

eMagin Investor Presentation

March 2020

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Key Messages

1

Leading global OLED microdisplay company uniquely positioned to capitalize on growing addressable markets in military, industrial and consumer

2

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

3

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

4

Continuing improvement in productivity and growth in revenue and profitability

5

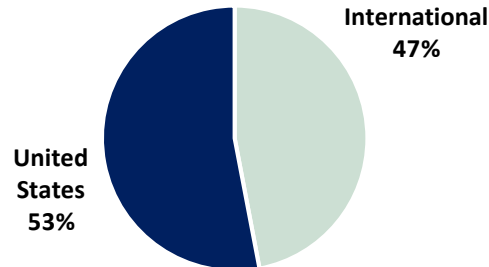
Highly experienced management team with industry leading technical expertise; substantial runway for value creation

Leading global company in OLED microdisplay technology

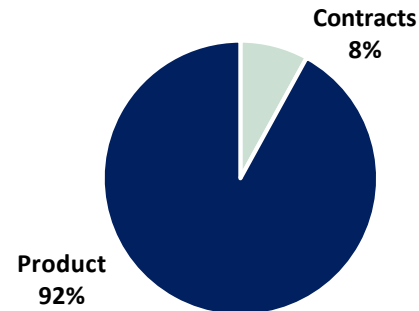
Headquarters	Hopewell Junction, NY	15+ Years Manufacturing OLED Microdisplays	55 US and 26 Foreign Patents and Applications	Military/Aviation, Commercial and Consumer end Markets
Manufacturing Operations	U.S. Domiciled			
Employees	101	\$12.3 Million Market Cap ¹	Revenue: \$26.7M in 2019	34 Countries Served

2019 Revenue Composition

By Region



By Type



¹Based upon closing price on 3/13/20 and 51.3 million shares outstanding .

Growth Strategy

Further expand military and aviation market share and grow commercial and industrial presence

Increase capacity and production yields to drive operating leverage

Deepen penetration of leading-edge direct patterning technology

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

Develop manufacturing and/or licensing partnerships for high volume manufacturing

Improved Financial Trends

- 4Q19 revenue of \$7.3 million, a 35% year-over-year increase
- Adjusted EBITDA of approximately \$0.5 million in 4Q19 vs. \$(3.6) million loss in 4Q18
- \$14.6 million backlog at 4Q19; 75% sequential increase with record bookings exceeding \$15 million
- Sold to 80 customers for over 20 new programs; three new customers

Productivity and Efficiency Gains

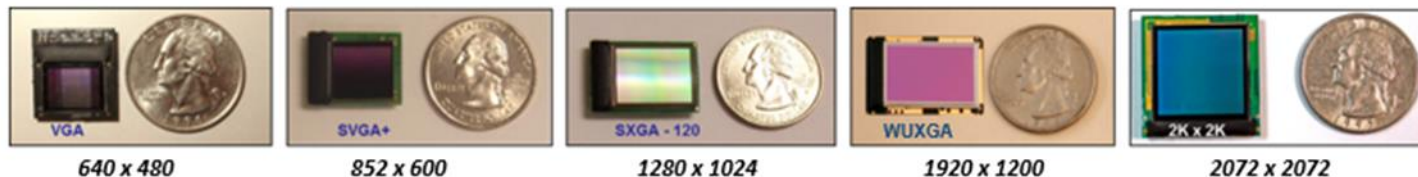
- Significant improvement in yield and throughput; identifying additional opportunities
- Production volumes increased over 50% in 2H19
- 4Q19 results reflected 25% decrease in operating expense year-over-year
- Operating expenses reduced by \$2.2 million on an annualized basis

Advancing Product Development

- In 4Q19, started a new consumer-related development project for a next generation display
- Developed significantly better full color display; 3X improvement in lifetime compared to OLED-XLS display.
- Awarded the Enhanced Military Capability award, part of the Defense Manufacturing Technology Achievement Awards
- On target to achieve 10,000 nits brightness by end of 2Q20

