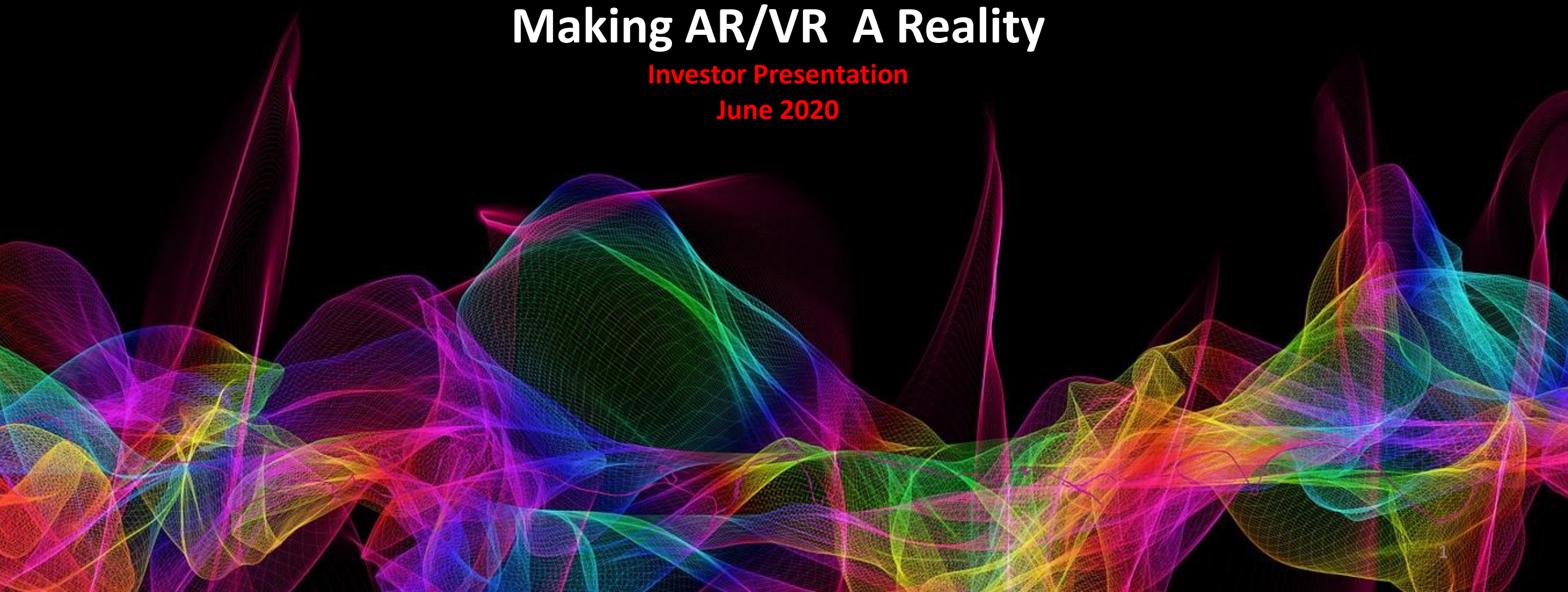




Making AR/VR A Reality

Investor Presentation

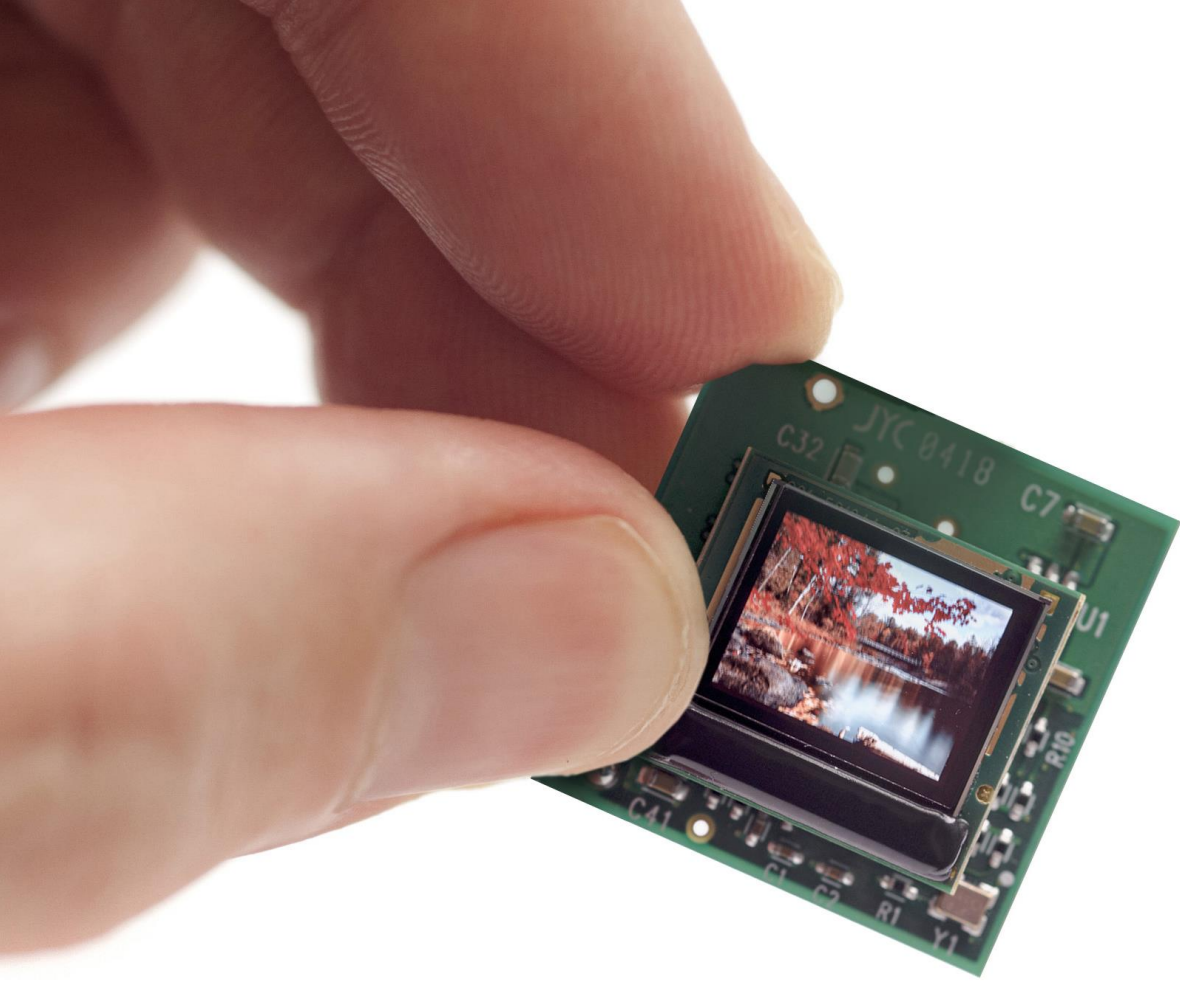
June 2020



Disclaimer

Certain statements made by us in this presentation that are not historical facts or that relate to future plans, events or performances are forward-looking statements within the meaning of the federal securities laws. Our actual results may differ materially from those expressed in any forward-looking statement made by us. Forward-looking statements involve a number of risks or uncertainties including, but not limited to, the risks described under the heading “Risk Factors” in the Company’s filings with the Securities and Exchange Commission, including, but not limited to, the Company’s Reports on Form 10-K for the year ended December 31, 2019. All forward-looking statements are qualified by those Risk Factors as well as the Company’s “Statement of Forward-Looking Information” in such filings. All statements made by us in this presentation are further qualified in all respects by the information disclosed in the Company’s filings with the Securities and Exchange Commission. These statements are only predictions. We are under no duty to update or revise any forward-looking statements to conform such statements to actual results or events, and do not intend to do so.

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Vision:

***Enable the future of
computing & imaging
with OLED technology***

Key Messages

1

The only US manufacturer of OLED microdisplays; a technology leader with proprietary and patented direct patterning technology (dPd™) for ultrahigh brightness in color

2

Uniquely positioned to capitalize on growing addressable markets in military, industrial and consumer for high brightness AR/VR solutions

3

Recent U.S. government funding of approximately \$39 million for manufacturing to support improvement in growth, innovation and productivity

4

Deep applications expertise and broad IP portfolio; aligned with blue-chip customer base and long-term industry trends


5

Well-established military and aviation market presence benefitting from secular and cyclical tailwinds; leverageable platform for high growth opportunities in consumer and commercial end markets

6

Highly experienced management team with industry leading technical expertise enabling a substantial runway for value creation

eMagin at a Glance

Headquarters: Hopewell Junction, NY
Manufacturing: U.S. Domiciled 
Employees: 100+

Revenue: **\$26.7M in 2019**

- 92% from Product Sales, 8% Contracts
- 53% U.S., 47% International
- 27 countries served

Market Cap: **\$95M***
Exchange: **EMAN on NYSE**

Patents: **43 issued, 39 pending**

The technology leader in OLED Displays.



