Safe Harbor

To the extent that this presentation discusses expectations or otherwise makes statements about the future, such statements are forward-looking and are subject to a number of risks and uncertainties that could cause actual results to differ materially from the statements made.

These items include the risk factors discussed in the Business Description and Management's Discussion and Analysis sections of Veeco's Annual Report on Form 10-K for the year ended December 31, 2018 and subsequent Quarterly Reports on Form 10-Q and current reports on Form 8-K. Veeco does not undertake any obligation to update any forward-looking statements to reflect future events or circumstances after the date of such statements.
Veeco at a Glance

- Solve Customer’s Tough Materials Challenges
- ~1,000 Employees; >800 Patents
- $109M in Q319 Revenue
- $232M in Cash, $345M in Convertible Debt

Global Semiconductor Capital Equipment Provider with Specialized Technology
Veeco Customers Drive Megatrends

IDMs & Foundries
- TSMC
- SK hynix
- Intel
- Infineon
- Texas Instruments
- Toshiba
- Samsung
- Micron
- Global Foundries
- IBM

OSATs, MEMS & RF Filters
- Qualcomm
- Amkor Technology
- Broadcom
- SPIL
- Qorvo
- Powertech
- Bosch
- Advanced Semiconductor Engineering, Inc.

Compound Semi
- Osram
- IQE
- II-VI
- IPG Photonics
- ON Semiconductor
- Finisar
- Lumentum
- Epistar

Scientific & Industrial
- Fraunhofer
- Seagate
- NIST (National Institute of Standards and Technology)
- Western Digital
- Sandia National Laboratories
- Cornell University
Historical Perspective

Proven Legacy of Enabling Technologies

Positioned to Drive Growth

Transformation

Return the Company to Profitability and Drive Growth

1990s

Data Storage
Ion Beam Deposition & Etch of magnetic material for HDD heads

2000s

LED
GaN MOCVD for LCD backlighting & general lighting applications

2010s

Ultratech
Leader in Laser Spike Anneal and Advanced Packaging Lithography

2019

Two-Phase Transformation
Improve profitability and drive growth in:
• Front-End Semiconductor
• Compound Semiconductor
• Advanced Packaging

Return the Company to Profitability and Drive Growth
Transformation Update

**Phase 1: Returning to Profitability**
- Shift MOCVD market focus from commodity LED to higher value photonics
- Execute general infrastructure reductions
- Rationalize product line investments

*Phase 1: well underway*

**Phase 2: Driving Growth**

Grow in current markets
- Front-End Semi with Laser Annealing
- Advanced Packaging with Lithography
- Data Storage with Ion Beam

Penetrate with new applications
- Front-End Semi with Ion Beam
- Compound Semi / VCSEL with MOCVD

*Phase 2: early stages*
Focused on Improving Profitability

Operating Expense Reduction

- SG&A reduction
- Optimize R&D investments

Gross Margin Improvement

- Gross margin has benefited from improving product mix and volume increases

* Based on midpoint of guidance for Q4 19

Investor Presentation | © 2019 Veeco Instruments Inc.
Key Markets and Technologies

Veeco is a Proven High Technology Capital Equipment Leader
Solving Tough Materials Problems to Ramp Growing Markets

High Performance Computing
- Laser Annealing
- Ion Beam Deposition & Etch

VCSEL / 5G
- MOCVD

AI / High Performance Computing
- AP Lithography

Cloud / Data Storage
- Ion Beam Deposition & Etch

Megatrend Technology
- AI − Artificial Intelligence
- 5G − Fifth Generation Wireless
- VCSEL − Vertical Cavity Surface Emitting Laser
- AP − Advanced Packaging
- Compound Semi includes LED, Lighting & Display
Longer Term Growth

GaN RF Devices (5G)
GaN based RF devices are more efficient than silicon based power amplifiers. Potential in mm wave base station and mobile device applications.

MicroLED
Sunlight readability, power efficiency & high brightness are the advantages of this next generation display technology.

