IR Defense), among others. In addition, in late 2015, we entered into a HMD technology licensing agreement with a Tier One consumer electronics company which includes the use of our 2K × 2K displays in its consumer headsets. In December 2016, we entered into an agreement with a Tier One company interested in incorporating our proprietary direct patterning technology into potential headset products.

In the first quarter 2017, we introduced two night vision products, BlazeSpark and BlazeTorch. These products were designed for recreational use as well as hobbyists, and outdoor enthusiasts. Additionally, the products can be used by utilities and law enforcement agencies to expand or enhance their night-time activities.

Military/Aviation

Properly implemented, we believe that head-mounted systems incorporating our microdisplays increase the user's effectiveness by allowing hands-free operation and increasing situational awareness with sufficient brightness for use in daylight, yet controllable for nighttime light security. As a COTS (commercial off-the-shelf) component, OLED microdisplays possess performance characteristics important to military and other demanding commercial and industrial applications, including high contrast, wide dimming range, shock and vibration resistance and insensitivity to high G-forces. The design features and performance characteristics of our OLED microdisplays reduce the size, weight, and power required by current and future military systems, while also providing a wide operating temperature range. The image does not suffer from flicker or color breakup in vibrating environments and the microdisplay's wide viewing angle allows ease of viewing for long periods of time. Most importantly, our OLED's low power consumption reduces battery weight and, for military applications, increases allowed mission length. The OLED's wide operating temperature range is of special interest for military applications because the display can turn on instantly at temperatures far below freezing and can operate at very high temperatures, such as in desert conditions. We believe that our microdisplay products provide power advantages over other microdisplay technologies, particularly liquid crystal displays which require backlights and heaters and cannot provide instant-on capabilities at low temperatures. Incorporating OLED microdisplays into aviation helmets has been made possible by the high brightness of the OLED technology that we have developed.

Our products' military applications primarily fall into three broad areas: (1) helmet-mounted and handheld displays for situational awareness and data; (2) night vision/thermal imaging goggles, rifles and targeting sights, and handheld viewers; and (3) training and simulation devices. These systems are also well suited for demanding operations such as urban security, homeland defense, and fire and rescue.

Situational Awareness

Our OLED microdisplays have been incorporated into a broad range of U.S. and foreign military situational awareness programs. Situational awareness products include head-mounted displays that are used to display images, including digital map, sensor imagery and pilot aviation information. In addition, handheld imagers provide improved situational awareness on the battlefield, as well as in

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training and simulation. These products can also be combined with a weapon system to give the user the capability to select targets without direct exposure.

Night Vision/Thermal Imaging

Night vision goggles allow the user to see in low light conditions. Most versions include two different technologies: infrared/thermal and image intensification. Third and fourth generation military devices generally use some combination of the two technologies. Thermal imagers detect infrared energy (heat) and convert it into an electronic signal. The resulting signal needs to be presented on a display. Heat sensed by an infrared camera can be very precisely quantified, or measured, allowing the user to not only monitor thermal performance, but also identify and evaluate the relative severity of heat-related problems. Thermal imaging systems can be stand-alone handheld systems or integrated as part of the aiming mechanism for a larger system. Advances in sensor technology, both in sensitivity and resolution as well as economic efficiency, have been the driving factors in the adoption of thermal technologies for military applications. We believe the power efficiency and environmental ruggedness of our products are strong competitive advantages, particularly for smaller handheld non-cooled systems. Fielded products incorporating our OLED microdisplays include Harris' and L3 Insight's Enhanced Night Vision Goggle II, the Enhanced Night Vision Goggle III, Family of Weapons Sights Individual and Crew Served for the U.S. Army, L-3's Javelin medium-range anti-tank missile system, Northrop Grumman's Lightweight Laser Designator Rangefinders, Thales' SOPHIE handheld thermal imagers, and Thales' MINIE , LUCIE , and MONIE night vision goggles.

Training and Simulation

Our OLED microdisplays are purchased by OEMs for use with their simulation and training products. The companies that incorporate our OLEDs into their training and simulation applications include Quantum 3D, Rockwell Collins, Intevac Vision Systems, and Sensics, among others. Our displays have been commercialized and prototyped for situational awareness and night vision/thermal imaging applications by military systems integrators, including Elbit, L-3 Communications, Intevac Vision Systems, Nivisys, BAE Systems Technology, DRS, Harris (formerly Excelis/ITT), Intevac Vision Systems, Qioptiq, Rockwell Collins, SA Photonics, Saab, Sagem DS, and Thales, among others.

Commercial, Industrial, and Medical

We believe that a wide variety of commercial and industrial markets offer significant opportunities for our products due to increasing demand for instant data accessibility in mobile workplace environments and due to the benefit of mobile displays to enhance visual performance. Examples of existing and potential microdisplay applications include enhanced visualization for ocular surgery, mobile ultrasound, mobile nondestructive testing, enhanced vision for those with visual impairments, immediate access to inventory or maintenance and construction manuals, routine quality assurance inspection, and real-time viewing of images and data for a variety of applications. As an example, a user wearing an HMD while operating test equipment, such as an oscilloscope, can view technical data while simultaneously probing printed circuit boards. Current commercial products equipped with our OLED microdisplays in these sectors include those produced by BCF, Liteye, FLIR Systems, Nordic NeuroLab, VRmagic GmbH, and Sensics, among others.

Our Products

Our first commercial microdisplay, the SVGA+ OLED, was introduced in 2001. In 2008, we introduced engineering samples of our SXGA120 OLED microdisplays and began selling significant quantities of the product in 2010. In late 2011, we began selling pre-production samples of the WUXGA OLED microdisplay which is now qualified and in production. In 2014, we released our Digital SVGA, and in 2015, we released our smaller pixel pitch digital SXGA, SXGA096, as well as an

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upgrade to the SXGA120 and WUXGA. Our OLED display products are being designed in products to be manufactured by OEM customers for a wide variety of military, medical, industrial, and consumer applications. We offer our products to OEMs and other buyers as both separate components, integrated bundles coupled with our own optics, or complete systems. We also offer engineering support to enable customers to quickly integrate our products into their own product development programs and design customized displays with resolutions or features to meet specific customer requirements. In 2015, we announced the development of a prototype 2K × 2K immersive headset that uses our prototype 2K × 2K display. During 2016, we demonstrated the world's first highest brightness (~4,500 cd/m2) and highest resolution (1920x1200 pixels) microdisplay using our proprietary direct patterning method. With the addition of these new displays, we now offer a wide variety of OLED microdisplay options to our customers.

SVGA+ OLED Microdisplay Series (Super Video Graphics Array of 852x600)

The SVGA+ OLED Microdisplay Series is a 0.62 inch diagonal microdisplay that has a resolution of 852x600 triad pixels (1.53 million picture elements). The display also has an internal NTSC monochrome video decoder for low power night vision systems. The SVGA+ Rev3 OLED-XL microdisplay is a power efficient OLED display solution for near-eye personal viewer applications which uses less than 115 mW power in monochrome for thermal imaging applications, and lower than 175 mW at 200 cd/m2 for full color video.

Digital SVGA OLED-XL

The Digital SVGA or DSVGA OLED-XL was released for production in 2014. This is an 800 × 600 display with 15 micron pixels and a 0.6 inch diagonal. It has all the benefits of our other digital displays, including lower power (100 mW monochrome and 135 mW color), high (10,000 to 1) contrast, and also features a digital composite signal interface, enabling a minimal physical interface for color applications.

SXGA096 OLED-XL/XLS (Super eXtended Graphics Array, 1280 x 1024)

The SXGA096 display was introduced in 2015. It features a 9.6-micron color pixel and was designed with the same level of feature integration as the DSVGA microdisplay, as well as a low pin-count, high speed LVDS (Low Voltage Differential Signaling) data interface. The compactness and high information content of the SXGA096 makes it ideal for small form factor applications such as commercial headsets and smart weapon sights. This microdisplay incorporates OLED XLS technology more than doubling the OLED XL brightness. This expands the range of optical solutions that can be used with this display to result in smaller and lighter display modules.

SXGA OLED-XL (Super eXtended Graphics Array, 1280 x 1024)

Our SXGA OLED microdisplay with a 0.77 inch diagonal active area provides 3,932,160 sub-pixels in an active area. The display's pixel array comprises triads of vertical sub-pixels stacked side by side to make up each 12 × 12mm color pixel. The SXGA OLED-XL microdisplay offers digital signal processing, requiring less than 200mW under typical operation. The supported video formats are SXGA, 720p, DVGA (through 1280 × 960 pixel doubling), and both frame sequential and field sequential stereovision.

