Forward-Looking Statements

This document may contain forward-looking statements regarding the business, results of operations, financial condition and earnings outlook of AIXTRON. These statements may be identified by words such as “may”, “will”, “expect”, “anticipate”, “contemplate”, “intend”, “plan”, “believe”, “continue” and “estimate” and variations of such words or similar expressions. These forward-looking statements are based on the current assessments, expectations and assumptions of the executive board of AIXTRON, of which many are beyond control of AIXTRON, based on information available at the date hereof and subject to risks and uncertainties. You should not place undue reliance on these forward-looking statements. Should these risks or uncertainties materialize, or should underlying expectations not occur or assumptions prove incorrect, actual results, performance or achievements of AIXTRON may materially vary from those described explicitly or implicitly in the relevant forward-looking statement. This could result from a variety of factors, such as those discussed by AIXTRON in public reports and statements, including but not limited those reported in the chapter “Risk Report”. AIXTRON undertakes no obligation to revise or update any forward-looking statements as a result of new information, future events or otherwise, unless expressly required to do so by law. This document is an English language translation of a document in German language. In case of discrepancies, the German language document shall prevail and shall be the valid version.

Due to rounding, numbers presented throughout this report may not add up precisely to the totals indicated and percentages may not precisely reflect the absolute figures for the same reason.

Our registered trademarks: AIXACT®, AIXTRON®, APEVA®; Atomic Level SolutionS®, Close Coupled Showerhead®, CRIUS®, EXP®, EPISON®, Gas Foil Rotation®, Optacap™, OVPD®, Planetary Reactor®, PVPD®, STExS®, TriJet®
Our Vision


Technology.
We are the **recognized technology leader** in complex material deposition.

Materials.
We **enable our customers** to successfully shape the markets of the future, exploiting the potential offered by **new materials**.

Performance.
We **deliver the performance** driving **economic success** through our expertise, our employees and the quality of our products.
Who we are

- Headquarters based near Aachen, Germany
- Worldwide presence in 7 countries
- R&D and production facilities in Germany and UK
- ~ 700 employees

- Company founded in 1983, >35 years of experience
- Technology leader in deposition systems
- Around 3,500 deposition systems sold worldwide
Where we are
What We Do

We provide enabling **Deposition Equipment to the Compound Semiconductor and Display Industry**

**For Optoelectronics and Power Electronics**

- **Metal-Organic Chemical Vapor Deposition (MOCVD)** for the deposition of compound materials to produce for instance Lasers, LEDs, GaN and SiC Power Electronics or other Optoelectronic components

- **Plasma-enhanced Chemical Vapor Deposition (PECVD)** for the deposition of Carbon Nanostructures and 2D materials (Carbon Nanotubes, Nanowires or Graphene)

**For Organic Electronics Applications**

- **Organic Vapor Phase Deposition (OVPD)** for the deposition of Organic Light Emitting Diodes (OLED) based displays for smartphones to TV

These thin film deposition technologies are offered by AIXTRON’s subsidiary APEVA.
Our MOCVD Market Position

(Market Size in USD)

2016

AIXTRON: 55%
Others: 8%
Veeco: 37%

2017

AIXTRON: 43%
Veeco: 34%
Others: 20%

2018

AIXTRON: 46%
Veeco: 27%
Others: 24%

Source: Gartner „Market Share: Semiconductor Wafer Fab Equipment, Worldwide, 2018” (publ. April, 2019)
Technology Portfolio for Complex Material Deposition

OLED: OVPD®/PVPD®

Lasers (VCSEL/EEL)
(e.g. 3D Sensing; Consumer Electronics; Optical Datacom, LIDAR)

Specialty LEDs
(e.g. Fine Pitch-, MiniLED-, Horticulture; Purification, next-gen MicroLED-Displays)

Carbon – PECVD

NANO: Innovation Pool

GaN Power | GaN RF
(e.g. Wireless Charging, Fast Charging, Power Supply, 5G Network)

SiC Power
(e.g. Electric Vehicles, Charging Stations, Infrastructure)