Our Technology Supports Longer Term Growth Megatrends
## Growth Areas – Market Status

<table>
<thead>
<tr>
<th>Growth Driver</th>
<th>Current Market View</th>
<th>Gross Margin (vs. corp. avg.)</th>
<th>SAM</th>
<th>Share</th>
<th>Growth Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUV Mask Blanks</td>
<td>Good</td>
<td>Better</td>
<td>Up to $50M</td>
<td>Very High</td>
<td>Technology</td>
</tr>
<tr>
<td>Laser Spike Annealing</td>
<td>Good</td>
<td>Equal</td>
<td>Up to $100M</td>
<td>Medium</td>
<td>Technology</td>
</tr>
<tr>
<td>AP Lithography</td>
<td>Flat</td>
<td>Equal</td>
<td>Up to $100M</td>
<td>High</td>
<td>Capacity Technology</td>
</tr>
<tr>
<td>3D Sensing / VCSEL</td>
<td>Flat</td>
<td>Equal</td>
<td>Up to $100M</td>
<td>Low</td>
<td>Technology Capacity</td>
</tr>
</tbody>
</table>
Recent Financial Trends (Non-GAAP)

Revenue ($m)

- Q4 18: 99
- Q1 19: 99
- Q2 19: 98
- Q3 19: 109
- Q4 19*: 110

Q4 19 up 10% YOY

Gross Margin

- Q4 18: 36%
- Q1 19: 36%
- Q2 19: 38%
- Q3 19: 40%
- Q4 19*: 40%

Ending 2019 with anticipated 40% gross margin

OPEX ($m)

- Q4 18: 43
- Q1 19: 40
- Q2 19: 39
- Q3 19: 40
- Q4 19*: 39

Further OPEX reductions expected ($36m quarterly by Q3 20)

EPS ($)

- Q4 18: (0.16)
- Q1 19: (0.14)
- Q2 19: (0.06)
- Q3 19: 0.05
- Q4 19*: 0.08

Return to profitability

Improving Financial Metrics as We Grow Topline and Manage Expenses

A reconciliation of GAAP to Non-GAAP financial measures can be found in the backup section of this presentation.

* Q4 19 figures represent the midpoint of guidance provided

© 2019 Veeco Instruments Inc.
Q3 2019 Revenue by Market & Region

**Revenue by Market**

- Front-End Semiconductor: 31% of $109M
- LED Lighting, Display & Compound Semi: 22% of $109M
- Advanced Packaging, MEMS & RF Filters: 10% of $109M
- Scientific & Industrial: 37% of $109M

**Revenue by Region**

- United States: 25% of Total
- ROW: 41% of Total
- China: 16% of Total

### Revenue Trend ($m)

<table>
<thead>
<tr>
<th></th>
<th>Q4 18</th>
<th>Q1 19</th>
<th>Q2 19</th>
<th>Q3 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front-End Semiconductor</td>
<td>22</td>
<td>23</td>
<td>25</td>
<td>34</td>
</tr>
<tr>
<td>LED Lighting, Display &amp; Compound Semi</td>
<td>13</td>
<td>14</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>Advanced Packaging, MEMS &amp; RF Filters</td>
<td>14</td>
<td>23</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Scientific &amp; Industrial</td>
<td>50</td>
<td>40</td>
<td>47</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>99</td>
<td>98</td>
<td>109</td>
</tr>
</tbody>
</table>

Amounts may not calculate precisely due to rounding.
Balance Sheet and Cash Flow Highlights

<table>
<thead>
<tr>
<th></th>
<th>Q2 19</th>
<th>Q3 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash &amp; Short-Term Investments</td>
<td>247</td>
<td>232</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>59</td>
<td>73</td>
</tr>
<tr>
<td>Inventories</td>
<td>140</td>
<td>135</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>22</td>
<td>35</td>
</tr>
<tr>
<td>Long-Term Debt</td>
<td>294</td>
<td>297</td>
</tr>
<tr>
<td>Cash Flow from Operations</td>
<td>14</td>
<td>(15)</td>
</tr>
<tr>
<td>DSO (days)</td>
<td>54</td>
<td>60</td>
</tr>
<tr>
<td>DOI</td>
<td>210</td>
<td>185</td>
</tr>
<tr>
<td>DPO</td>
<td>33</td>
<td>47</td>
</tr>
</tbody>
</table>
Investment Summary

- Leveraging core technologies in growing markets
- Growing top line
- Megatrends supported by our technologies
  - EUV Mask Blanks – Ion Beam Deposition
  - Advanced Front-End Semiconductor – Laser Annealing
  - 3D Sensing / VCSEL – MOCVD
  - Advanced Packaging – Lithography
  - Cloud / Data Storage – Ion Beam Deposition / Etch
- Improving profitability