VGA OLED-XL (Video Graphics Array, 640 x 480)

The VGA OLED-XL microdisplay was introduced to our product line in 2011 and is our smallest (0.5 inches) and lowest powered (<60 mW monochrome/<100 mW color). The VGA OLED-XL utilizes the same voltage pixel drive architecture and "Deep Black" technology as the SXGA and

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WUXGA designs and includes motion artifact reduction technology like the WUXGA. Also like the SXGA and WUXGA, the VGA provides a FPGA driver design for maximum flexibility and versatility. The VGA interface is 30-bit digital RGB.

WUXGA OLED-XL (Widescreen Ultra eXtended Graphics Array, 1920 x 1200)

Our WUXGA OLED-XL microdisplay provides higher resolution than most HD (High Definition) flat screen televisions. With a triad sub-pixel structure this display is built of 7,138,360 active dots at 3.2 microns each. The WUXGA OLED-XL is built upon the voltage pixel drive approach first developed for the SXGA OLED-XL, which provides improved uniformity, ultra-high contrast (measured at greater than 100,000:1) and lower power. The advanced WUXGA design features our proprietary "Deep Black" architecture that ensures that off-pixels are truly black, automatically optimizes contrast under all conditions, and delivers better pixel to pixel uniformity. The WUXGA OLED-XL includes a low-power, low-voltage-differential-signaling (LVDS) serial interface and the overall display power requirement is typically less than 350 mW running standard video. Also included is our proprietary motion enhancement technology which smooths video display and virtually eliminates unwanted artifacts. Like the SXGA, the WUXGA provides a FPGA driver design available on a separate, lower power driver board, or as source code for integration into end product electronics giving OEM developers maximum versatility and flexibility. On-board circuitry ensures consistent color and brightness over a wide range of operating temperatures.

Lens and Design Reference Kits

We offer a prism optic with mounting brackets or combined with OLED microdisplays to form an optic-display module. We provide design reference kits, which include a microdisplay and associated electronics, to help OEMs evaluate our microdisplay products and to assist their efforts to build and test new products incorporating our microdisplays.

Integrated Modules

We provide near-eye virtual imaging modules that incorporate our OLED-on-silicon microdisplays with our lenses and electronic interfaces for integration into OEM products. We have shipped customized modules to several customers, some of which have incorporated our products into their own commercial products.

Headsets

In 2014, we developed and demonstrated a new Immersive Head Mounted Display (IHMD) with a different look and superior performance than other VR HMDs. Compared to other VR HMDs, it has four times the resolution, no pixelization, and a much smaller form factor. It incorporated our earlier 2K by 2K high-resolution OLED microdisplay prototype and patented optics, giving it significantly sharper resolution than a cell phone display and conventional optics. The field of view (FOV) of the IHMD exceeds one hundred (100) degrees and it has a resolution of four (4) megapixels per eye. We entered into a nonexclusive license agreement in 2015 to allow an undisclosed company to use the technology in this IHMD for their own applications and may incorporate our 2K × 2K displays in headsets that use the technology. The retrofit of our latest 2K × 2K microdisplay prototypes into the original design of this IHMD is being considered as a means to showcase their superior performance and higher resolution.

We are subject to certain export control laws, including the Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR). Certain of our products may be deemed to be controlled for export by the U.S. Commerce Department's Bureau of Industry and Security under the EAR or by the U.S. State Department's Directorate of Defense Trade Controls

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(DDTC) under the ITAR. Most of our ITAR products are custom displays developed for a specific military program or purpose. Failure to comply with these export control laws can lead to severe penalties, both civil and criminal, and can include debarment from contracting with the U.S. government.

Night Vision Smartphone Camera Attachment and Goggles

In 2016, we announced night vision products for the consumer markets and began limited sales in the first quarter of 2017. A smartphone camera attachment allows consumers to see clear, high-resolution images in the dark. A companion application allows users to record and live stream content directly to our social media sites and share with other sites. We also developed a wearable device that utilizes our OLED microdisplay technology to provide hands-free operation for night-time activities with the capability to record and upload content. We are completing the development of these products and pursuing channels of distribution.

Government Contract Funding

We derive a portion of our revenue from funding that we receive pursuant to research contracts or subcontracts funded by various agencies of the U.S. government.

In 2014, we were awarded a $5 million contract to develop and produce an ultra-high resolution, high brightness, high contrast, full color OLED microdisplay at a low unit cost. This Defense-wide Manufacturing Science & Technology award, also known as ManTech, is funded by the Undersecretary of Defense for Acquisition, Technology, and Logistics and will be administered by the U.S. Army RDECOM CERDEC Night Vision and Electronic Sensors Directorate Science and Technology Division. We earned a substantial portion of our R&D contract revenue in 2016 from this project and we expect to complete it by May 2018.

In 2015, we were awarded two new development programs that continued into 2016. The first program is a Small Business Technology Transfer program with the Air Force Research Laboratory and the second is a Small Business Innovation Research program with the United States Special Operations Command. Both programs were for investigating improved OLED micro display design and performance and were completed in 2016.

Our contracts with the U.S. government require us to conduct the research effort described in the statement of work section of the contract. These contracts may be modified or terminated at the discretion of the government and are subject to authorization, appropriation and allocation of the required funding on an annual basis.

Our Strategy

Our strategy is to strengthen our leadership position as a worldwide supplier of microdisplays and virtual imaging technology solutions for applications in high growth segments of the consumer, military and commercial electronics industry by capitalizing on our experience and expertise in active matrix OLED technology and silicon wafer design. We also plan to continue our participation in U.S. government funded Contract Research and Development programs which allows us to continue to enhance our technology. We aim to provide microdisplays and complementary accessories to enable OEM customers serving a variety of markets, including commercial, military and medical, to develop and manufacture new and enhanced electronic products. With the announcement of our BlazeSpark and BlazeTorch consumer night vision products, we have also entered the consumer electronics,

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recreational, law enforcement and first responder markets. Some key elements of our strategy to achieve these objectives include the following:

Develop OEM and mass production partnerships in the consumer HMD market. As the consumer VR market matures, eMagin technology is positioned well to address the requirements of this segment. Developing customer partners is key to establishing eMagin as the market leader for next generation displays for the consumer HMD market. In addition, executing on mass production partnerships will position us to capture a market predicted to experience significant growth through the 2020s.

Strengthen our technology leadership. As the first to exploit AMOLED microdisplays and the only participant in U.S. government contract research and development programs for OLED microdisplays, we believe that we enjoy a significant advantage in bringing this technology to market. By continuing to invest in research and development, and protecting our intellectual property, we expect to further develop performance improvements and provide a competitive edge for our customers who integrate our displays into their end products.

Optimize microdisplay manufacturing efficiencies while protecting proprietary processes and partner with large volume manufacturers to bring our technology into high volume production. We intend to reduce our production costs primarily by improving manufacturing yields and lowering fixed costs through reduced cycle time and increased automation as well as equipment upgrades. We outsource certain portions of microdisplay production, such as chip fabrication, to minimize our costs and time to market. We intend to retain the OLED-related processes in-house, where we have a core competency and manufacturing expertise. We also believe that by keeping these processes under tight control we can better protect our proprietary technology and process know-how. We believe that this strategy will also enhance our ability to continue to optimize and customize processes and devices to meet customer needs. In order to address emerging high volume consumer electronics OLED microdisplay requirements, we are actively seeking manufacturing partners who can help us realize that objective.

Build and maintain strong design capabilities. We employ in-house design capabilities supplemented by outsourced design services. Building and maintaining this capability allows us to reduce engineering costs, accelerate the design process and enhance design accuracy to respond to our customers' needs as new markets develop. Contracting third party design support to meet demand and for specialized design skills may also remain a part of our overall long term strategy. Given these capabilities, we continue to look for opportunities to add value to our displays to increase revenue.

Leverage strategic relationships. External relationships serve an important role in our research and development efforts. Suppliers, equipment vendors, government organizations, contract research groups, external design companies, customer and corporate partners, consortia, and university relationships all enhance the overall research and development effort and bring us new ideas and solutions. In addition, we participate in industry associations such as the Society for Information Display; SPIE, the international society for optics and photonics; the Army Aviation Association of America; and the National Defense Industrial Association; among others. We believe that strategic relationships allow us to determine better the demands of the marketplace and, as a result, allow us to focus our research and development activities on satisfying our customers' evolving requirements.

Enter consumer electronics markets. We announced the launch of our consumer night vision products, the BlazeSpark smart phone accessory and BlazeTorch night vision goggles in late 2016 and began limited sales in the first quarter of 2017. We plan to sell to consumers and to build relationships with commercial, law enforcement and first responder customers who have expressed interest in our products.