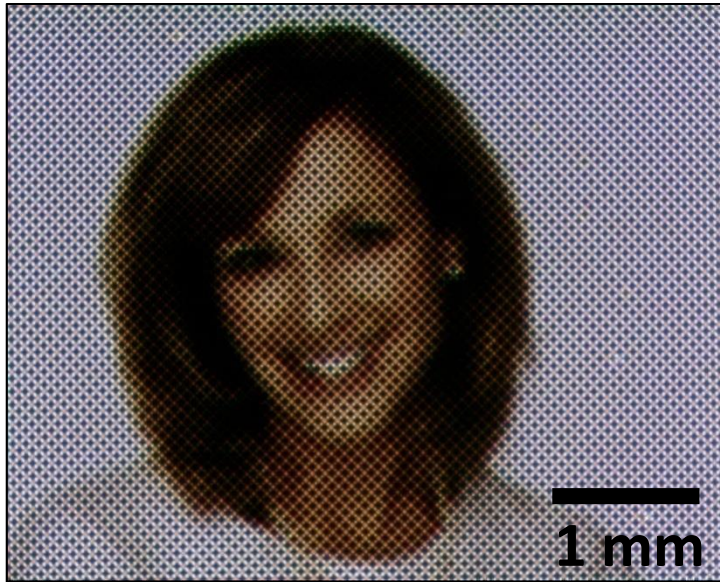
Improving Performance On Multiple Fronts

- Brightest OLED – monogreen over 15,000 nits; full color 7,000 nits demonstrated, full color 10,000 nits targeted
- 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



Lowest Power and Highest Brightness

Consumer and commercial AR & VR headsets need a high-resolution microdisplay with high fill factor to eliminate the “screen door” effect