Well Positioned to Capitalize in Growing Markets
Backup & Financial Tables
EUV Mask Blanks for Front-End Semiconductor Manufacturing

**Market Drivers**
- Artificial Intelligence
- High Performance Computing
- Autonomous Driving

**Enabling Advanced Nodes**
- 28nm
- 14nm
- 10nm
- 7nm
- 5nm

**Veeco Advantage**
Veeco supplies best in class Ion Beam Deposition systems to the only two EUV Lithography mask blank suppliers to the semiconductor industry

**Market Opportunity** – Up to $50M Annually

*Source: Semiconductor Engineering*
Laser Annealing for Front-End Semiconductor Manufacturing

**Market Drivers**
- Artificial Intelligence
- High Performance Computing
- Graphics Processing Units

**Enabling Advanced Nodes**

<table>
<thead>
<tr>
<th>Semiconductor Node</th>
<th>Furnace Anneal</th>
<th>Rapid Thermal Processing</th>
<th>Laser Annealing</th>
<th>Melt</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;90nm</td>
<td>90</td>
<td>40-144</td>
<td>&gt;90nm</td>
<td></td>
</tr>
<tr>
<td>90-44nm</td>
<td>40-144</td>
<td>10-40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14nm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;10nm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Veeco Advantage**
Veeco’s LSA allows customers to perform their annealing steps with great accuracy.
- Very high temperatures over precise geometries
- Extremely short durations
- Minimal introduction of wafer defects

Current product status:
- PTOR for single step at ≤7nm with 2 customers
- Potential for up to 3 steps at next nodes

**Market Opportunity – Up to $100M Annually**
Lithography for Advanced Packaging

Market Drivers
- Artificial intelligence
- Automotive
- Mobility
- GPU

Enabling Better System Performance
- Smaller Form Factor
- Higher Performance
- Lower Cost
- Improved Battery Life

Veeco Advantage
Veeco’s advanced packaging lithography is the process of choice:
- Fan-out wafer level packaging at top foundries
- Recent wins for Copper Pillar applications in high bandwidth memory

- Updated product platform
- Highly automated
- Superior performance
- Cost effective

Market Opportunity – Up to $100M Annually
VCSEL Production Utilizing Proven Technology Platform

**Market Drivers**
- 3D Sensing / World Facing
- Autonomous Vehicle Sensing (LiDAR)
- Data / Telecom

**VCSEL Application Space**

<table>
<thead>
<tr>
<th>Category</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer</td>
<td>Laser printers, proximity sensors, autofocus systems, facial recognition, gas sensors, eye tracking, gesture recognition</td>
</tr>
<tr>
<td>Automotive</td>
<td>Plastic optical fiber, LiDAR, eye tracking, gesture recognition</td>
</tr>
<tr>
<td>Industrial</td>
<td>Datacom, industrial heating systems, security / surveillance, advanced optical components, laser printers</td>
</tr>
<tr>
<td>Medical</td>
<td>Optical coherence tomography, pulse oximeters</td>
</tr>
</tbody>
</table>

**Veeco Advantage: TurboDisc® Platform**
- Excellent uniformity
- Maximum up-time
- Highest productivity
- Lowest cost of ownership

**Market Opportunity – Up to $100M Annually**

*Source: Yole Development and Veeco Instruments*
# The Markets We Serve

<table>
<thead>
<tr>
<th>Market</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Front-End Semiconductor</strong></td>
<td>Ion Beam Deposition for EUV and Laser Spike Annealing that enable early steps in the process of integrated circuit fabrication</td>
</tr>
<tr>
<td><strong>Compound Semiconductor</strong></td>
<td>Metal Organic Chemical Vapor Deposition of Gallium Nitride and Arsenide Phosphide compound-semi materials used to create VSCSELs, EELs, specialty LEDs, displays, RF &amp; power devices</td>
</tr>
<tr>
<td><strong>Advanced Packaging, MEMS &amp; RF Filters</strong></td>
<td>Lithography for advanced packaging, wet etch and clean technology for wafer-level packaging techniques that enable the miniaturization and performance of electronic products</td>
</tr>
<tr>
<td><strong>Scientific &amp; Industrial</strong></td>
<td>Ion Beam Etch/Sputtering, Molecular Beam Epitaxy, Atomic Layer Deposition serving data storage, optical coating, university, research and industrial institutions to create hard disc drives in cloud storage, fiber optics for wireless communication, and research and development of complex and diverse material sciences</td>
</tr>
</tbody>
</table>