Making AR/VR a reality.

*Based on closing price on 8/26/20 and 67.4 million shares outstanding.

Growth Strategy



Leverage commercial and consumer electronics customer relationships for AR/VR opportunities

Develop partnerships for high volume manufacturing

Grow commercial and industrial presence

Expand military and aviation market share

Deepen penetration of leading-edge dPd™ technology

Increase capacity and production yields; expand manufacturing capability

Q2 2020 Highlights: Improving Performance



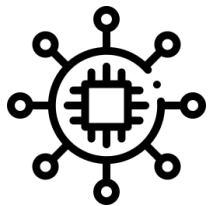
Improved Financial Trends

- 2Q20 revenue of \$7.7 million, 44% YOY increase due to increased demand from military customers and contribution from R&D work for the consumer market
- \$13.2 million of backlog at 2Q20, 14% YOY increase



Operating Trends

- 2Q20 results reflected an 8% increase YOY in operating expenses due to focus on R&D projects related to dPd technology and XLE display development
- Expect ongoing improvement in yield and throughput



Advancing Product Development

- Continued to ship a significant amount of product for the ENVG-B program as well as produce displays for the F-35 program in 2020
- Will achieve 10,000 nits brightness by 4Q20 and 28,000 nits by 2023, 5x – 10x > competitors
- Received awards for two-multiyear U.S. helicopter helmet programs in 1Q20
- Providing displays for thermal systems for firefighting/law enforcement and veterinary ultrasound goggles, cataract operating systems, and MRI and LASIK systems in medical market



\$39 million of Department of Defense Awards

- Recognized by DOD as the only domestic manufacturer of OLED microdisplays designated as a cornerstone of the US manufacturing base
- Received \$5.5 million award under the Industrial Base Analysis and Sustainment (IBAS) Program for Organic Light Emitting Diode (OLED) Supply Chain Assistance for procurement and installation of capital equipment at the Hopewell Junction facility to enhance manufacturing capabilities
- Received \$33.6 million DoD funding to sustain and enhance U.S. domestic capability for high resolution, high brightness OLED microdisplays based on proprietary dPd technology



eMagin's OLED Technology Advantage

Lowest Power and Highest Brightness

- Brightest OLED – monogreen over 28,000 cd/m²; full color 7,500 cd/m² demonstrated, full color 10,000 cd/m² targeted this year
- Very high contrast – greater than 1,000,000:1
- Lower power consumption– longer battery life
- More compact form factor
- Light-weight solution
- Field tested for reliability and performance
- Nausea-free operation
- Superior performance and a competitive cost at higher volumes



History of Technical Leadership

Many fundamental innovations in microdisplays

- Commercial full color SVGA+ Active Matrix OLED microdisplay
- Full color SXGA OLED microdisplay
- High-brightness monochrome SXGA microdisplay (20k+ cd/m²)
- High-brightness color SXGA OLED microdisplay (700+ cd/m²)



History of Technical Leadership

Promising results of Direct Patterning (dPd)

- dPd® demonstrated on 2k x 2k display
- dPd enhancements (<7,500 cd/m² brightness on a full color WUXGA)
- 4k x 4k microdisplay demonstrated at SID conference

OLED Provides Superior AR/VR Experience

Magnification Highlights eMagin's Superior Fill Factor



Samsung Galaxy S5 OLED
Cell Phone Display / 600 ppi



eMagin OLED Microdisplay
>2,500 ppi



The Future of AR/VR Powered by – dPd™



- Conventional OLED microdisplays use white OLED with color filters
 - Color filters absorb ~80% of the useful light; limited brightness and inefficient
- Only eMagin has Direct Patterned microdisplay technology for direct emission of red, green and blue light without color filters
 - Enables significantly higher brightness; targeting 10,000 cd/m² at year end and 28,000 cd/m² by 2023
 - Higher efficiency, much lower power consumption
- eMagin is ahead today in full color OLED microdisplay brightness and will stay ahead

*for illustrative purposes only

Deep Application Expertise & Broad IP Portfolio

Patents

- 43 patents issued and 39 pending
- Includes silicon backplane, OLED architecture, process and packaging
- Key patents include ultra-high brightness directly patterned OLED displays