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Sales and Marketing

We primarily provide our OLED display and optics components to OEMs to incorporate into their branded products and sell through their own well-established distribution channels. We have traditionally marketed and sold our products to customers through targeted selling, promotions, select advertising and attendance at trade shows. We identify companies with end products and applications for which we believe our products will provide a key differentiator. Marketing efforts focus on identifying prospects and communicating the product performance attributes foremost in the minds of purchasing decision-makers. We believe that this approach positions us to achieve the highest possible return on investment for our marketing expense.

We market our products in North America, Asia, and Europe directly from our sales office located at our Hopewell Junction, NY facilities. We also have distributors in China and Korea.

An OEM design cycle typically requires between six and 36 months, depending on the uniqueness of the market, the complexity of the end product or, in the case of military OEM customers, government procurement schedules. Because our microdisplays are the main functional component that defines many of our customers' end products, we work closely with customers to provide technical assistance throughout the product evaluation and integration process.

Our consumer night vision products, which became available for sale in the first quarter of 2017, are marketed directly to the consumer through leveraging social media, trade shows, coverage by industry and consumer publications, and through our web site. We also market our products directly to recreational venues which may purchase our products for use by and sale to their customers and directly to industrial and commercial end users.

Customers

Customers for our products include both large multinational and smaller OEMs. We maintain relationships with OEMs in a diverse range of industries encompassing the military, industrial, medical, and consumer market sectors. The following table estimates net product revenues in the market sectors.

	For the Years Ended December 31,		
Market	**2016**	**2015**	**2014**
Commercial	29%	27%	23%
Military	47%	53%	58%
Commercial and Military	24%	20%	19%

The following table represents the domestic and international revenues as a percentage of total net revenues:

	For the Years Ended December 31,		
Geographic Location	**2016**	**2015**	**2014**
United States	58%	63%	51%
International	42%	37%	49%

In 2016, there was one customer that accounted for 11% of total revenues. In 2015, there were 2 customers that accounted for 12% and 11% of total revenues.

Backlog

As of December 22, 2017, we had a backlog of approximately $11.1 million. This backlog primarily consists of non-binding customer purchase orders and purchase agreements with expected delivery dates

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during 2018, but does not include expected revenue from research and development contracts or expected NRE (non-recurring engineering) programs under development. Most purchase orders are subject to rescheduling or cancellation by the customer with no or limited penalties. We believe that the backlog metric is of limited utility in predicting future sales because many of our OEM customers operate on a ship-to-order basis. Variations in the magnitude and duration of purchase orders and customer delivery requirements may result in substantial fluctuations in backlog from period to period.

Facilities

Manufacturing

Our manufacturing facilities are located about 70 miles north of New York City in Hopewell Junction, NY. We lease approximately 37,000 square feet of space which houses our own equipment for OLED microdisplay fabrication and research and development, includes a 16,300 square foot class 10 clean room space, additional lower level clean room testing space, assembly space and administrative offices. The lease expires in 2024.

Facilities services provided by the lessor include our clean room, pure gases, high purity de-ionized water, compressed air, chilled water systems, and waste disposal support. This infrastructure provided by our lease provides us with many of the resources of a larger corporation without the added overhead costs. It further allows us to focus our resources more efficiently on our product development and manufacturing goals.

We believe manufacturing efficiency is an important factor for success, especially in the consumer markets. Although we currently have the equipment needed for profitable production in place, we purchased $1.4 million, $1.2 million and $1.1 million in 2016, 2015 and the first nine months of 2017, respectively, of additional equipment mainly related to manufacturing to increase capacity and yield and to meet expected demand for our microdisplays.

Our consumer night vision products are manufactured at contract manufacturing facilities located in Singapore and China and incorporate displays manufactured at our facilities in Hopewell Junction, NY, and components and subassemblies manufactured by domestic and foreign suppliers.

Other

We lease approximately 2,000 square feet of office space for design and product development in Santa Clara, CA and the lease expires in 2019.

Competition

The industry in which we operate is highly competitive. We face competition from legacy technologies such as transmissive liquid crystal displays and liquid crystal on silicon displays as well as from alternative flat panel display technologies such as virtual scanning retinal displays. There are many large and small companies that manufacture or have in development products based on these technologies.

There are a few manufacturers of high resolution OLED microdisplays that produce microdisplays that compete with our microdisplay products. They are Yunnan OLiGHTECK Opto-Electronic Technology Co., Ltd. in China and MicroOLED in France. Both are shipping OLED microdisplays into the market. Sony Mobile Display Corp., in Japan, produces OLED microdisplays for integration into Sony's own higher-level systems such as digital cameras and HMDs and is now selling microdisplays to some commercial customers. In addition, in early 2017, Kopin Corporation announced a 2k × 2k microdisplay which includes OLEDs sourced from an existing manufacturer.

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If other new OLED-based companies enter our markets with directly relevant display designs and without manufacturing and reliability issues, we will face additional competition, although we believe that our progress to date in this area gives us a significant advantage.

We believe that competition will come from liquid crystal on silicon displays, small transmissive liquid crystal displays, and OLED microdisplays manufactured by competitors. While we believe our OLED technology is technically superior by providing higher quality images, greater environmental ruggedness, reduced electronics cost and complexity, and improved power efficiency microdisplays, there is no assurance that we will continue to be the dominant OLED microdisplay supplier. Competition can also come from inorganic micro LEDs, a technology still in the development stage but which could become a major competitor if all the technological hurdles are overcome.

Our consumer night vision products may face competition from a variety of electronics manufacturers that primarily offer thermal imaging cameras and monoculars. These include manufacturers of thermal imaging video cameras and monoculars. These devices are traditionally more expensive, heavier and larger than our BlazeSpark and BlazeTorch night vision products and are primarily designed for commercial users.

Our BlazeSpark and BlazeTorch products rely on a less expensive digital CMOS sensor and software image processing to produce viewable images though either smart phone displays or our proprietary OLED display and prism technology. While we believe our digital process technology, compact size, appealing designs, and streaming platforms offer advantages for serving consumer markets, it is possible that existing manufacturers of military and tactical night vision systems may offer consumer products, or other manufacturers may develop innovative technologies, that create increased competition.

Intellectual Property

We believe we have developed our own intellectual property portfolio of patents, trade secrets and manufacturing know-how. Our intellectual property includes 34 patents and 29 patent applications. It is important to protect our investment in technology by obtaining and enforcing intellectual property rights, including rights under patent, trademark, trade secret and copyright laws. We seek to protect inventions we consider significant by applying for patents in the United States and other countries when appropriate. The U.S. government holds licenses to much of our technology as a result of its funding a significant portion of our research and development.

Our intellectual property covers a wide range of materials, device structures, processes, and fabrication techniques, primarily concentrated in the following areas:

OLED Devices, Architecture, Structures, and Processes;

Display Color Processing and Sealing;

Active Matrix Circuit Methodologies and Designs;

Lenses and Tracking (Eye and Head);

Ergonomics and Industrial Design;

Wearable Computer Interface Methodology;

Legacy Field Emission and General Display Technologies; and

Head-mounted display technology.

We believe that, in addition to patent protection, our success is dependent upon trade secrets, technical expertise and know-how. To protect this information and know-how from unauthorized use or disclosure, we use nondisclosure agreements and other measures to protect our proprietary rights, and

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we require all employees, and where appropriate, contractors, consultants, advisors and collaborators to enter into confidentiality and non-competition agreements. We believe that our intellectual property portfolio, coupled with our strategic relationships and accumulated manufacturing know-how in OLED, gives us a significant advantage over potential competitors.

Employees

At September 30, 2017, we had a total of 98 employees, of whom 95 were full-time employees. None of our employees are represented by a labor union. We have not experienced any work stoppages and consider our relations with our employees to be good.

Legal Proceedings

From time to time and in the ordinary course of business, we are subject to various claims, charges and litigation. The outcome of litigation cannot be predicted with certainty and some lawsuits, claims or proceedings may be disposed of unfavorably to us, which could materially affect our financial condition or results of operations.

During 2015, we received a letter from an attorney representing a former employee claiming damages for age discrimination and wrongful termination. In September 2016, this former employee commenced action against the Company in Superior Court for the State of Washington. In February 2017, the former employee's counsel sent a discovery request to the Company. In October 2017, the parties reached a tentative settlement, subject to payment of an amount not material to the Company, documentation of the terms and the expiration of a revocation period.