* Compound Semi includes LED, Lighting & Display
## Historical Revenue by Market and Geography

<table>
<thead>
<tr>
<th>Revenue by Market ($M)</th>
<th>FY 2016</th>
<th>FY 2017</th>
<th>FY 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Packaging, MEMS &amp; RF Filters</td>
<td>68</td>
<td>67</td>
<td>91</td>
</tr>
<tr>
<td>LED Lighting, Display &amp; Compound Semi</td>
<td>146</td>
<td>249</td>
<td>250</td>
</tr>
<tr>
<td>Front-End Semi</td>
<td>8</td>
<td>40</td>
<td>63</td>
</tr>
<tr>
<td>Scientific &amp; Industrial</td>
<td>110</td>
<td>119</td>
<td>139</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>332</strong></td>
<td><strong>476</strong></td>
<td><strong>542</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenue by Market (%)</th>
<th>FY 2016</th>
<th>FY 2017</th>
<th>FY 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Packaging, MEMS &amp; RF Filters</td>
<td>20%</td>
<td>15%</td>
<td>17%</td>
</tr>
<tr>
<td>LED Lighting, Display &amp; Compound Semi</td>
<td>44%</td>
<td>52%</td>
<td>46%</td>
</tr>
<tr>
<td>Front-End Semi</td>
<td>3%</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>Scientific &amp; Industrial</td>
<td>33%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenue by Geography ($M)</th>
<th>FY 2016</th>
<th>FY 2017</th>
<th>FY 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>86</td>
<td>93</td>
<td>126</td>
</tr>
<tr>
<td>EMEA</td>
<td>84</td>
<td>73</td>
<td>89</td>
</tr>
<tr>
<td>China</td>
<td>85</td>
<td>107</td>
<td>194</td>
</tr>
<tr>
<td>ROW</td>
<td>77</td>
<td>203</td>
<td>133</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>332</strong></td>
<td><strong>476</strong></td>
<td><strong>542</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenue by Geography (%)</th>
<th>FY 2016</th>
<th>FY 2017</th>
<th>FY 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>26%</td>
<td>20%</td>
<td>23%</td>
</tr>
<tr>
<td>EMEA</td>
<td>25%</td>
<td>15%</td>
<td>16%</td>
</tr>
<tr>
<td>China</td>
<td>26%</td>
<td>22%</td>
<td>36%</td>
</tr>
<tr>
<td>ROW</td>
<td>23%</td>
<td>43%</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Note: Amounts may not calculate precisely due to rounding. Prior period results have been recast to reflect the retrospective adoption of ASC 606.
Note on Reconciliation Tables

These tables include financial measures adjusted for the impact of certain items; these financial measures are therefore not calculated in accordance with U.S. generally accepted accounting principles (“GAAP”). These Non-GAAP financial measures exclude items such as: share-based compensation expense; charges relating to restructuring initiatives; non-cash asset impairments; certain other non-operating gains and losses; and acquisition-related items such as transaction costs, non-cash amortization of acquired intangible assets, incremental transaction-related compensation, and certain integration costs.

These Non-GAAP financial measures may be different from Non-GAAP financial measures used by other companies. Non-GAAP financial measures should not be considered a substitute for, or superior to, measures of financial performance prepared in accordance with GAAP. By excluding these items, Non-GAAP financial measures are intended to facilitate meaningful comparisons to historical operating results, competitors’ operating results, and estimates made by securities analysts. Management is evaluated on key performance metrics including Non-GAAP Operating Income, which is used to determine management incentive compensation as well as to forecast future periods.