Know-how

- Includes Silicon backplane, OLED architecture, process and packaging
- Back-plane design
- Anode patterning
- Direct patterning of OLED
- Thin film encapsulation
- Packaging methodology

Significant Barriers to Entry

Military & Aviation

Profile

- Predominately sole-source supplier
- Differentiated performance and leader in brightness
 - Visible in bright sunlight
 - High contrast for detail
- First mover in AR/VR for domestic and foreign military applications
- Global market leadership - U.S. Army, Air Force, Special Forces, Navy/Marines
- Proven track record of performing in demanding applications and environments
- Long-standing customer relationships and extended program and product lifecycles
- Favorable secular and cyclical tailwinds
- Military microdisplays addressable market expected to increase five-fold to \$1.3B by 2024¹
- Accelerating activity and program wins in aviation
- Trend away from LCD to microOLED for better contrast and brightness

Customers

BAE SYSTEMS



LEONARDO DRS

SAGEM



L3HARRIS™



Rockwell Collins

THALES



Products



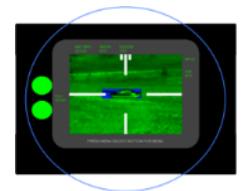
Enhanced Night Vision Goggle



Helmet Display



Laser Range Finder



Simulation Training Devices

Commercial & Medical

Profile

- Products provide high reliability in stressful environments
- Visualize digital information and imagery
- Successful in supplying to medical imaging devices, thermal cameras and hunting scopes
- Recent customer wins include:
 - \$780,000 order from an existing medical device customer upgrading their product with our high brightness XLT technology with anticipated follow-on orders
 - Second order from a new customer that is developing/prototyping a non-invasive surgical application device using our displays



Abbott LASIK

Products



XM Reality AR
Guidance System



NordicNuroLabs
Visual System



Bug Bovine
Ultrasound Goggle



EyeSi
Surgical Sim



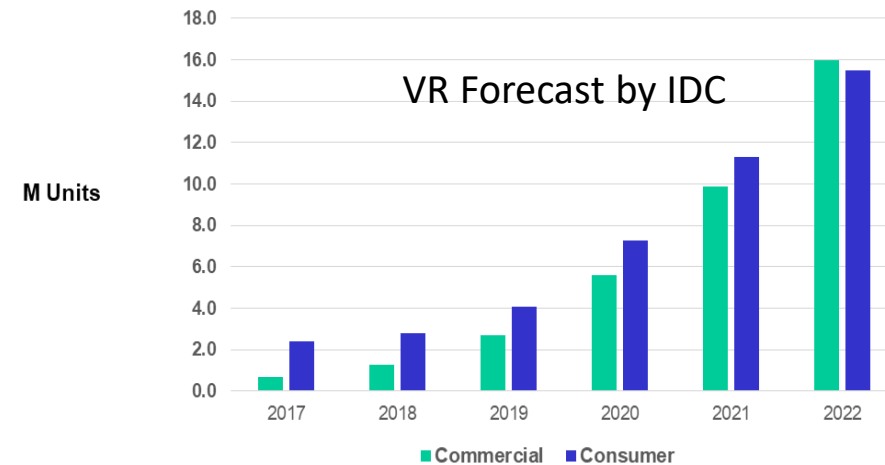
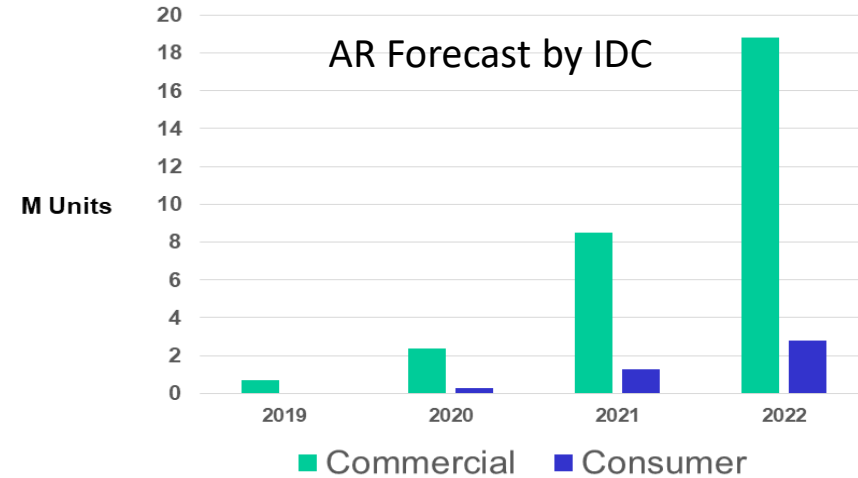
Hunting
Scopes