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MANAGEMENT

Executive Officers and Directors

The following table sets forth information regarding our executive officers and directors as of January 1, 2018:

Name	Age	Position
Andrew G. Sculley	66	Chief Executive Officer, President and Director
Jeffrey P. Lucas	57	Chief Financial Officer and Chief Accounting Officer
Amalkumar Ghosh	63	Senior Vice President, Research and Development
Olivier Prache	58	Senior Vice President, Product Development
Stephen Costello	51	Senior Vice President, Strategic Partnerships
Christopher Brody(2)(3*)	49	Director
Paul Cronson(1)(4)	60	Director
Dr. Leslie G. Polgar(1)(3)(4)	74	Director
Ellen Richstone(1*)(2)	66	Director
Brig. General Stephen M. Seay, U.S. Army (Ret.)(1)(2*)(3)	71	Director
Dr. Jill J. Wittels	68	Director, Chair of the Board

(1) Audit Committee

(2) Governance & Nominating Committee

(3) Compensation Committee

* Committee Chair

Andrew G. Sculley

Andrew G. Sculley became the Company's Chief Executive Officer and President on June 1, 2008 and was appointed to the Board of Directors on November 2, 2009. Mr. Sculley served as the General Manager of Kodak's OLED systems Business Unit and Vice President of Kodak's Display Business from 2004 to 2008. From 2003 to 2006, he served on the Board of Directors of SK Display, a joint venture between Sanyo and Kodak. From 1996 to 2001, Mr. Sculley served as the Manager of Operations, Chief Financial Officer and member of the Board of Directors of Kodak Japan Ltd., where he led the effort to improve performance. Previously, he held positions in strategic planning and finance at Eastman Kodak Company. Mr. Sculley holds an M.B.A. from Carnegie-Mellon University, an M.S. in physics from Cornell University and a B.S. in physics from Stevens Institute of Technology. He attended Harvard University's Advanced Management Program/International Senior Management Program while an executive at Kodak. Mr. Sculley's experience as the Company's Chief Executive Officer and technical and business management experience at Kodak's Display Business, SK Display and Kodak Japan Ltd., led to the conclusion that Mr. Sculley should serve on the Board of Directors, given the Company's business and structure.

Jeffrey P. Lucas

Jeffrey P. Lucas became the Company's Chief Financial Officer on September 14, 2015. Mr. Lucas was the Chief Financial Officer and a member of the Board of Directors of Transfreight companies from 2013 to 2015. From 2010 to 2013, Mr. Lucas was the Managing Director of Neptune Advisors, LLC, a strategy consulting firm. From 2006 to 2010, he was the Chief Financial Officer of GPX International Tire Corporation. Mr. Lucas is a Certified Public Accountant and a Chartered

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Financial Analyst. He earned a M.B.A. from Harvard Business School and a B.A. in Economics from Tufts University.

Dr. Amalkumar Ghosh

Dr. Amalkumar Ghosh was appointed Senior Vice President of Research and Development in April 2009, after serving as Vice President of OLED Research and Development at the Company since 2005. He is responsible for new microdisplay technology development, government programs, intellectual property and manufacturing process engineering. Dr. Ghosh has more than thirty years of leading industrial research and development experience. From 2002 to 2005, he was at Eastman Kodak Company where he played a key role towards OLED display technology development. From 1995 to 2002, he was employed by the Company. His work during this period laid the foundations for OLED microdisplay technology. From 1985 to 1995, he was with IBM Corporation where he was a leader in various aspects of semiconductor and liquid crystal display technologies. He has many publications and patents to his credit and has received numerous awards and recognitions from the Society for Information Display, including being nominated a Fellow of the Society. Dr. Ghosh was the President of the Society for Information Displays from 2014 to 2016. Currently, he is a board director for the society. Dr. Ghosh earned a Bachelor of Science and Master of Science in physics from Poona University and a Ph.D. degree in Physics from Massachusetts Institute of Technology.

Olivier Prache

Olivier Prache was appointed Senior Vice President, Product Development in September 2012. His current responsibilities encompass managing OLED product development and product engineering. He served as Senior Vice President of Display Operations and Development from 2005 to 2012, after overseeing microdisplay product development at the Company since 1995 when he joined the Company's predecessor, FED Corporation. He was employed by Philips-LCOS from 2002 until 2004 when he rejoined the Company. Prior to joining the Company's predecessor in 1995, he worked for Pixtech in France and OIS Optical Imaging Systems in Troy, Michigan. He earned an M.S. degree in electronics from E.N.S.E.R.G., in Grenoble, France in 1983.

Stephen Costello

Stephen Costello was appointed Senior Vice President, Strategic Partnerships in September 2016. He has extensive experience in sales, partner development and marketing. He served from May 2015 to September 2016 as Vice President of Community Development for Aras Corp. From 2010 to 2014, he served as Head of Sales at SpaceClaim Corp. Steve has successfully commercialized military technology in Industrial, Enterprise and Consumer segments with multiple companies, including BAE Systems and DigitalGlobe. He earned a B.S. in Marketing and Economics from Babson College and a M.S. in Marketing from Bentley University.

Christopher Brody

Since February of 2012, Mr. Brody has served as the President and Managing Director of Stillwater LLC and as the Vice President of Stillwater Trust LLC. Both Stillwater LLC and Stillwater Trust LLC are affiliates of Stillwater Holdings LLC, our largest stockholder, which originally nominated him in 2012. From 2008 to 2011, Mr. Brody was the Chief Investment Officer of BAWAG P.S.K. Bank Fur Arbeit und Wirtschaft Und Osterreichische Sparkasse Aktiengesellschaft, a large Austrian commercial bank, and as a member of the management committee of its stockholder, BAWAG Holdings GmbH. He served on the boards of both companies. From 2001 to 2008, he served as Managing Director of Cerberus Capital Management L.P., an alternate asset hedge fund. He previously served on the boards of Scottish Re Group LTD (NYSE traded), and numerous other boards of private companies in the portfolio of Cerberus Capital Management L.P. Mr. Brody holds a B.A. from

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Brandeis University. Mr. Brody's U.S. and international business and financial knowledge and experience led to the conclusion that he should serve on the Board of Directors, given the Company's business and structure.

Paul Cronson

Paul Cronson has served as a director since July of 2003. Mr. Cronson is Managing Director of Larkspur Capital Corporation, which he co-founded in 1992. Larkspur is a broker dealer that is a member of FINRA and advises companies seeking private equity or debt. Mr. Cronson's career in finance began in 1979 at Laidlaw, Adams, & Peck where he worked in asset management and corporate finance. From 1983 to 1985, Mr. Cronson worked with Samuel Montagu Co., Inc. in London, where he marketed Eurobond issuers and structured transactions. Subsequently from 1985 to 1987, he was employed by Chase Investment Bank Ltd., where he structured international debt securities and developed synthetic asset products using derivatives. Returning to the U.S., he joined Peter Sharp Co., where he managed a real estate portfolio, structured financings and assisted with capital market investments until 1992. Mr. Cronson received his B.A. from Columbia College in 1979, and his M.B.A. from Columbia College in 1982. He is on the board of the Evelyn Sharp Foundation in New York, a private foundation supporting various not-for-profit endeavors. Mr. Cronson's business management and financial experience and knowledge led to the conclusion that he should serve on the Board of Directors, given the Company's business and structure.

Leslie G. Polgar

Dr. Leslie G. Polgar has served as a director since November of 2010. Dr. Polgar is an Adjunct Professor at St. Mary's College of California (2008 present), where he teaches Entrepreneurship in the Professional M.B.A. Program and Management of Innovation and Technology in the Executive M.B.A. Program. From 2005 to 2007, Dr. Polgar was chief executive officer and a member of the board of directors of Forth Dimension Displays Ltd. in Dalgety Bay, Scotland. From 2000 to 2003, Dr. Polgar was the founding president of Eastman Kodak's Display Products Business Unit, where he led the successful commercialization of the world's first full color, direct-view organic light emitting diode display (OLED). Dr. Polgar's board experience includes: Shotgun Players Theater Company (not-for-profit, US) and for-profits Interschola (US), Forth Dimension Displays (UK), SK Display (Japan), Bertram Labs/Chemetall GmbH (US-Germany), and Chemical Suppliers Inc. (US). Dr. Polgar earned an M.B.A. (U. of Connecticut), a Ph.D. and M.S. in physics (Carnegie Mellon University) and a B.S. in physics/math (U. of Michigan). Dr. Polgar's scientific and technical knowledge and his experience in the industry led to the conclusion that he should serve on the Board of Directors, given the Company's business and structure.