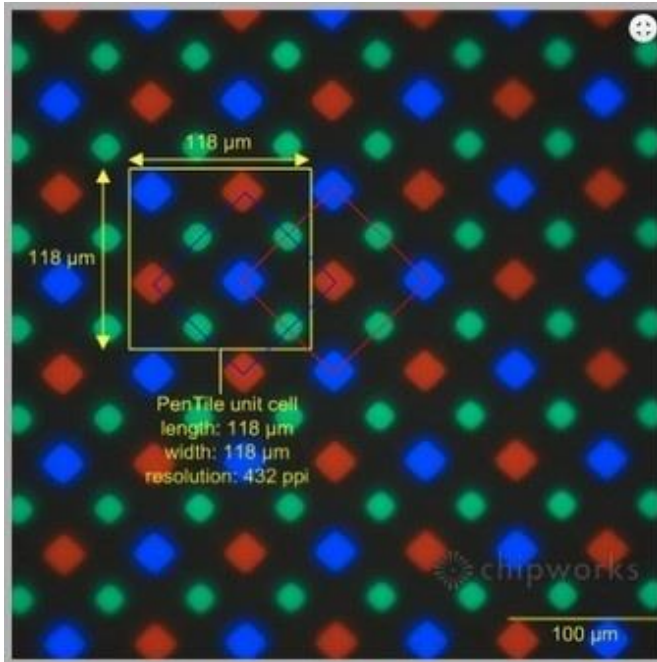


Magnified Cell Phone Display
~600 ppi

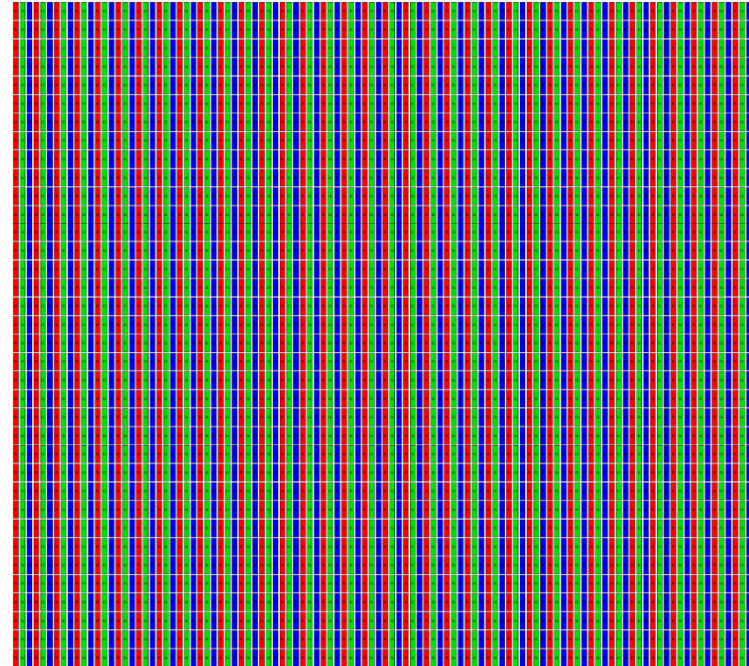
eMagin Microdisplay
>2,500 ppi



Magnification Highlights eMagin's Superior Fill Factor



Samsung Galaxy S5 OLED Cell Phone Display



eMagin OLED Microdisplay
(Shown at same scale)

Direct Patterned OLED Required for Fully Immersive Experience

Patents

- 55 U. S. and 26 foreign patents issued and 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 and Aviation

Profile

- ✓ Predominately sole-source supplier
- ✓ First mover in AR/VR for domestic and foreign military applications
- ✓ Long-standing customer relationships and extended program and product lifecycles
- ✓ Global market leadership - U.S. Army, Air Force, Special Forces, Navy/Marines
- ✓ Proven track record of performing in demanding applications and environments
- ✓ Favorable secular and cyclical tailwinds
- ✓ Accelerating activity and program wins in aviation
- ✓ Upgrade cycle to next generation headsets and technology
- ✓ Military microdisplays addressable market expected to increase five-fold to \$1.3B by 2024¹

Customers

BAE SYSTEMS



LEONARDO DRS

SAGEM



TATA POWER

HARRIS



Rockwell Collins

THALES

United Technologies

Products

Enhanced Night Vision Goggle



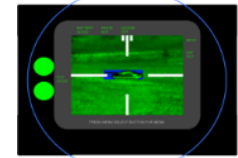
Laser Range Finder



Helmet Display



Simulation Training Devices



Growing Base of Revenues and Development Funding

Commercial and Industrial



Abbott LASIK

Profile

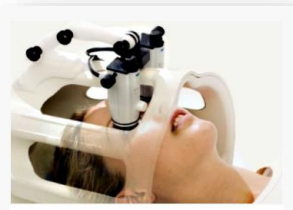
- ✓ Products provide high reliability in stressful environments
- ✓ Successful in supplying to medical imaging devices, thermal cameras and hunting scopes
- ✓ Recent customer wins include:
 - \$780,000 order from an existing medical device customer upgrading their product with our high brightness XLT 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