These Non-GAAP financial measures may be useful to investors in allowing for greater transparency of supplemental information used by management in its financial and operational decision-making. In addition, similar Non-GAAP financial measures have historically been reported to investors; the inclusion of comparable numbers provides consistency in financial reporting. Investors are encouraged to review the reconciliation of the Non-GAAP financial measures used in this news release to their most directly comparable GAAP financial measures.
## Supplemental Information – GAAP to Non-GAAP Reconciliation

### US$ millions

<table>
<thead>
<tr>
<th></th>
<th>Q4 18</th>
<th>Q1 19</th>
<th>Q2 19</th>
<th>Q3 19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Sales</strong></td>
<td>$99.0</td>
<td>$99.4</td>
<td>$97.8</td>
<td>$109.0</td>
</tr>
<tr>
<td><strong>GAAP Gross Profit</strong></td>
<td>35.3</td>
<td>34.7</td>
<td>36.3</td>
<td>42.2</td>
</tr>
<tr>
<td><strong>GAAP Gross Margin</strong></td>
<td>35.6%</td>
<td>34.9%</td>
<td>37.1%</td>
<td>38.8%</td>
</tr>
<tr>
<td>Add: Release of inventory fair value step-up for purchase accounting</td>
<td>0.1</td>
<td>-</td>
<td>-</td>
<td>1.3</td>
</tr>
<tr>
<td>Add: Share-Based Comp</td>
<td>0.3</td>
<td>0.5</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Add: Depreciation of PP&amp;E fair value step-up for purchase accounting</td>
<td>0.1</td>
<td>-</td>
<td>0.1</td>
<td>-</td>
</tr>
<tr>
<td>Non-GAAP Gross Profit</td>
<td>$35.7</td>
<td>$35.2</td>
<td>$36.9</td>
<td>$43.9</td>
</tr>
<tr>
<td>Non-GAAP Gross Margin</td>
<td>36.0%</td>
<td>35.5%</td>
<td>37.8%</td>
<td>40.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Q4 18</th>
<th>Q1 19</th>
<th>Q2 19</th>
<th>Q3 19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GAAP Net Income (Loss)</strong></td>
<td>$(144.7)</td>
<td>$(18.5)</td>
<td>$(15.6)</td>
<td>$(11.8)</td>
</tr>
<tr>
<td>Add: Share-Based Comp</td>
<td>3.4</td>
<td>3.2</td>
<td>4.6</td>
<td>3.8</td>
</tr>
<tr>
<td>Add: Amortization</td>
<td>4.2</td>
<td>4.2</td>
<td>4.2</td>
<td>4.3</td>
</tr>
<tr>
<td>Add: Restructuring</td>
<td>0.7</td>
<td>1.4</td>
<td>0.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Add: Acquisition Related</td>
<td>0.1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Add: Release of inventory fair value step-up for purchase accounting</td>
<td>0.1</td>
<td>-</td>
<td>-</td>
<td>1.3</td>
</tr>
<tr>
<td>Add: Depreciation of PP&amp;E fair value step-up for purchase accounting</td>
<td>0.2</td>
<td>0.1</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Add: Accelerated Depreciation</td>
<td>0.6</td>
<td>0.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Add: Asset Impairment</td>
<td>123.8</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Add: Interest Expense</td>
<td>4.5</td>
<td>4.2</td>
<td>4.2</td>
<td>4.3</td>
</tr>
<tr>
<td>Subtract: Tax expense (benefit)</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Non-GAAP Operating Income (Loss)</td>
<td>$(6.9)</td>
<td>$(4.8)</td>
<td>$(1.6)</td>
<td>$(4.0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Q4 18</th>
<th>Q1 19</th>
<th>Q2 19</th>
<th>Q3 19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GAAP Operating Expenses</strong></td>
<td>$174.2</td>
<td>$48.9</td>
<td>$47.5</td>
<td>$49.6</td>
</tr>
<tr>
<td>Share-Based Compensation</td>
<td>(2.9)</td>
<td>(2.7)</td>
<td>(4.0)</td>
<td>(3.4)</td>
</tr>
<tr>
<td>Amortization</td>
<td>(4.2)</td>
<td>(4.2)</td>
<td>(4.2)</td>
<td>(4.3)</td>
</tr>
<tr>
<td>Asset Impairment</td>
<td>(123.8)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>(0.7)</td>
<td>(2.0)</td>
<td>(0.8)</td>
<td>(1.9)</td>
</tr>
<tr>
<td>Non-GAAP Operating Expenses</td>
<td>$42.6</td>
<td>$40.0</td>
<td>$38.5</td>
<td>$40.0</td>
</tr>
</tbody>
</table>

Ammounts may not calculate precisely due to rounding.