Ellen Richstone

Ellen Richstone began service as a director in July 2014. Ms. Richstone served as the Chief Financial Officer of several public and private companies between 1989 and 2012, including Rohr Aerospace, a Fortune 500 company. From 2002 to 2004, Ms. Richstone was the President and Chief Executive Officer of the Entrepreneurial Resources Group. From 2004 until its sale in 2007, Ms. Richstone served as the financial expert on the board of directors of American Power Conversion, an S&P 500 company. Ms. Richstone currently serves on, and was designated a financial expert by, the board of directors of BioAmber Inc., a publicly traded industrial biotechnology company producing sustainable chemicals, and Superior Industries. She also sits on the board of the National Association of Corporate Directors (NACD) in New England, as well as other non-profit organizations. In April 2013, Ms. Richstone was given the first annual Distinguished Director Award from the Corporate Directors Group. Ms. Richstone graduated from Scripps College in Claremont, California and holds graduate degrees from the Fletcher School of Law and Diplomacy at Tufts University. Ms. Richstone

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also completed the Advanced Professional Certificate in Finance at New York University's Graduate School of Business Administration and attended the Executive Development program at Cornell University's Business School. Ms. Richstone holds an Executive Master's Certification in Director Governance from the American College of Corporate Directors. Ms. Richstone's broad industry experience in technology and corporate governance expertise led to the conclusion that she should serve on the Board of Directors, given the Company's business and structure.

Stephen M. Seay

Brigadier General Stephen M. Seay, U.S. Army (Ret.) began service as a director in January 2006. In March 2016, Brig. General Seay became Director, Leadership and Career Development Strategies at the University of Central Florida Department of Athletics. His responsibilities include mentoring, coaching and advising students and student-athletes in career development opportunities in academia, government and industry, and toward successful employment upon graduation. He founded Seay Business Solutions, LLC, a Florida veteran-owned small business, in 2006, specializing in providing assistance to entrepreneurs and small businesses focused on working in defense. Retired Brig. General Seay provides expertise in high technology operational and integrated modeling, simulation, training and education, mission command, cyber operations, strategic planning, resource management/allocation/analysis, operations research and system life cycle planning, programming, execution, sustainment and life cycle system design. He held a wide variety of command and staff positions during his over thirty-three year Army career, culminating as the Commanding General, Joint Contracting Command-Iraq/Head of Contracting Authority, Operation Iraqi Freedom (2004-2005) and Program Executive Officer, Simulation, Training and Instrumentation (PEO STRI) from 2000-2005. He performs corporate and independent director responsibilities as a member of strategy, audit, compensation, finance, governance and executive committees. Brig. General Seay is the senior mentor/advisor for Talon Simulations, LLC, an entrepreneurial Florida small business, University of Central Florida graduate degree program and National Science Foundation grant awardee, focused on aviation simulation for training, and gaming, simulation focused on smaller aviation schools and instructional facilities. Additionally, in 2016, Brig. General Seay was selected to join the Proxy Board of Quantum 3D, Government Systems, Milpitas, CA. He serves on the Board of Directors and as Secretary, formerly Treasurer, Kid's House of Seminole County, Florida (children's advocacy), Orlando Science Center, Orlando, Florida (STEM) Director and on its Finance Committee, and is Secretary, National Modeling and Simulation Coalition (Industry professional). Brig. General Seay received his B.S. from the University of New Hampshire, where he was a three-sport student-athlete, and an M.S. from North Carolina State University. He taught Chemistry and coached lacrosse at the United States Naval Academy. Brig. General Seay is a recognized expert in operational training systems and programs. His Army operational experience and understanding of high technology devices, optics and digital displays, his business knowledge and experience in transitioning emerging technology into practical applications led to the conclusion that he should serve on the Board of Directors, given the Company's business and structure.

Jill J. Wittels

Dr. Wittels has served as a director and Chair of the Board since August, 2011. She served on the Board of Directors previously from 2003 to 2006. Dr. Wittels is currently the principal in Sostenuto Strategic Advisors, in which capacity she consults on business strategy and serves as a strategy advisor. She served on the Board of the Fermi National Accelerator Laboratory, a laboratory of the U.S. Department of Energy Office of High Energy Physics from 2013 to 2014 and also from June 1995 through June 2011. From 2001 until July 2011, Dr. Wittels was Corporate Vice President, Business and Technology Strategy of L-3 Communications. Her responsibilities at L-3 included strategies for growth, oversight of R&D, diligence support for M&A, and cross-company business development coordination. From 1979 to 2001, she held a variety of positions with BAE Systems, including Vice President and General Manager, Acting President and Vice President of Engineering. She served on the board of

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Innovative Micro Technology, Inc. from 2002 through July 2011 and on the board of Millivision, Inc. from 2002 to 2006. Dr. Wittels holds a B.S. and a Ph.D. in Physics, both from the Massachusetts Institute of Technology. Dr. Wittels' business management experience, her scientific knowledge, her knowledge of the Company, and her experience in developing strategy and strategic alliances led to the conclusion that she should serve on the Board of Directors, given the Company's business and structure.

There are no family relationships between any of our executive officers or directors.

Involvement in Certain Legal Proceedings

Pursuant to an Order Instituting Cease-and-Desist Proceedings Pursuant to Section 21C of the Exchange Act, Making Findings, and Imposing a Cease-and-Desist Order and Civil Penalty dated September 10, 2014, the entry to which Mr. Cronson consented, the SEC found that Mr. Cronson had violated Section 16(a) of the Exchange Act and Rule 16a-3 promulgated thereunder by virtue of having failed to timely file a Form 4 reporting transactions in our Company's securities on numerous occasions during the calendar years 2010 through 2013. The SEC ordered Mr. Cronson to (i) cease and desist from committing or causing any future violations Section 16(a) of the Exchange Act and Rule 16a-3 promulgated thereunder, and (ii) pay a civil money penalty in the amount of $47,250. Other than the foregoing, there are currently no legal proceedings, and during the past 10 years there have been no legal proceedings, that are material to the evaluation of the ability or integrity of any of our directors or director nominees.

Committees Established by the Board

The Board of Directors has standing Audit, Compensation, and Governance and Nominating Committees. Information concerning the function of each Board committee follows.

Audit Committee

The Audit Committee is responsible for overseeing management's implementation of effective internal accounting and financial controls, supervising matters relating to audit functions, reviewing and setting internal policies and procedures regarding audits, accounting and other financial controls, reviewing the results of our audit performed by the independent public accountants, and evaluating and selecting the independent public accountants. The Audit Committee has adopted an Audit Committee Charter which is posted on our Corporate Governance landing page under the tab labeled "Investors" on our website at http://www.emagin.com. The information on our website is not part of this prospectus. The current members of the Audit Committee are Ellen Richstone (Chair), Paul Cronson, Leslie G. Polgar and Stephen M. Seay. The Board has determined that Ms. Richstone is an "audit committee financial expert" as defined by the SEC. During 2016, the Audit Committee held nine meetings in person or through conference calls.

Compensation Committee

The Compensation Committee determines matters pertaining to the compensation of our executive officers and outside directors and administers our stock option and incentive compensation plans. The Compensation Committee has adopted a Compensation Committee Charter which is posted on our Corporate Governance landing page under the tab labeled "Investors" on our website at http://www.emagin.com. The information on our website is not part of this prospectus. The current members of the Compensation Committee are Christopher Brody (Chair), Leslie G. Polgar and Stephen M. Seay. During 2016, the Compensation Committee held 6 meetings in person or through conference calls.

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Governance and Nominating Committee

The Governance and Nominating Committee is responsible for considering potential Board members, nominating Directors for election to the Board, implementing the Company's corporate governance policies, and for all other purposes outlined in the Governance and Nominating Committee Charter, which is posted on our Corporate Governance landing page under the tab labeled "Investors" on our website at http://www.emagin.com. The information on our website is not part of this prospectus. The current members of the Governance and Nominating Committee are Stephen M. Seay (Chair), Christopher Brody and Ellen Richstone. During 2016, the Governance and Nominating Committee held six meetings in person or through conference calls.

Board Meetings During Fiscal 2016

During 2016, the Board of Directors held six meetings. Each director attended all of the meetings of the Board and all of the meetings held by all committees on which such director served. The Board also approved certain actions by unanimous written consent. In addition, all of the directors were present in person at the annual meeting of our stockholders in 2016.

Board Leadership Structure, Independence and Role in Risk Oversight

The Company has separated the positions of Chair of the Board of Directors and Chief Executive Officer. Given the demanding nature of these positions, the Board believes it is appropriate to separate the positions of Chair and Chief Executive Officer. Our Chair presides over all meetings of the Board of Directors, including executive sessions of the independent directors which are held at each Board meeting. She briefs the Chief Executive Officer on issues arising in executive sessions and communicates frequently with him on matters of importance. She has responsibility for shaping the Board's agenda and consults with all directors to ensure that the board agendas and board materials provide the Board with the information needed to fulfill its responsibilities. From time to time she may also represent the Company in interactions with external stakeholders at the discretion of the Board.