MOCVD Core Technology
Revenue Analysis*

2019 by equipment & spares

- Equipment: 80%
- Spares: 20%

2019 by end application (equipment only)

- LED: 43%
- Power Electronics: 18%
- Optoelectronics*: 4%
- Others: 35%

2019 by region

- Asia: 68%
- Europe: 16%
- Americas: 16%

* Optoelectronics includes applications in Consumer Optoelectronics, Telecom/Datacom and Solar

* Rounded figures; may not add up
## Key Financials FY 2019*

* Rounded figures; may not add up

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
<th>+/-%</th>
<th>Q4/19</th>
<th>Q3/19</th>
<th>+/-%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Order intake</strong></td>
<td>231.9</td>
<td>302.5</td>
<td>-23</td>
<td>81.4</td>
<td>52.2</td>
<td>56</td>
</tr>
<tr>
<td><strong>Order backlog (equipment only)</strong></td>
<td>116.7</td>
<td>138.3</td>
<td>-16</td>
<td>116.7</td>
<td>108.4</td>
<td>8</td>
</tr>
<tr>
<td><strong>Revenues</strong></td>
<td>259.6</td>
<td>268.8</td>
<td>-3</td>
<td>75.1</td>
<td>52.6</td>
<td>43</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td>108.7</td>
<td>117.6</td>
<td>-8</td>
<td>34.0</td>
<td>22.1</td>
<td>54</td>
</tr>
<tr>
<td>%</td>
<td>42</td>
<td>44</td>
<td>-2 pp</td>
<td>45</td>
<td>42</td>
<td>3 pp</td>
</tr>
<tr>
<td><strong>EBIT</strong></td>
<td>39.0</td>
<td>41.5</td>
<td>-6</td>
<td>14.4</td>
<td>5.5</td>
<td>162</td>
</tr>
<tr>
<td>%</td>
<td>15</td>
<td>15</td>
<td>0 pp</td>
<td>19</td>
<td>10</td>
<td>9 pp</td>
</tr>
<tr>
<td><strong>Net result</strong></td>
<td>32.5</td>
<td>45.9</td>
<td>-29</td>
<td>12.2</td>
<td>4.4</td>
<td>176</td>
</tr>
<tr>
<td>%</td>
<td>13</td>
<td>17</td>
<td>-4 pp</td>
<td>16</td>
<td>8</td>
<td>8 pp</td>
</tr>
<tr>
<td><strong>Net result per share (EUR)</strong></td>
<td>0.29</td>
<td>0.41</td>
<td>-29</td>
<td>0.11</td>
<td>0.04</td>
<td>176</td>
</tr>
<tr>
<td><strong>Free Cash Flow</strong></td>
<td>36.0</td>
<td>4.4</td>
<td>718</td>
<td>37.8</td>
<td>2.6</td>
<td>n.m.</td>
</tr>
</tbody>
</table>
**FINANCIALS**

### 24 - Month Business Development

**€ million**

**Order Intake**
(incl. equipment. service. spare parts)

**Order Backlog**
(equipment only)

**Revenues**
(incl. equipment. service. spare parts)

USD order intake and backlog were recorded at the prevailing budget rate (2018: $1.20/€; 2019: $1.20/€)
USD revenues were converted at the actual period average FX rate (2018: $1.18/€; 2019: $1.12/€)
## Consolidated Income Statement*