End Market Diversification

Commercial & Consumer

Profile

- ✓ Augmented reality for
 - Equipment repair
 - Factory automation
 - Service technicians
- ✓ Virtual reality for
 - Vehicle design
 - Training and simulation
 - Consumer gaming and entertainment
- ✓ eMagin is the only company with technology that satisfies the key requirements:
 - High brightness
 - High speed
 - High pixels per inch
 - High resolution



Well Positioned To Capitalize on Large Market Opportunity

Manufacturing Footprint - Made in the USA

Hopewell Junction, NY (Headquarters)

- Lease ~42,000 square feet of space
- Houses own equipment for OLED microdisplay fabrication, assembly operations, R&D and product development functions
- eMagin is the only US-based manufacturer of OLED microdisplays
- Approximately \$39 million in DoD awards for procurement and installation of capital equipment to enhance manufacturing and enhance dPd technology

Class 10 Clean Room Operations

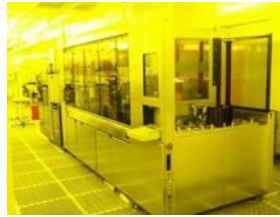


Photo-Lithography



Metal Deposition



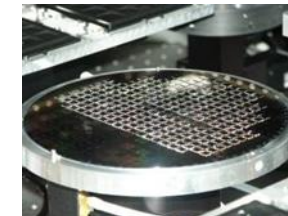
OLED Deposition



In-Line Inspection



Glass Lid



Glass Lid Detail



Advanced Packaging Capabilities

Senior Management Team

Andrew Sculley <i>CEO</i>	<ul style="list-style-type: none">• Over 20 years experience in OLED technology and manufacturing• Led Kodak OLED Systems• MS Physics Cornell, MBA Carnegie-Mellon
Dr. Amal Ghosh <i>COO</i>	<ul style="list-style-type: none">• Pioneering inventor of disruptive OLED technology at eMagin and Kodak• PhD Physics MIT• Past President of the prestigious Society for Information Display (SID)
Mark Koch <i>Acting CFO</i>	<ul style="list-style-type: none">• Previously eMagin's VP of Finance and Corporate Controller• +25 years of financial experience• Certified Public Accountant; BS Manhattan College
Oliver Prache <i>SVP</i> <i>Product Development</i>	<ul style="list-style-type: none">• OLED product commercialization pioneer at Pixtech (France) and OIS Optical Imaging Systems• Diplôme d'Ingénieur from E.N.S.E.R.G. Grenoble France
Joseph Saltarelli <i>SVP Operations</i>	<ul style="list-style-type: none">• Over 25 years of semiconductor, thin films, and packaging manufacturing• Senior Director of Manufacturing Operations, GLOBALFOUNDRIES• BS Ceramic Engineering and Materials Science Rutgers, MBA in Technology Management
Dr. Scott Bukofsky <i>VP Business Development</i>	<ul style="list-style-type: none">• Over 20 Years experience in semiconductors and sales management• Senior Director of Sales at GLOBALFOUNDRIES• PhD Electrical Engineering from Yale University

Key Messages

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The only US manufacturer of OLED microdisplays; a technology leader with proprietary and patented direct patterning technology (dPd™) for ultrahigh brightness in color

2

Uniquely positioned to capitalize on growing addressable markets in military, industrial and consumer for high brightness AR/VR solutions

3

Approximately \$39 million in recent government awards for manufacturing to support improvement in growth, innovation and productivity, including dPd equipment

4

Deep applications expertise and broad IP portfolio; aligned with blue-chip customer base and long-term industry trends

5

Well-established military and aviation market presence benefitting from secular and cyclical tailwinds; leverageable platform for high growth opportunities in consumer and commercial end markets

6

Highly experienced management team with industry leading technical expertise enabling a substantial runway for value creation