The Board of Directors has determined that each of our current directors, except for Mr. Sculley, is an "independent director" as that term is defined in the listing standards of the NYSE American LLC. The Board of Directors has also determined that each member of the Audit Committee, Compensation Committee and Governance and Nominating Committee meets the independence standards applicable to those committees prescribed by the NYSE American LLC and the SEC. In making this decision, the Board considered all relationships between the Company and the directors. The Board determined each such relationship, and the aggregate of such relationships, to be immaterial to the applicable director's ability to exercise independent judgment.

Our Board has overall responsibility for risk oversight. The oversight is conducted primarily through committees of the Board of Directors, as disclosed in each of the descriptions of each of the committees above and in the charters of each of the committees, but the full Board of Directors has retained responsibility for general oversight of risks.

Code of Ethics and Business Conduct

We have adopted a Code of Ethics and Business Conduct that applies to all of our directors, officers and employees, including our Chief Executive Officer and Chief Financial Officer and principal accounting officer. The Code of Ethics and Business Conduct is posted on our website at http://www.emagin.com. The information on our website is not part of this prospectus.

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EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

Executive Compensation Objectives

The objectives of our compensation program are as follows:

Attract, hire and retain well-qualified executives.

Reward performance that drives substantial increases in shareholder value, as evidenced through both future operating profits and increased market price of our common shares.

Compensation Setting Process

Role of Compensation Committee. The role of the Compensation Committee is to oversee the Company's executive compensation strategy, oversee the administration of its executive compensation and its equity based compensation plans, review and approve the compensation of the Company's Chief Executive Officer, and oversee the Company's compensation plan for the Board of Directors. The Compensation Committee is comprised exclusively of independent outside directors and includes members with executive level experience in other companies. In addition, the Compensation Committee compares executive compensation practices of similar companies at similar stages of development.

Role of Compensation Consultant. The Compensation Committee has the authority to engage its own advisors to assist in carrying out its responsibilities. Towers Watson, a global professional services company, was previously engaged by Compensation Committee to assist in the identification and selection of peer companies for purposes of comparing compensation practices and to provide guidance regarding the amount and types of compensation that we provide to our executives and Board of Directors, and on other compensation-related matters. In 2016, the Compensation Committee did not engage or receive services from Towers Watson or any other compensation consultant.

Role of Management. In setting compensation for 2017, our Chief Executive Officer worked closely with the Compensation Committee and attended the meetings of the Compensation Committee. Our Chief Executive Officer made recommendations to the Compensation Committee regarding compensation of our executive officers other than himself. No executive officer participated directly in the final deliberations regarding his own compensation package.

Use of Comparative Market Data. The Compensation Committee approved the 2016 peer group consisting of the following 17 companies. These companies were selected as peers based on their being in a similar industry, primarily manufacturers of electronic components or electronic equipment and instruments, and of a generally similar size, based mainly on revenue.

Clearfield, Inc.
Digital Ally Inc.
Inrad Optics Inc.
Intricon Corporation
Kopin Corporation
LightPath Technologies Inc.
Luna Inc.
LRAD Corporation
Mercury Computer Systems, Inc.
Micropac Industries Inc.
Microvision Inc.
Murata Manufacturing Co. Ltd.
NVE Corporation
SPI Energy Co., Ltd.
Supertex, Inc.
The LGL Group, Inc.
Universal Display Corporation

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Elements of Executive Compensation

The compensation level of our executives generally reflects their level of experience and is designed to provide an incentive to positively affect our future operating performance and shareholder value.

Base Salary. Base salary is the primary fixed element in the Company's compensation program and is intended to provide an element of certainty and security to the Company's executive officers on an ongoing basis. Base salaries are determined based on the executive's level of experience, specialty and responsibility. Executive base salaries are reviewed on an annual basis by the Compensation Committee. Any increases in base salary are based on an evaluation of the individual's performance, level of responsibility and, when such information is available, the level of pay compared to the salaries paid to persons in similar positions in the Company's peer group or as shown in survey data.

Mr. Sculley's base salary for 2016 was increased from $410,000 to $440,000, a 7.4% increase. Mr. Sculley's base salary had not been increased since 2014. In 2016, Dr. Ghosh received an increase in his base annual salaries of 6.7% from $300,000 to $320,000 and Mr. Lucas received an increase in his base annual salary of 2.9% from $345,000 to $355,000. Dr. Ghosh had not received an increase in his base annual salary since 2014 and Mr. Lucas had not received an increase in his base annual salary since joining the Company in September 2015.

Equity. Part of the compensation paid to our executives is in the form of equity, which to date has been exclusively through stock option grants. The stock option exercise price is generally equal to the fair market value of our common stock on the date of grant. Therefore, a gain is only recognized if the value of the stock increases, which promotes a long term alignment between the interests of the Company's executives and its stockholders. In 2016, the Compensation Committee awarded option grants to several employees and to the named executive officers. In addition, the time-based vesting features of our stock options contribute to executive retention. During 2016, the Compensation Committee awarded Mr. Sculley an option to purchase 150,000 shares of our common stock and an option to purchase 100,000 shares of common stock to each of Dr. Ghosh and Mr. Lucas.

Bonus. Our named executive officers are eligible to receive cash incentive awards that are tied to achieving performance metrics established by the Compensation Committee at the beginning of each year, with input from the Chief Executive Officer. Target bonuses for the named executive officers are set as a percentage of base salary. The program is funded by establishing a pool based on a percentage of annual EBITDA, which is then adjusted by an overall company performance modifier based on company performance to reach the final bonus pool. The program creates incentive for the named executive officers to direct their efforts toward achieving specified company goals and individual goals. For 2016 annual cash incentive bonuses, the Compensation Committee established goals related to the Company's financial performance and attainment of strategic milestones and approved individual goals for executives. In 2016, we fell short of reaching the Company's financial performance goals. Although we did not achieve the pre-determined financial performance and strategic milestone goals, we achieved other strategic milestones related to the development of certain technologies and attainment of certain production milestones and certain individual milestones were achieved. Accordingly, our named executive officers were awarded discretionary cash bonuses totaling $40,000 for 2016 performance.

Anti-Hedging Policy

Our insider trading policy prohibits directors and employees from engaging in short-term or speculative transactions such as trading in eMagin stock on a short-term basis, purchasing eMagin stock on the margin or engaging in short sales.

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Clawback Policy

Our Clawback Policy provides that the Company will seek to recover, under the direction of the Compensation Committee, any compensation paid to an executive officer of the Company which is subject to recovery under any law, government regulation or stock exchange listing requirement, through such deductions or clawback as may be required to be made pursuant to such law, government regulation or stock exchange listing requirement.

Summary Compensation Table

The following table sets forth information regarding compensation paid to our named executive officers for the years indicated.

Name and principal position	Year	Salary ($)	Bonus ($)	Option awards(1) ($)	All other compensation ($)	Total ($)
Andrew G. Sculley,	2017	440,000				440,000
President and Chief Executive Officer	2016	426,692	10,000	183,015		619,707
Amalkumar Ghosh,	2017	324,933				324,933
Senior Vice President, Research and Development	2016	304,500	20,000	122,010		446,510
Jeffrey P. Lucas,	2017	355,000				355,000
Chief Financial Officer and Chief Accounting Officer(2)	2016	349,673	10,000	122,010		481,683

(1) Amounts in this column represent the grant date fair value of options granted to the named executive officers during 2016, computed in accordance with FASB ASC Topic 718. These amounts do not necessarily correspond to the actual value that may be realized by the named executive officers. The assumptions made in valuing the options reported in this column are discussed in Note 10 to our financial statements for the year ended December 31, 2016, included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016.

(2) Mr. Lucas was appointed Chief Financial Officer effective September 14, 2015. His annual base salary for 2015 was $345,000.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth information with respect to the outstanding equity awards held by our named executive officers as of December 31, 2017.

Name	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Options exercise price ($)	Option expiration date
Andrew G. Sculley	188,333(1)		4.03	November 3, 2018
	600,000(2)	90,000	2.66	August 12, 2023
Amalkumar Ghosh	40,000(2)	60,000	2.66	August 12, 2023
Jeffrey P. Lucas	50,000(3)	25,000	2.50	September 14, 2020
	40,000(2)	60,000	2.66	August 12, 2023

(1) The shares underlying this stock option vested as follows: one third on June 1, 2012; one third on June 1, 2013; and the balance on December 31, 2013.

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(2) The shares underlying these stock options vest as follows: 20% of shares vested on the grant date of August 12, 2016 and 20% of the shares vest on each of the following four anniversaries of September 12, 2016.

