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, 2019 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

- Advanced Technology Equipment Provider
- ~1,000 Employees; >800 Patents

- $419M 2019 Revenue
- $245M in Cash, $345M in Convertible Debt*

Global Semiconductor Capital Equipment Provider with Specialized Technology

Veeco System for Semiconductor Manufacturing

* As of Q4 2019
Veeco Customers Drive Megatrends

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

Compound Semi
- OSRAM
- IQE
- IQE
- IFVI
- IPG Photonics
- ON Semiconductor
- Finisar
- Lumentum
- Epistar

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

Scientific & Industrial
- Fraunhofer
- Seagate
- NIST
- Western Digital
- Sandia National Laboratories
- Cornell University

Investor Presentation     |   © 2020 Veeco Instruments Inc.
Historical Perspective

Proven Legacy of Enabling Technologies

Positioned to Drive Growth

1990s 2000s 2010s Today

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

LED
GaN MOCVD for LCD backlighting & general lighting applications

Transformation

Two-Phase Transformation
Targeting improved profitability and growth in:
- Front-End Semiconductor
- Compound Semiconductor
- Advanced Packaging

Return the Company to Profitability and Drive Growth

Ultratech
Leader in Laser Spike Anneal and Advanced Packaging Lithography

HDD – Hard Disk Drive
LED – Light Emitting Diode
MOCVD – Metal Organic Chemical Vapor Deposition
GaN – Gallium Nitride

Investor Presentation | © 2020 Veeco Instruments Inc.
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 and MOCVD
- Compound Semi / VCSEL with MOCVD

Phase 2: early stages
General Infrastructure Reductions:
- Flatter organization led by exceptional leadership team including newly appointed CFO
- Product line organization
- Centralized R&D – optimal allocation of resources

Better Focus on Markets and Customers with More Efficient R&D Execution

Introducing John Kiernan, Senior VP, CFO:
- Appointed January 2020
- Close relationship for over 15 years
- 25 years financial leadership at Veeco
Returning to Profitability (Non-GAAP)

Operating Expense Reduction

- SG&A reduction
- Optimize R&D investments

Gross Margin Improvement

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

Improving Operating Expenses and Gross Margin
Markets and Technologies

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

Photonics / 5G
- MOCVD

AI / High Performance Computing
- AP Lithography

Cloud / Data Storage
- Ion Beam Deposition & Etch

Veeco Applies Unique Know-how to Solve Unmet Needs with the Right Technology for Commercial Scaling

* Compound Semi includes LED, Lighting & Display
AI – Artificial Intelligence
5G – Fifth Generation Wireless
AP – Advanced Packaging
EUV Mask Blanks for Front-End Semiconductor

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

*Source: Semiconductor Engineering

---

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

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

**EUV Lithography**
- Multi Patterning
- Single Patterning

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

**EUV Adopters**
- SAMSUNG
- tsmc
- Intel

---

Investor Presentation | © 2020 Veeco Instruments Inc.

EUV – Extreme Ultraviolet
Laser Annealing for Front-End Semiconductor

**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>40-14nm</td>
<td>&lt;10nm</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

**Anticipated 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

---

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

---

**GPU**
- **Graphical Processing Unit**
Compound Semi for Photonics, 5G & MicroLED

**Compound Semiconductor Markets**

**Photonics**
AsP based devices with consumer, automotive and industrial applications such as world facing sensors in mobile devices, LiDAR for autonomous vehicles and Data / Telecom.

**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.

**Veeco Advantage: TurboDisc® Platform**
- Multi-Wafer
- Single Wafer
- GaN - GaAs - InP - AsP
- Excellent uniformity
- Maximum up-time
- Highest productivity
- Lowest cost of ownership

**Attractive Market Opportunity for Compound Semiconductor Applications**

Veeco’s New Lumina™ Platform for VCSELs, EELs and mini / microLEDs
Recent Financial Trends (Non-GAAP)

Improving Financial Metrics as We Grow Top Line and Manage Expenses

- **Revenue ($m)**
  - Q4 18: 99
  - Q1 19: 99
  - Q2 19: 98
  - Q3 19: 109
  - Q4 19: 113
  - Q4 19 up 14% YOY

- **Gross Margin**
  - Q4 18: 36%
  - Q1 19: 36%
  - Q2 19: 38%
  - Q3 19: 40%
  - Q4 19: 40%
  - Ended 2019 with anticipated 40% gross margin