Appendices

Consolidated Statement of Operations

(\$ In thousands)
(unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Revenues:				
Product	\$ 6,260	\$ 4,958	\$ 11,894	\$ 10,465
Contract	1,440	403	2,537	1,008
Total revenues, net	<u>7,700</u>	<u>5,361</u>	<u>14,431</u>	<u>11,473</u>
Cost of revenues:				
Product	4,978	4,898	9,768	9,324
Contract	746	238	1,253	588
Total cost of revenues	<u>5,724</u>	<u>5,136</u>	<u>11,021</u>	<u>9,912</u>
Gross profit	<u>1,976</u>	<u>225</u>	<u>3,410</u>	<u>1,561</u>
Operating expenses:				
Research and development	1,599	1,300	2,579	2,897
Selling, general and administrative	1,712	1,777	3,510	3,716
Total operating expenses	<u>3,311</u>	<u>3,077</u>	<u>6,089</u>	<u>6,613</u>
Loss from operations	<u>(1,335)</u>	<u>(2,852)</u>	<u>(2,679)</u>	<u>(5,052)</u>
Other (expense) income:				
Change in fair value of common stock warrant liability	(1,481)	536	(1,501)	1,330
Interest expense, net	(18)	(21)	(35)	(55)
Other income, net	3	—	15	—
Total other (expense) income	<u>(1,496)</u>	<u>515</u>	<u>(1,521)</u>	<u>1,275</u>
Loss before provision for income taxes	<u>(2,831)</u>	<u>(2,337)</u>	<u>(4,200)</u>	<u>(3,777)</u>
Income taxes	—	—	—	—
Net loss	<u>\$ (2,831)</u>	<u>\$ (2,337)</u>	<u>\$ (4,200)</u>	<u>\$ (3,777)</u>
Loss per share, basic and diluted	<u>\$ (0.05)</u>	<u>\$ (0.05)</u>	<u>\$ (0.08)</u>	<u>\$ (0.08)</u>
Weighted average number of shares outstanding:				
Basic and Diluted	<u>56,755</u>	<u>48,818</u>	<u>54,197</u>	<u>46,980</u>

Adjusted EBITDA

\$ in thousands

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Net loss	\$ (2,831)	\$ (2,337)	\$ (4,200)	\$ (3,777)
Non-cash compensation	44	97	87	290
Change in fair value of common stock warrant liability	1,481	(536)	1,501	(1,330)
Depreciation and intangibles amortization expense	479	499	959	987
Interest expense	18	21	35	55
Adjusted EBITDA	\$ (809)	\$ (2,256)	\$ (1,618)	\$ (3,775)

Consolidated Balance Sheet

(unaudited)

(In thousands, except share data)

	<u>June 30, 2020</u>	<u>December 31, 2019</u>
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 5,447	\$ 3,515
Accounts receivable, net	6,085	3,966
Unbilled accounts receivable	16	155
Inventories	8,470	8,832
Prepaid expenses and other current assets	1,389	1,130
Total current assets	<u>21,407</u>	<u>17,598</u>
Equipment, furniture and leasehold improvements, net	7,817	8,100
Operating lease right - of - use assets	3,358	3,729
Intangibles and other assets	130	160
Total assets	<u>\$ 32,712</u>	<u>\$ 29,587</u>
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 1,809	\$ 1,302
Accrued compensation	1,914	1,778
Paycheck Protection Program loan - current	496	—
Revolving credit facility, net	420	2,891
Common stock warrant liability	1,524	23
Other accrued expenses	1,598	1,401
Deferred revenue	289	277
Operating lease liability - current	809	775
Other current liabilities	508	342
Total current liabilities	<u>9,367</u>	<u>8,789</u>
Finance lease liability - long term	16	24
Paycheck Protection Program loan - long term	1,467	—
Deferred Income - Government awards - long term	2,263	—
Operating lease liability - long term	2,654	3,067
Total liabilities	<u>15,767</u>	<u>11,880</u>
Shareholders' equity:		
Common stock, \$.001 par value: authorized 200,000,000 shares, issued 61,407,331 shares, outstanding 61,245,265 shares as of June 30, 2020 and issued 50,250,378 shares, outstanding 50,088,312 shares as of December 31, 2019.	61	50
Additional paid-in capital	262,194	258,767
Accumulated deficit	(244,810)	(240,610)
Treasury stock, 162,066 shares as of June 30, 2020 and December 31, 2019.	(500)	(500)
Total shareholders' equity	<u>16,945</u>	<u>17,707</u>
Total liabilities and shareholders' equity	<u>\$ 32,712</u>	<u>\$ 29,587</u>