(3) The shares underlying this stock option vest as follows: one third of the shares vested on September 14, 2016 and one third of the shares vests on each of the following two anniversaries of September 14, 2016.

Employment Agreements

Employment Agreement with Andrew G. Sculley

On July 1, 2016, the Company and Andrew G. Sculley, Jr. entered into an Amended and Restated Employment Agreement, which is referred to herein as the Sculley Employment Agreement. The term of the Sculley Employment Agreement will continue until December 31, 2018 unless it is terminated sooner pursuant to its terms. Mr. Sculley's current annual base salary is $440,000.

If Mr. Sculley's (i) employment is terminated without Cause (as defined in the Sculley Employment Agreement), (ii) employment is terminated or his position is significantly changed or salary decreased as a result of a Change of Control (as defined in the Sculley Employment Agreement) or (iii) if he terminates his employment for Good Reason (as defined in the Sculley Employment Agreement), then Mr. Sculley shall, at the Company's sole discretion, be entitled to the lesser of (i) the total amount of his base salary that remains unpaid under the Sculley Employment Agreement, which shall be paid monthly, or (ii) monthly salary payments for twelve (12) months, based on Mr. Sculley's monthly rate of base salary at the date of such termination, provided, however in lieu of the aforementioned monthly payments, the Company may in its sole discretion pay such payments in a lump-sum. Payment by the Company of the foregoing severance amounts is contingent upon Mr. Sculley's executing a release agreement substantially in the form attached as an exhibit to the Sculley Employment Agreement, and such release becoming effective, and only so long as Mr. Sculley does not revoke or breach the provisions of the such release or the restrictive covenants set forth in Sections 4 and 5 of the Sculley Employment Agreement. Mr. Sculley shall also be entitled to: (i) payment for accrued and unused vacation; (ii) the immediate vesting of any non-vested equity-related instruments granted pursuant to Section 2.6 of the Sculley Employment Agreement; and (iii) any bonuses which have accrued but remain unpaid prior to the date of Mr. Sculley's termination.

The Company has also agreed to amend any equity-related instruments granted to Mr. Sculley to permit the full exercise thereof following the termination of his employment without Cause, because of his Disability (as defined in the Sculley Employment Agreement) or death and to amend any equity-related instruments granted to him to permit the immediate full vesting and exercise thereof at any time after termination Mr. Sculley's employment without Cause or because of his Disability or death, to the same extent as Mr. Sculley's employment had not terminated. Mr. Sculley or his personal representative may accept either or both of such offers at any time before such equity-related instruments otherwise expire by giving written notice to the Company.

Offer Letter with Jeffrey P. Lucas

On September 14, 2015, the Company and Jeffrey P. Lucas entered into an offer letter. Mr. Lucas's current base salary is $355,000 and he is eligible for an annual incentive bonus targeted at 20% of his base salary, In the event that Mr. Lucas's employment is terminated by the Company for any reason other than for unsatisfactory performance or gross misconduct, he will receive severance equal to six months his salary at the time of termination.

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Change of Control Agreements

On November 8, 2017, the Company entered into Change in Control Agreements with four of its executive officers, Steve Costello, Amalkumar Ghosh, Olivier Prache and Jeffrey P. Lucas, each of which is referred to herein as an Executive. The Change in Control Agreements provide that if, within the twelve-month period following a Change in Control of the Company (as defined in the Change in Control Agreements), the Executive suffers a Terminating Event (as defined below and in the Change in Control Agreements), he will be entitled to receive a lump sum cash payment in an amount equal to the Executive's annual base salary in effect immediately prior to the Terminating Event (or the Executive's annual base salary in effect immediately prior to the Change in Control, if higher), payable in a lump sum on the termination date, provided that the Executive executes and does not revoke a separation agreement and release in favor of the Company. In addition, if the Executive was participating in the Company's group health plan immediately prior to termination and elects COBRA health continuation, then the Company will pay the Executive a monthly cash payment for 12 months or the Executive's COBRA health continuation period, whichever ends earlier, in an amount equal to the monthly employer contribution that the Company would have made to provide health insurance to the Executive if he had remained employed by the Company.

A "Terminating Event" shall be deemed to have occurred under the Change in Control Agreements if the Executive (i) is terminated by the Company other than for Cause (as defined in the Change in Control Agreements), death or Disability (as defined in the Change in Control Agreements) or (ii) terminates his employment with the Company for Good Reason (as defined in the Agreements).

The Change in Control Agreements became effective as of November 8, 2017 and shall terminate upon the earliest of (a) the termination of the Executive's employment for any reason prior to a Change in Control, (b) the termination of the Executive's employment with the Company after a Change in Control for any reason other than the occurrence of a Terminating Event or (c) the date which is twelve months and a day after a Change in Control if the Executive is still employed by the Company.

Director Compensation

The following table sets forth compensation information for our non-employee directors for the year ended December 31, 2017.

Name	Fees earned or paid in cash ($)	Option awards ($)(1)	Total ($)
Christopher Brody	40,000	50,000	90,000
Paul Cronson	40,000	50,000	90,000
Leslie G. Polgar	40,000	50,000	90,000
Ellen Richstone	45,000	50,000	95,000
Stephen M. Seay	40,000	50,000	90,000
Jill J. Wittels	70,000	98,750	168,750

(1) Amounts in this column represent the grant date fair value of options granted to the non-employee directors during 2017, computed in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, which is referred to herein as FASB ASC Topic 718. These amounts do not necessarily correspond to the actual value that may be realized by the non-employee directors. The assumptions made in valuing the options reported in this column are discussed in Note 10 to our financial statements for the year ended December 31, 2016, included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016.

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(2) The following table sets forth the aggregate number of shares of our common stock underlying unexercised stock options held as of December 31, 2017 by each of the persons who served as a non-employee director during 2017:

	Number of Shares Underlying Options Outstanding as of December 31, 2017
Christopher Brody	261,569
Paul Cronson	482,651
Leslie G. Polgar	342,978
Ellen Richstone	188,496
Stephen M. Seay	546,151
Jill J. Wittels	542,317

Fees Earned or Paid in Cash

Board Retainer. Each non-employee director, except the Chair, received an annual cash retainer of $40,000 for his or her service as a member of the Board of Directors in 2017. The Audit Committee Chair received an additional annual retainer of $5,000 for her service in such role in 2017.

Meeting Fees. Members of the Board of Directors do not receive any additional fees for meeting attendance.

Option Awards

Each non-employee director, except the Chair, received equity compensation in the form of a stock option with a grant date fair value of $50,000 in 2017.

Chair of the Board

The Chair received an annual cash retainer of $70,000 and equity compensation in the form of a stock option with a grant date fair value of $98,750 in 2017.

2017 Non-Employee Director Compensation

On April 20, 2017, the Compensation Committee approved the following 2017 compensation for non-employee directors, excluding the Chair:

Annual cash retainer of $40,000

Stock option with a grant date fair value of $50,000

No meeting fees

For service in 2017, the Chair received an annual cash retainer of $70,000 and a stock option with a grant date fair value of $98,750. The Chair of the Audit Committee received an annual cash retainer of $5,000 in addition to the $40,000 annual cash retainer for service on the Board of Directors.

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CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Transactions with Related Persons

At no time during 2016 or 2017 has any executive officer, director or any member of these individuals' immediate families, any corporation or organization with whom any of these individuals is an affiliate or any trust or estate in which any of these individuals serves as a trustee or in a similar capacity or has a substantial beneficial interest been indebted to the Company or been involved in any transaction in which the amount exceeded $120,000 and such person had a direct or indirect material interest.

On March 24, 2017, the Company entered into an unsecured debt financing arrangement, which is referred to herein as the Line Letter Agreement, with one of our largest stockholders Stillwater Trust LLC, which is referred to herein as Stillwater. Pursuant to the Line Letter Agreement, the Company may borrow up to $2 million for general working capital purposes and up to an additional $3 million should the Company's primary lender not provide borrowing availability under its normal terms and conditions, which is referred to herein as the Line.

Advances against the Line are available for working capital needs of the Company and for general corporate purposes. The Company may only borrow up to $2,000,000 unless the Company is unable to borrow further amounts under its financing agreement with Rosenthal & Rosenthal. All loans under the Line Letter Agreement mature and become immediately repayable upon the date that is the earliest to occur of (i) June 30, 2020, (ii) the closing date of any issuance or related issuance of securities of the Company by the Company or any of its subsidiaries in which the Company or such subsidiary receives gross proceeds of at least $5,000,000, and (iii) the occurrence of an Event of Default (as defined in the Line Letter Agreement). Loans under the Line Letter Agreement shall bear interest at 6.00% per annum, payable in kind. Upon the occurrence and during the continuance of an Event of Default, all loans under the Line Letter Agreement shall bear interest at a fixed rate of 11.00% per annum.