<table>
<thead>
<tr>
<th>(€ million)</th>
<th>2019</th>
<th>2018</th>
<th>+/-%</th>
<th>Q4/19</th>
<th>Q3/19</th>
<th>+/-%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td>259.6</td>
<td>268.8</td>
<td>-3</td>
<td>75.1</td>
<td>52.6</td>
<td>43</td>
</tr>
<tr>
<td><strong>Cost of sales</strong></td>
<td>150.9</td>
<td>151.2</td>
<td>0</td>
<td>41.1</td>
<td>30.4</td>
<td>35</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td>108.7</td>
<td>117.6</td>
<td>-8</td>
<td>34.0</td>
<td>22.1</td>
<td>54</td>
</tr>
<tr>
<td>%</td>
<td>42</td>
<td>44</td>
<td>-2 pp</td>
<td>45</td>
<td>42</td>
<td>3 pp</td>
</tr>
<tr>
<td><strong>Selling expenses</strong></td>
<td>9.9</td>
<td>9.4</td>
<td>6</td>
<td>2.8</td>
<td>2.4</td>
<td>16</td>
</tr>
<tr>
<td><strong>General &amp; admin expenses</strong></td>
<td>16.5</td>
<td>18.4</td>
<td>-10</td>
<td>4.0</td>
<td>4.3</td>
<td>-6</td>
</tr>
<tr>
<td><strong>R&amp;D</strong></td>
<td>55.0</td>
<td>52.2</td>
<td>5</td>
<td>15.0</td>
<td>14.7</td>
<td>2</td>
</tr>
<tr>
<td><strong>Net other operating income</strong></td>
<td>(11.6)</td>
<td>(3.8)</td>
<td>205</td>
<td>(2.3)</td>
<td>(4.7)</td>
<td>-52</td>
</tr>
<tr>
<td><strong>EBIT</strong></td>
<td>39.0</td>
<td>41.5</td>
<td>-6</td>
<td>14.4</td>
<td>5.5</td>
<td>163</td>
</tr>
<tr>
<td>%</td>
<td>15</td>
<td>15</td>
<td>-0 pp</td>
<td>19</td>
<td>10</td>
<td>9 pp</td>
</tr>
<tr>
<td><strong>Net result</strong></td>
<td>32.5</td>
<td>45.9</td>
<td>-29</td>
<td>12.2</td>
<td>4.4</td>
<td>176</td>
</tr>
<tr>
<td>%</td>
<td>13</td>
<td>17</td>
<td>-4 pp</td>
<td>16</td>
<td>8</td>
<td>8 pp</td>
</tr>
</tbody>
</table>

* Rounded figures; may not add up
## Balance Sheet*

*Rounded figures; may not add up*

<table>
<thead>
<tr>
<th>(€ million)</th>
<th>31/12/19</th>
<th>30/09/19</th>
<th>31/12/18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property. plant &amp; equipment</td>
<td>64.5</td>
<td>64.8</td>
<td>63.1</td>
</tr>
<tr>
<td>Goodwill</td>
<td>72.4</td>
<td>72.2</td>
<td>71.6</td>
</tr>
<tr>
<td>Other intangible assets</td>
<td>2.4</td>
<td>2.2</td>
<td>2.1</td>
</tr>
<tr>
<td>Others</td>
<td>11.7</td>
<td>12.5</td>
<td>13.3</td>
</tr>
<tr>
<td><strong>Non-current assets</strong></td>
<td><strong>151.0</strong></td>
<td><strong>151.8</strong></td>
<td><strong>150.1</strong></td>
</tr>
<tr>
<td>Inventories</td>
<td>79.0</td>
<td>87.9</td>
<td>73.5</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>29.2</td>
<td>33.2</td>
<td>40.1</td>
</tr>
<tr>
<td>Others</td>
<td>5.4</td>
<td>6.5</td>
<td>11.5</td>
</tr>
<tr>
<td>Cash &amp; Cash Deposits</td>
<td>298.3</td>
<td>260.6</td>
<td>263.7</td>
</tr>
<tr>
<td><strong>Current Assets</strong></td>
<td><strong>412.0</strong></td>
<td><strong>388.2</strong></td>
<td><strong>388.8</strong></td>
</tr>
<tr>
<td><strong>Equity</strong></td>
<td><strong>464.1</strong></td>
<td><strong>451.0</strong></td>
<td><strong>429.6</strong></td>
</tr>
<tr>
<td><strong>Non-current liabilities</strong></td>
<td><strong>4.5</strong></td>
<td><strong>4.8</strong></td>
<td><strong>1.8</strong></td>
</tr>
<tr>
<td>Trade payables</td>
<td>19.4</td>
<td>14.0</td>
<td>27.8</td>
</tr>
<tr>
<td>Advance payments from customers</td>
<td>51.1</td>
<td>44.4</td>
<td>53.3</td>
</tr>
<tr>
<td>Others</td>
<td>23.9</td>
<td>25.9</td>
<td>26.3</td>
</tr>
<tr>
<td><strong>Current liabilities</strong></td>
<td><strong>94.3</strong></td>
<td><strong>84.3</strong></td>
<td><strong>107.4</strong></td>
</tr>
<tr>
<td><strong>Balance Sheet total</strong></td>
<td><strong>563.0</strong></td>
<td><strong>540.1</strong></td>
<td><strong>538.9</strong></td>
</tr>
</tbody>
</table>
## Consolidated Statement of Cash Flows*