Products

XM Reality AR Guidance System



NordicNuroLabs Visual System



Bug Bovine Ultrasound Goggle



EyeSi Surgical Sim

Hunting Scopes

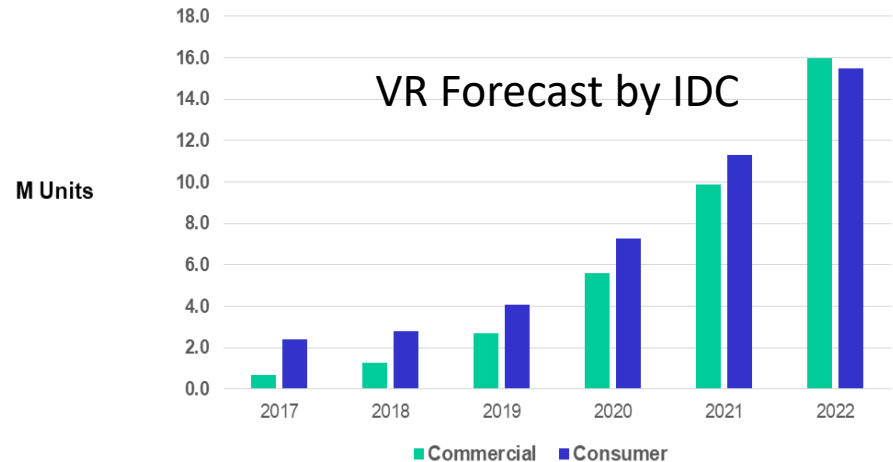
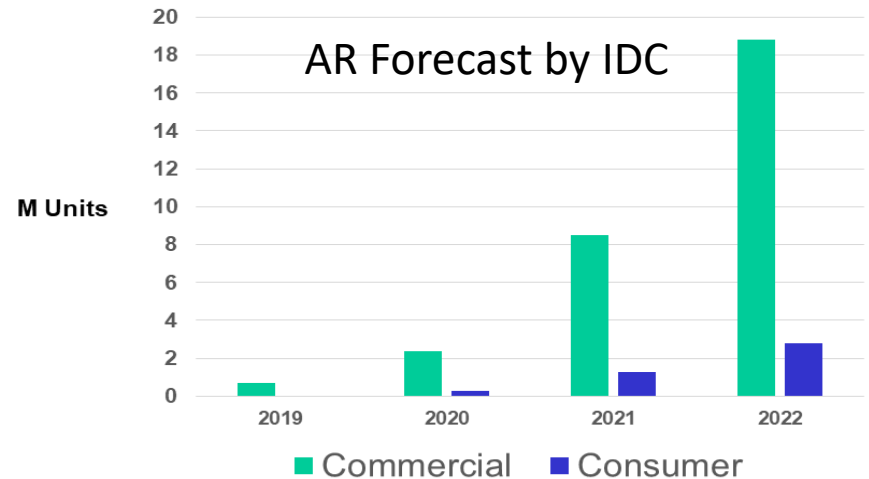


End Market Diversification

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 & Process

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

Class 10 Clean Room Operations

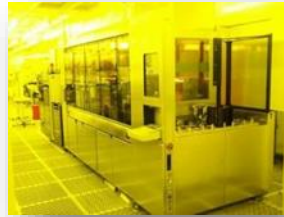


Photo-Lithography



Metal Deposition



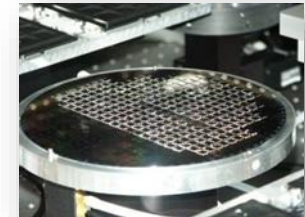
OLED Deposition



In-Line Inspection



Glass Lid



Glass Lid Detail

Advanced Packaging



Senior Management Team

Andrew Sculley
CEO

- Over 20 years experience in OLED technology and manufacturing
- Led Kodak OLED Systems
- MS Physics Cornell, MBA Carnegie-Mellon

Dr. Amal Ghosh
COO

- 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
Acting CFO

- Previously eMagin's VP of Finance and Corporate Controller
- +25 years of financial experience
- Certified Public Accountant; BS Manhattan College

Oliver Prache
*SVP
Product
Development*

- 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
SVP Operations

- 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

Doug Hughes
*VP Business
Development*

- Sr. Director, Legislative at Raytheon
- Office of the Secretary of the Navy; Commanding Officer, US Navy, Pearl Harbor
- MS Naval War College

Key Takeaways

1

Leading global OLED microdisplay company uniquely positioned to capitalize on growing addressable markets in military, industrial and consumer

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

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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

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Continuing improvement in productivity and growth in revenue and profitability