As additional consideration for the Line, the Company paid Stillwater a non-refundable origination fee of $50,000 and issued warrants to Stillwater to purchase up to 100,000 shares of the Company's common stock at an exercise price of $2.25 per share, the closing market price of the Company's common stock on the date the arrangement was executed. As additional consideration for the Line, with respect to each loan made under the Line Letter Agreement, the Company agreed to pay Stillwater, 180 days after each loan is made, which is referred to herein as the First Anniversary Date, and then each 90 days thereafter (each referred to herein as a Renewal Date and, together with the First Anniversary Date, an Anniversary Date), a non-refundable fee, equal to 2% of the principal balance of such loan outstanding on such Anniversary Date. As additional consideration for the Line, the Company also agreed to pay Stillwater a non-refundable fee in the amount of 2% of each loan. On May 24, 2017, the Company voluntarily terminated its unsecured debt financing arrangement with Stillwater. The Company did not incur any early termination penalties in connection with the termination of the Line. As of the date of its termination, there were no amounts outstanding under the Line.

Procedures for Approval of Related Party Transactions

Our Board of Directors is charged with reviewing and approving all potential related party transactions. All such related party transactions must then be reported to the extent required under applicable SEC rules. We have not adopted other procedures for review, or standards for approval, of such transactions, but instead review them on a case-by-case basis.

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PRINCIPAL STOCKHOLDERS

The following table sets forth information with respect to the beneficial ownership of our capital stock, as of December 31, 2017, by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our capital stock;
- each of our directors;
- each of our named executive officers; and
- all of our current executive officers and directors as a group.

The number of shares beneficially owned by each stockholder is determined under rules of the SEC and includes voting or investment power with respect to securities. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of common stock subject to options, warrants or other rights held by such person that are currently exercisable or will become exercisable within 60 days after December 31, 2017 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person.

We have based our calculation of the percentage of beneficial ownership prior to this offering on 35,020,523 shares of our common stock outstanding as of December 31, 2017. The calculation of the percentage of beneficial ownership after this offering gives effect to the issuance by us of 6,451,613 shares of common stock and warrants to purchase 2,580,645 shares of common stock in this offering. The percentage ownership information assumes no exercise of the underwriters' over-allotment option.

Unless otherwise indicated, the address of all listed stockholders is c/o eMagin Corporation, 2070 Route 52, Hopewell Junction, New York 12533. Each of the stockholders listed has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise.

Name of Beneficial Owner	Common Stock Beneficially Owned**	Percentage of Common Stock Before this Offering**	Percentage of Common Stock After this Offering**
Stillwater Holdings LLC (f/k/a Stillwater LLC)(1)	16,159,160	37.92%	32.93%
Ginola Limited(2)	4,980,694	13.39%	9.18%
Rainbow Gate Corporation(3)	1,720,658	4.79%	4.06%
Paul Cronson(4)	811,122	2.27%	1.93%
Andrew G. Sculley(5)	537,133	1.52%	1.29%
Jill J. Wittels(6)	542,317	1.52%	1.29%
Stephen Seay(7)	546,151	1.54%	1.30%
Leslie G. Polgar(8)	642,978	*	
Christopher Brody(9)	261,569	*	
Ellen Richstone(10)	188,496	*	
Amalkumar Ghosh(11)	60,485	*	
Olivier Prache(12)	40,181	*	
Jeffrey P. Lucas(13)	89,950	*	
Stephen Costello		0%	
All current executive officers and directors as a group (consisting of 11 individuals)	3,437,132	9.69%	8.22%

* Less than 1% of the outstanding common stock.

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Beneficial Ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Shares of common stock subject to options, warrants, or preferred shares exercisable or convertible within 60 days of December 31, 2017 are deemed outstanding for computing the percentage of the person holding such option or warrant.

(1)

This figure represents: (i) 8,556,826 shares of common stock owned by Stillwater Holdings LLC (f/k/a Stillwater LLC), which includes 4,250,000 shares of common stock placed with Flat Creek Fiduciary Management LLC as trustee of a trust for the benefit of minor beneficiaries of the sole member of Stillwater Holdings LLC, in which the sole member of Stillwater Holdings LLC has investment control; 2,250,000 shares of common stock held by Stillwater Trust LLC in which the sole member of Stillwater Holdings LLC has investment control; and 783,325 shares of common stock owned by Rainbow Gate Corporation of which the sole member of Stillwater Holdings LLC is the investment manager; (ii) 6,314,666 shares of common stock underlying Series B Convertible Preferred Stock which includes 937,333 shares of common stock underlying Series B Convertible Preferred Stock held by Rainbow Gate Corporation of which the sole member of Stillwater Holdings LLC is the investment manager; and (iii) 1,277,668 shares underlying common stock warrants. Mortimer D. A. Sackler exercises sole voting power with respect to the shares held in the name of Stillwater Holdings LLC as sole member, Mortimer D. A. Sackler exercises sole voting power with respect to the shares held in the name of Rainbow Gate Corporation as investment manager, Mortimer D. A. Sackler exercises sole voting power with respect to the shares held in the name of Stillwater Trust LLC as sole member and President and Mortimer D.A. Sackler has investment control with respect to the shares held in the name of Flat Creek Fiduciary Management LLC, as trustee; therefore Stillwater Holdings LLC is deemed to beneficially own the shares held by Rainbow Gate Corporation and Flat Creek Fiduciary Management LLC.

(2)

This figure represents: (i) 2,799,361 shares of common stock owned by Ginola Limited, which include: 783,325 shares of common stock held indirectly by Rainbow Gate Corporation; 78,478 shares of common stock owned by Mount Union Corp.; and 57,372 shares of common stock owned by Chelsea Trust Company Limited, as trustee (Ginola Limited disclaims beneficial ownership of the shares owned by Rainbow Gate Corporation, Mount Union Corp. and Chelsea Trust Company Limited, as trustee); and (ii) 173,333 shares underlying common stock warrants; and (iii) 2,008,000 shares of common stock underlying Series B Convertible Preferred Stock, which includes 937,333 shares of common stock underlying Series B Convertible Preferred Stock held by Rainbow Gate Corporation. Stillwater Holdings LLC (f/k/a Stillwater LLC) and Ginola Limited are beneficially owned by separate parties and therefore do not exert voting control over one another. However, the figure for Stillwater Holdings LLC includes the shares held by Rainbow Gate Corporation and the sole member of Stillwater Holdings LLC is the investment manager and sole director of Rainbow Gate Corporation that exerts voting control over such shares. Jonathan White, Geraldine McNaney and Joerg Fischer exercise shared voting power with respect to the shares held in the name of Mount Union Corp. Stuart Baker, Joerg Fischer, Leslie Schreyer and Jonathan White exercise shared voting power with respect to the shares held in the name of Chelsea Trust Company Limited. Jonathan White, Joerg Fischer and Philip Le Cornu are the directors of Ginola Limited and exercise shared voting power with respect to the shares held in the name of Ginola Limited.

(3)

This figure represents 783,325 shares of common stock owned by Rainbow Gate Corporation and 937,333 shares of common stock underlying Series B Convertible Preferred Stock held by Rainbow Gate Corporation. Mortimer D. Sackler exercises the sole voting power with respect to the shares held in the name of Rainbow Gate Corporation.

(4)

This figure represents 168,471 shares of common stock owned by Mr. Cronson, 482,651 shares of common stock underlying options, and 160,000 shares of common stock underlying Series B Convertible Preferred Stock held directly and indirectly by Paul Cronson. This includes (i) 13,294 shares of common stock held indirectly by a family member of Paul Cronson; and (ii) 155,177 shares of common stock and 160,000 shares of common stock underlying Series B Convertible Preferred Stock held indirectly by Navacorp III, LLC. Mr. Cronson exercises sole voting power with respect to the shares held in the name of Navacorp III, LLC.

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(5) This figure represents 288,800 shares of common stock owned by Andrew G. Sculley and 248,333 shares underlying options.

(6) This figure represents shares underlying options.

(7) This figure represents shares underlying options.

(8) This figure represents shares underlying options.

(9) This figure represents shares underlying options.

(10) This figure represents shares underlying options.

(11) This figure represents 20,585 shares of common stock owned by Amalkumar Ghosh and 40,000 shares underlying options.

(12) This figure represents 181 shares of common stock owned by Olivier Prache and 40,000 shares underlying options.

(13) This figure represents shares underlying options.

There are no arrangements known to the Company, including any pledge by any person of securities of the Company, the operation of which may at a subsequent date result in a change in control of the Company.

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DESCRIPTION OF CAPITAL STOCK