* *Rounded figures; may not add up*

<table>
<thead>
<tr>
<th>(€ million)</th>
<th>2019</th>
<th>2018</th>
<th>Q4/19</th>
<th>Q3/19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Result</strong></td>
<td>32.5</td>
<td>45.9</td>
<td>12.2</td>
<td>4.4</td>
</tr>
<tr>
<td>Adjust for</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non Cash Items</td>
<td>13.1</td>
<td>0.7</td>
<td>3.9</td>
<td>3.0</td>
</tr>
<tr>
<td>Changes in Working Capital</td>
<td>-2.8</td>
<td>-34.6</td>
<td>20.0</td>
<td>-2.4</td>
</tr>
<tr>
<td><strong>Cash Flow from Operating Activities</strong></td>
<td>42.8</td>
<td>11.9</td>
<td>36.1</td>
<td>5.0</td>
</tr>
<tr>
<td>Capex &amp; Interest received</td>
<td>-6.8</td>
<td>-7.6</td>
<td>1.7</td>
<td>-2.4</td>
</tr>
<tr>
<td>Free Cash Flow</td>
<td>36.0</td>
<td>4.4</td>
<td>37.8</td>
<td>2.6</td>
</tr>
<tr>
<td>FX effects and financing</td>
<td>-0.9</td>
<td>12.8</td>
<td>0.0</td>
<td>-0.8</td>
</tr>
<tr>
<td>Cash &amp; Deposits</td>
<td>298.3</td>
<td>263.7</td>
<td>298.3</td>
<td>260.6</td>
</tr>
</tbody>
</table>
AIXTRON – 2020 Guidance*

Based on current order situation, Management expects for 2020**:

- Total Order Intake between EUR 260 ~ 300 million
- Revenues between EUR 260 ~ 300 million
- Gross Margin of ~40%
- EBIT between 10% and 15% of Revenues

* Based on 1.20 USD/EUR Budget Rate; please refer to “Expected Results of Operations and Financial Position” in the AIXTRON 2019 Annual Report for further information

** Based on the assumption that the COVID-19 outbreak will not have a significant impact on the business
Market Prospects

**Short-Term**
- Increasing adoption of compound semiconductor-based lasers for 3D sensor systems in mobile devices as well as sensors for infrastructure applications.
- Further increasing demand for lasers for ultra-fast optical data transmission of large volumes, such as for video streaming and Internet-of-Things (IoT) applications.
- Increasing use of LEDs and specialty LEDs (esp. red-orange-yellow, UV or IR) in displays and other applications.
- Increasing use of wide-band gap GaN- or SiC-based components for energy-efficient power electronics devices in autos, in consumer electronics, in mobile devices and in IT infrastructure.
- Progress in the development of OLED displays that require an efficient deposition technology.