- **OPEX ($m)**
  - Q4 18: 43
  - Q1 19: 40
  - Q2 19: 39
  - Q3 19: 40
  - Q4 19: 38
  - 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: 0.11
  - Return to profitability

A reconciliation of GAAP to Non-GAAP financial measures can be found in the backup section of this presentation.
## Balance Sheet and Cash Flow Highlights

<table>
<thead>
<tr>
<th></th>
<th>Q3 19</th>
<th>Q4 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash &amp; Short-Term Investments</td>
<td>232</td>
<td>245</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>73</td>
<td>46</td>
</tr>
<tr>
<td>Inventories</td>
<td>135</td>
<td>133</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>35</td>
<td>21</td>
</tr>
<tr>
<td>Long-Term Debt</td>
<td>297</td>
<td>300</td>
</tr>
<tr>
<td>Cash Flow from Operations</td>
<td>(15)</td>
<td>16</td>
</tr>
<tr>
<td>DSO (days)</td>
<td>60</td>
<td>36</td>
</tr>
<tr>
<td>DOI</td>
<td>185</td>
<td>177</td>
</tr>
<tr>
<td>DPO</td>
<td>47</td>
<td>28</td>
</tr>
</tbody>
</table>

Amounts may not calculate precisely due to rounding. A reconciliation of GAAP to Non-GAAP financial measures can be found in the backup section of this presentation.
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
  - Photonics & 5G – MOCVD
  - Advanced Packaging – Lithography
  - Cloud / Data Storage – Ion Beam Deposition / Etch
- Improving profitability
Q4 2019 Revenue by Market & Region

**Revenue by Market**
- Front-End Semiconductor: 35%
- LED Lighting, Display & Compound Semi: 23%
- Advanced Packaging, MEMS & RF Filters: 14%
- Scientific & Industrial: 28%

**Revenue by Region**
- United States: 23%
- EMEA: 7%
- China: 22%
- ROW: 48%

**Revenue Trend ($m)**

<table>
<thead>
<tr>
<th>Market/Area</th>
<th>Q4 18</th>
<th>Q1 19</th>
<th>Q2 19</th>
<th>Q3 19</th>
<th>Q4 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front-End Semiconductor</td>
<td>22</td>
<td>23</td>
<td>25</td>
<td>34</td>
<td>39</td>
</tr>
<tr>
<td>Advanced Packaging, MEMS &amp; RF Filters</td>
<td>14</td>
<td>23</td>
<td>16</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>LED Lighting, Display &amp; Compound Semi</td>
<td>13</td>
<td>14</td>
<td>10</td>
<td>24</td>
<td>26</td>
</tr>
<tr>
<td>Scientific &amp; Industrial</td>
<td>50</td>
<td>40</td>
<td>47</td>
<td>40</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>99</td>
<td>98</td>
<td>109</td>
<td>113</td>
</tr>
</tbody>
</table>

Amounts may not calculate precisely due to rounding.
## Growth Areas – Market Status

<table>
<thead>
<tr>
<th>Growth Area</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>
The Markets We Serve

- **Front-End Semiconductor**
  - Ion Beam Deposition for EUV and Laser Spike Annealing that enable early steps in the process of integrated circuit fabrication

- **Advanced Packaging, MEMS & RF Filters**
  - Lithography for advanced packaging, wet etch and clean technology for wafer-level packaging techniques that enable the miniaturization and performance of electronic products

- **Compound Semiconductor**
  - Metal Organic Chemical Vapor Deposition of Gallium Nitride and Arsenide Phosphide compound-semi materials used to create VSCSELs, EELs, specialty LEDs, displays, RF & power devices

- **Scientific & Industrial**
  - 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

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

#### Revenue by Market ($M)

<table>
<thead>
<tr>
<th>Market</th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>FY 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front-End Semi</td>
<td>40</td>
<td>63</td>
<td>120</td>
</tr>
<tr>
<td>Advanced Packaging, MEMS &amp; RF Filters</td>
<td>67</td>
<td>91</td>
<td>67</td>
</tr>
<tr>
<td>LED Lighting, Display &amp; Compound Semi</td>
<td>249</td>
<td>250</td>
<td>73</td>
</tr>
<tr>
<td>Scientific &amp; Industrial</td>
<td>119</td>
<td>139</td>
<td>160</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>476</td>
<td>542</td>
<td>419</td>
</tr>
</tbody>
</table>