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

Appendices



Consolidated Statement of Operations

\$ in thousands, except share and per share data

	Three Months Ended December 31,		Twelve Months Ended December 31,	
	2019	2018	2019	2018
Revenues:				
Product	\$ 6,803	\$ 5,195	\$ 24,589	\$ 23,322
Contract	531	240	2,137	2,913
Total revenues, net	<u>7,334</u>	<u>5,435</u>	<u>26,726</u>	<u>26,235</u>
Cost of revenues:				
Product	4,338	5,541	18,775	17,797
Contract	320	365	1,223	1,754
Impairment of Consumer Night Vision Business inventory	—	—	—	2,690
Total cost of revenues	<u>4,658</u>	<u>5,906</u>	<u>19,998</u>	<u>22,241</u>
Gross profit	<u>2,676</u>	<u>(471)</u>	<u>6,728</u>	<u>3,994</u>
Operating expenses:				
Research and development	1,105	1,753	5,048	6,694
Selling, general and administrative	1,696	1,985	7,251	8,967
Total operating expenses	<u>2,801</u>	<u>3,738</u>	<u>12,299</u>	<u>15,661</u>
Loss from operations	(125)	(4,209)	(5,571)	(11,667)
Other income (expense):				
Change in fair value of common stock warrant liability	23	1,807	1,474	2,194
Interest expense, net	(103)	(57)	(201)	(69)
Total other income	<u>(80)</u>	<u>1,750</u>	<u>1,273</u>	<u>2,125</u>
Loss before provision for income taxes	<u>(205)</u>	<u>(2,459)</u>	<u>(4,298)</u>	<u>(9,542)</u>
Income taxes	—	—	—	—
Net loss	<u>\$ (205)</u>	<u>\$ (2,459)</u>	<u>\$ (4,298)</u>	<u>\$ (9,542)</u>
Loss per share, basic	\$ —	\$ (0.05)	\$ (0.09)	\$ (0.21)
Loss per share, diluted	\$ —	\$ (0.05)	\$ (0.09)	\$ (0.21)
Weighted average number of shares outstanding:				
Basic	<u>49,317</u>	<u>45,161</u>	<u>48,133</u>	<u>44,429</u>
Diluted	<u>49,317</u>	<u>45,161</u>	<u>48,133</u>	<u>44,429</u>

Adjusted EBITDA

\$ in thousands

Non-GAAP Information

	Three Months Ended December 31,		Twelve Months Ended December 31,	
	2019	2018	2019	2018
Net loss	\$ (205)	\$ (2,459)	\$ (4,298)	\$ (9,542)
Non-cash compensation	96	98	551	610
Change in fair value of common stock warrant liability	(23)	(1,807)	(1,474)	(2,194)
Depreciation and intangibles amortization expense	483	486	1,963	1,906
Interest expense	103	57	201	69
Adjusted EBITDA	\$ 454	\$ (3,625)	\$ (3,057)	\$ (9,151)



Consolidated Balance Sheet

\$ in thousands, except share and per share data

	December 31, 2019	December 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 3,515	\$ 3,359
Accounts receivable, net	3,966	3,186
Unbilled accounts receivable	155	224
Inventories	8,832	8,582
Prepaid expenses and other current assets	1,130	875
Total current assets	17,598	16,226
Equipment, furniture and leasehold improvements, net	8,100	8,921
Operating lease right - of - use assets	3,729	—
Intangibles and other assets	160	269
Total assets	\$ 29,587	\$ 25,416
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 1,302	\$ 2,024
Accrued compensation	1,778	1,634
Revolving credit facility, net	2,891	—
Common stock warrant liability	23	1,497
Other accrued expenses	1,401	1,827
Deferred revenue	277	38
Operating lease liability - current	775	—
Other current liabilities	342	427
Total current liabilities	8,789	7,447
Finance lease liability - long term	24	—
Operating lease liability - long term	3,067	—
Total liabilities	11,880	7,447
Commitments and contingencies (Note 9)		
Shareholders' equity:		
Preferred stock, \$.001 par value: authorized 10,000,000 shares:		
Series B Convertible Preferred stock, (liquidation preference of \$5,659) stated value \$1,000 per share, \$.001 par value: 10,000 shares designated and 5,659 issued and outstanding as of December 31, 2019 and 2018.	—	—
Common stock, \$.001 par value: authorized 200,000,000 shares, issued 50,250,378 shares, outstanding 50,088,312 shares as of December 31, 2019 and issued 45,323,339 shares, outstanding 45,161,273 shares as of December 31, 2018.		
	50	45
Additional paid-in capital	258,767	254,736
Accumulated deficit	(240,610)	(236,312)
Treasury stock, 162,066 shares as of December 31, 2019 and 2018.	(500)	(500)
Total shareholders' equity	17,707	17,969
Total liabilities and shareholders' equity	\$ 29,587	\$ 25,416