**Mid- to Long-Term**
- Development of new applications based on wide-band gap materials such as high-frequency chips or system-on-chip architectures with integrated power management.
- Increased use of compound semiconductor-based sensors for autonomous driving.
- Increased development activities for high performance solar cells made of compound semiconductors.
- Development of new materials with the help of carbon nanostructures (carbon nanotubes, wires and graphene).
- Development of alternative LED applications, such as visual-light communication technology or Micro LED displays.
Epitaxial Growth Equipment Market Forecast*  

- Micro LED equipment demand as strongest driver from 2021 (Aggressive Model)
- Power equipment demand to accelerate from 2021

Source: Epitaxial Growth Equipment Market for More-than-Moore Devices by Yole Developpement 2020
Our technology. YOUR FUTURE.
AIXTRON MOCVD – Planetary Reactor®: Tool-of-Record

✓ Individual Wafer Rotation = Best Material Uniformity
✓ Individual wafer temperature adjustment = Wafer Level Control/Optimization
✓ Highest Epi / Product Yield = Lowest Production Cost
AIXTRON TECHNOLOGIES AND PRODUCTS

AIXTRON – Enabling Emerging Global Mega Trends

MOCVD Platform Technology

- GaAs
- GaN
- SiC
- Specialty LED
- Photonics
- Power

- Automotive
- Optical Communication
- 3D Sensing Lasers
- Mobile communication
- Power Supplies for Consumer Electronics
- Fine Pitch & MiniLED Displays
- Infrared LED
- Electric Vehicles
- Solar
- MicroLED Displays
- UV LED
- Electric Trains
- Industry Power Supplies
Devices: VCSEL/EEL – Internet of Things Creates New Opportunities

3D Sensing Functionality

Lasers: VCSEL/EEL

Processor

Sensor/Receiver

Facial Recognition

Autonomous Driving

Tailor-made clothing/shoes

Interior Design

Mapping

Industry 4.0

Source: icons from www.flaticon.com
Devices: GaN/SiC Power Electronics – Superior Performance

- Energy Saving
- Less Heat
- Light Weight
- Lower System Cost
- Electric Vehicles
- Data Centers
- Renewable Energy
- Wireless Charging
- Fast Charging

More Efficient
Smaller

Source: icons from www.flaticon.com
Devices: ROY LEDs for RGB* Displays; UV LEDs for Niche Markets

**RGB* LED DISPLAYS**

- **Stadium Outdoor Display**
  - (Pixel Pitch ≥ 10mm)
  - (Chip size: ≥ 200μm)

- **Fine Pitch Indoor Display**
  - (Pixel Pitch ≤ 2.5mm)
  - (Chip size: ≥ 200μm)

- **MiniLED for Consumer Electronics**
  - (Chip size: ≤ 200μm)

- **MicroLED for Consumer Electronics**
  - (Chip size: ≤ 50μm)

**UV LED**

- **Curing**
- **Water Disinfection**
- **Air Purifier**

*RGB = Red, Green & Blue*
Devices: MiniLED & MicroLED – The Perfect Future Display Technology

- **Self-Emissive**
- **Low Power Consumption**
- **Perfect Contrast**
- **High Brightness**
- **Fast Response**

RGB* MicroLED Display

≈ 1

100

RGB* LED Display

*RGB = Red, Green & Blue

Source: LEDinside

- Wearables
- AR/VR
- Signage
- Smartphones/Tablets/TVs
AIXTRON – Instrumental in Evolving Display Technologies

- **1950’s → CRT**
- **2000’s → Plasma LCD**
- **2006 → LED Backlit Display**
- **2010 → OLED Display**
- **Under Development → MicroLED Display**
APEVA: Complete OLED Deposition System Provider

OVPD Deposition Line*

- Fully Automated OLED Deposition Lines and Fab Integration as a Complete System Provider
- Innovative Deposition Technology with
  - Higher Efficiency of OLED Material Deposition
  - Mixing and Doping of Materials via Multiple Material Deposition in One Chamber
  - Maintaining the Delicate Organic Material Properties improving Lifetime

* Pictures shown are for illustration purpose only
Organic Electronics – OVPD® – APEVA

OLED manufacturing process

- Cleaning
- ITO deposition
- Coating
- Etching
- Stripping
- Test and repair
- Cleaning
- Organic material deposition
- Cathode deposition
- Encapsulation (Thin film; TFE)
- Glass cutting
- Bonding
- Aging
- Final test