#### Revenue by Market (%)

<table>
<thead>
<tr>
<th>Market</th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>FY 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front-End Semi</td>
<td>8%</td>
<td>12%</td>
<td>29%</td>
</tr>
<tr>
<td>Advanced Packaging, MEMS &amp; RF Filters</td>
<td>15%</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>LED Lighting, Display &amp; Compound Semi</td>
<td>52%</td>
<td>46%</td>
<td>17%</td>
</tr>
<tr>
<td>Scientific &amp; Industrial</td>
<td>25%</td>
<td>25%</td>
<td>38%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

#### Revenue by Geography ($M)

<table>
<thead>
<tr>
<th>Geography</th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>FY 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>93</td>
<td>126</td>
<td>126</td>
</tr>
<tr>
<td>EMEA</td>
<td>73</td>
<td>89</td>
<td>57</td>
</tr>
<tr>
<td>China</td>
<td>107</td>
<td>194</td>
<td>71</td>
</tr>
<tr>
<td>ROW</td>
<td>203</td>
<td>133</td>
<td>165</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>476</td>
<td>542</td>
<td>419</td>
</tr>
</tbody>
</table>

#### Revenue by Geography (%)

<table>
<thead>
<tr>
<th>Geography</th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>FY 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>20%</td>
<td>23%</td>
<td>30%</td>
</tr>
<tr>
<td>EMEA</td>
<td>15%</td>
<td>16%</td>
<td>14%</td>
</tr>
<tr>
<td>China</td>
<td>22%</td>
<td>36%</td>
<td>17%</td>
</tr>
<tr>
<td>ROW</td>
<td>43%</td>
<td>25%</td>
<td>39%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td>100%</td>
<td>100%</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>Q4 18</th>
<th>Q1 19</th>
<th>Q2 19</th>
<th>Q3 19</th>
<th>Q4 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Sales</td>
<td>$99.0</td>
<td>$99.4</td>
<td>$97.8</td>
<td>$109.0</td>
</tr>
<tr>
<td>GAAP Gross Profit</td>
<td>35.3</td>
<td>34.7</td>
<td>36.3</td>
<td>42.2</td>
</tr>
<tr>
<td>GAAP Gross Margin</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>

### US$ millions, except per share amounts

<table>
<thead>
<tr>
<th>Q4 18</th>
<th>Q1 19</th>
<th>Q2 19</th>
<th>Q3 19</th>
<th>Q4 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAAP Basic EPS</td>
<td>$(3.11)</td>
<td>$(0.40)</td>
<td>$(0.33)</td>
<td>$(0.25)</td>
</tr>
<tr>
<td>GAAP Diluted EPS</td>
<td>$(3.11)</td>
<td>$(0.40)</td>
<td>$(0.33)</td>
<td>$(0.25)</td>
</tr>
<tr>
<td>GAAP Net Income (Loss)</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>4.3</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>122.8</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Add: Non-Cash Interest Expense</td>
<td>3.0</td>
<td>3.1</td>
<td>3.1</td>
<td>3.2</td>
</tr>
<tr>
<td>Add: Impairment of equity investment</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Add: Tax Adjustment from GAAP to Non-GAAP</td>
<td>2.0</td>
<td>(0.3)</td>
<td>(0.2)</td>
<td>(0.1)</td>
</tr>
<tr>
<td>Non-GAAP Net Income (Loss)</td>
<td>$(7.5)</td>
<td>(6.4)</td>
<td>(3.0)</td>
<td>2.6</td>
</tr>
<tr>
<td>Non-GAAP Basic EPS</td>
<td>$(0.16)</td>
<td>$(0.14)</td>
<td>$(0.06)</td>
<td>0.05</td>
</tr>
<tr>
<td>Non-GAAP Diluted EPS</td>
<td>$(0.16)</td>
<td>$(0.14)</td>
<td>$(0.06)</td>
<td>0.05</td>
</tr>
</tbody>
</table>

### US$ millions

<table>
<thead>
<tr>
<th>Q4 18</th>
<th>Q1 19</th>
<th>Q2 19</th>
<th>Q3 19</th>
<th>Q4 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAAP Operating Expenses</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>(122.8)</td>
<td>-</td>
<td>-</td>
<td>(4.0)</td>
</tr>
<tr>
<td>Other</td>
<td>(1.7)</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>

Amounts may not calculate precisely due to rounding.