Front-end
Array process equipment

Front-end
Cell process equipment

Back-end
Module process equipment

In Qualification for Volume Production

Source: DisplaySearch, AIXTRON
Overview: GaN/SiC as Wide Band Gap (WBG) Power Electronics

<table>
<thead>
<tr>
<th>Consumer Electronics &amp; IT</th>
<th>Automotive</th>
<th>Energy</th>
<th>Industrial</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Management</strong></td>
<td><strong>Power Switching</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30V</td>
<td>600V</td>
<td>1.2 kV</td>
<td>≥2kV</td>
</tr>
</tbody>
</table>

- Electronic appliances
- Computing
- Wireless charging
- Power supplies
- PFC

- Infotainment
- GPS
- Connected car
- Autonomous driving
- EMI/EMC
- Adaptive cruise control

- General automotive electronic
- HEV/EV
- Charging station
- Inverter / motor drives
- Converter
- Radar test applications

- Power Grid / Smart meter / appliances
- Solar / Wind inverters
- Solar / Wind power DC distribution
- Storage
- UPS

- UPS
- Industrial machines
- Building
- Mining, oil, gas power generation
- Shipping/Rail

<table>
<thead>
<tr>
<th>GaN</th>
<th>GaN / SiC</th>
<th>SiC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low to Medium Voltages</td>
<td>Medium to High Voltages</td>
<td></td>
</tr>
</tbody>
</table>

- **GaN**
- **GaN / SiC**
- **SiC**

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AIXTRON TECHNOLOGIES AND PRODUCTS
SiC in Automotive: Main Inverter as the Major Market Opportunity

AIXTRON TECHNOLOGIES AND PRODUCTS

Brings energy from battery to the electric motor

![Diagram of electric vehicle with components labeled]

<table>
<thead>
<tr>
<th>Component</th>
<th>Power (kW)</th>
<th>Fraction 6” wafer*</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main inverter</td>
<td>20 ~ 150</td>
<td>0.1 ~ 0.5</td>
<td>Brings energy from battery to the electric motor</td>
</tr>
<tr>
<td>DC-DC Converter</td>
<td>1 ~ 3</td>
<td>&lt;0.01</td>
<td>Brings energy from battery for car electronics</td>
</tr>
<tr>
<td>On Board Charger (OBC)</td>
<td>5 ~ 30</td>
<td>0.01</td>
<td>Brings 240 V AC energy from wall plug to battery</td>
</tr>
<tr>
<td>(Quick) Charging Pole</td>
<td>30 ~ 300</td>
<td>0.1 ~ 1</td>
<td>Brings 1–3 kV DC energy directly from grid to battery</td>
</tr>
</tbody>
</table>

* Back-of-the-envelope order-of-magnitude estimates

Higher efficiency =
✓ Battery size reduction
✓ Cost savings
✓ Range extension
**AIXTRON TECHNOLOGIES AND PRODUCTS**

**Carbon Nanomaterials – PECVD**

### Graphene and Carbon Nanotube Deposition Systems

- Proprietary thermal and plasma enhanced chemical vapor deposition technology
- Excellent uniformity and reproducibility with fast turnaround cycle times
- BM platform: BM R&D (2-inch), BM Pro (4-inch and 6-inch), BM GB (4-inch glovebox), BM HT (high temperature, 1,700°C), BM300T (300mm)
- Graphene and carbon nanotube films for electronics, energy storage, thermal management, sensors and flexible/transparent applications

### Product features

- Fast response heater and turnaround
- Thermal CVD
- Substrate and top heating
- Closed loop infrared wafer temperature control
- Plasma enhanced CVD with frequency control
- Flexible processing for different applications
- Low cost of ownership
- Easy maintenance and cleaning
- User management features and growth library

**Graphene (2D) and Carbon nanotube (1D)**

Unique combination of high electrical/thermal conductivity, mobility, flexibility and transparency

**Serving R&D market today**

AIXTRON BM Pro

**Production ready for tomorrow**

AIXTRON BM Pro 300
Our technology. YOUR FUTURE.
Order Intake per Quarter (Equipment Only)

- (EUR million)
- Driven by strategic China investments
- Driven by mobile phone penetration
- Driven by LED TV
- Driven by notebook backlighting
- Overcapacity Absorption, Industry Consolidation
- Lasers, ROY LEDs and Power Electronics driving demand

Equipment Demand
Strategic China Investments

Q3/98 to Q3/19
Annual Total Revenues by Application (including spares)

(EUR million)

* Optoelectronics includes applications in Consumer Optoelectronics, Telecom/Datacom and Solar
** Silicon: ALD/CVD product line sold in 2017
## AIXTRON Competitive Landscape

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>Europe</th>
<th>China</th>
<th>Korea</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opto</strong></td>
<td>GaAs/InP Optoelectronics, ROY LED</td>
<td>Veeco</td>
<td></td>
<td></td>
<td>TAIYO NIPPON SANSO</td>
</tr>
<tr>
<td></td>
<td>GaN LED</td>
<td>Veeco</td>
<td>TOPEC</td>
<td></td>
<td>TAIYO NIPPON SANSO</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>GaN Power</td>
<td>Veeco</td>
<td></td>
<td></td>
<td>TAIYO NIPPON SANSO</td>
</tr>
<tr>
<td></td>
<td>SiC Power</td>
<td></td>
<td>LPE</td>
<td></td>
<td>TEL</td>
</tr>
<tr>
<td><strong>OLED</strong></td>
<td>OLED</td>
<td></td>
<td></td>
<td>CANON TOKKI CORPORATION</td>
<td>NuFlare</td>
</tr>
</tbody>
</table>
## Consolidated Income Statement*

* Rounded figures; may not add up

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td>259.6</td>
<td>268.8</td>
<td>230.4</td>
</tr>
<tr>
<td><strong>Cost of sales</strong></td>
<td>150.9</td>
<td>151.2</td>
<td>156.4</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td>108.7</td>
<td>117.6</td>
<td>74.0</td>
</tr>
<tr>
<td>%</td>
<td>42 %</td>
<td>44 %</td>
<td>32 %</td>
</tr>
<tr>
<td><strong>Selling expenses</strong></td>
<td>9.9</td>
<td>9.4</td>
<td>10.2</td>
</tr>
<tr>
<td><strong>General &amp; admin expenses</strong></td>
<td>16.5</td>
<td>18.4</td>
<td>17.1</td>
</tr>
<tr>
<td><strong>R&amp;D</strong></td>
<td>55.0</td>
<td>52.2</td>
<td>68.8</td>
</tr>
<tr>
<td><strong>Net other operating income</strong></td>
<td>11.6</td>
<td>3.8</td>
<td>27.0</td>
</tr>
<tr>
<td><strong>EBIT</strong></td>
<td>39.0</td>
<td>41.5</td>
<td>4.9</td>
</tr>
<tr>
<td>%</td>
<td>15 %</td>
<td>15 %</td>
<td>2 %</td>
</tr>
<tr>
<td><strong>Net result</strong></td>
<td>32.5</td>
<td>45.9</td>
<td>6.5</td>
</tr>
<tr>
<td>%</td>
<td>13 %</td>
<td>17 %</td>
<td>3 %</td>
</tr>
</tbody>
</table>

* Rounded figures; may not add up
## Balance Sheet*

<table>
<thead>
<tr>
<th>(€ million)</th>
<th>31/12/19</th>
<th>31/12/18</th>
<th>31/12/17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property, plant &amp; equipment</td>
<td>64.5</td>
<td>63.1</td>
<td>64.3</td>
</tr>
<tr>
<td>Goodwill</td>
<td>72.4</td>
<td>71.6</td>
<td>71.2</td>
</tr>
<tr>
<td>Other intangible assets</td>
<td>2.4</td>
<td>2.1</td>
<td>1.8</td>
</tr>
<tr>
<td>Others</td>
<td>11.7</td>
<td>13.3</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Non-current assets</strong></td>
<td><strong>151.0</strong></td>
<td><strong>150.1</strong></td>
<td><strong>141.3</strong></td>
</tr>
<tr>
<td>Inventories</td>
<td>79.0</td>
<td>73.5</td>
<td>43.0</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>29.2</td>
<td>40.1</td>
<td>19.3</td>
</tr>
<tr>
<td>Others</td>
<td>5.4</td>
<td>11.5</td>
<td>5.0</td>
</tr>
<tr>
<td>Cash &amp; Cash Deposits</td>
<td>298.3</td>
<td>263.7</td>
<td>246.5</td>
</tr>
<tr>
<td><strong>Current Assets</strong></td>
<td><strong>412.0</strong></td>
<td><strong>388.8</strong></td>
<td><strong>313.8</strong></td>
</tr>
<tr>
<td><strong>Equity</strong></td>
<td><strong>464.1</strong></td>
<td><strong>429.7</strong></td>
<td><strong>368.9</strong></td>
</tr>
<tr>
<td><strong>Non-current liabilities</strong></td>
<td><strong>4.5</strong></td>
<td><strong>1.8</strong></td>
<td><strong>2.0</strong></td>
</tr>
<tr>
<td>Trade payables</td>
<td>19.4</td>
<td>27.8</td>
<td>14.3</td>
</tr>
<tr>
<td>Contract liabilities for advance payments</td>
<td>51.1</td>
<td>53.3</td>
<td>30.3</td>
</tr>
<tr>
<td>Others</td>
<td>23.9</td>
<td>26.3</td>
<td>39.7</td>
</tr>
<tr>
<td><strong>Current liabilities</strong></td>
<td><strong>94.3</strong></td>
<td><strong>107.4</strong></td>
<td><strong>84.2</strong></td>
</tr>
<tr>
<td><strong>Balance Sheet total</strong></td>
<td><strong>563.0</strong></td>
<td><strong>538.9</strong></td>
<td><strong>455.1</strong></td>
</tr>
</tbody>
</table>

* Rounded figures; may not add up
## Consolidated Statement of Cash Flows*

*Rounded figures; may not add up*

<table>
<thead>
<tr>
<th>(€ million)</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Flow from operating activities</td>
<td>42.8</td>
<td>13.0</td>
<td>70.1</td>
</tr>
<tr>
<td>Cash Flow from investing activities</td>
<td>-6.8</td>
<td>-16.1</td>
<td>40.7</td>
</tr>
<tr>
<td>Cash Flow from financing activities</td>
<td>-1.2</td>
<td>10.4</td>
<td>1.2</td>
</tr>
<tr>
<td>Exchange rate changes</td>
<td>-0.1</td>
<td>2.4</td>
<td>-5.5</td>
</tr>
<tr>
<td>Net change in Cash &amp; Cash Equivalents</td>
<td>34.6</td>
<td>9.7</td>
<td>106.5</td>
</tr>
<tr>
<td>Cash &amp; Cash Equivalents (beginning of period)</td>
<td>236.2</td>
<td>226.5</td>
<td>120.0</td>
</tr>
<tr>
<td>Cash &amp; Cash Equivalents (end of period)</td>
<td>270.8</td>
<td>236.2</td>
<td>226.5</td>
</tr>
<tr>
<td>Change in Cash deposits</td>
<td>0.0</td>
<td>7.5</td>
<td>-19.5</td>
</tr>
<tr>
<td>Free Cash Flow</td>
<td>36.0</td>
<td>4.4</td>
<td>91.4</td>
</tr>
<tr>
<td>Capex</td>
<td>7.8</td>
<td>9.2</td>
<td>9.7</td>
</tr>
</tbody>
</table>
Financial Calendar & Contact Data

- April 30, 2020  Q1/2020 Results, Conference Call
- May 20, 2020  Annual General Meeting, Aachen, Germany
- October 29, 2020  9M/2020 Results, Conference Call
- February 2021  FY/2020 Results, Conference Call

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