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US Semiconductor Equipment and Semiconductors

Citi TMT Day 3: AEIS, VECO, CLS, Tokyo Electron, Lasertec, Advantest

CITI'S TAKE

We hosted 1) fireside chats with AEIS, Tokyo Electron; and 2) met VECO, CLS, Advantest, and Lasertec. Please see key takeaways inside.

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See Appendix A-1 for Analyst Certification, Important Disclosures and Research Analyst Affiliations.

Citi TMT Day 3 Takeaways

Advanced Energy (AEIS)

Steve Kelley - President & CEO
Paul Oldham - EVP & CFO

- **Semi Outlook / Visibility —** Management raised confidence in 2H26 semi growth to ~50% y/y as customer forecasts and orders strengthened materially in 1H26. Customers now have roughly two years of visibility, with fab-space constraints the main limiter to further upside. AEIS believes it can continue to outperform WFE as new advanced-memory and advanced-logic fabs come online.

- **Gross Margins — Management expects gross margin to exit CY26 around 42% and exit CY27 around 43%,** despite tariffs, data-center mix and ramp inefficiencies. The majority of new-product mix benefit remains ahead, while manufacturing efficiency, volume leverage and richer products provide additional upside. Management believes the prior 43.5% long-term target can ultimately be exceeded.

- **Semi New Products / Share Gains —** eVoS, eVerest and NavX are already shipping into leading-edge applications but remain a small part of revenue today. Management expects a much larger contribution in CY27/28 as sub-2nm logic and advanced-memory processes ramp, with the mix shifting from legacy socket volume growth toward new-product wins. Higher etch/dep intensity, higher power, multiple frequencies and more advanced metrology all increase AEIS content and ASPs.

- **Test Power —** AEIS is gaining traction in system power for semiconductor test, including testers and burn-in ovens, where AI-related test requirements are becoming more demanding. Management is expanding capacity every quarter for these applications and said margins are comparable to plasma power, making test an incremental growth vector rather than just a low-margin adjacency.

- **Data Center —** CY26 data-center growth of >50% is primarily driven by CY25 design wins ramping at AEIS's targeted hyperscalers, where the company continues to gain share and content across multiple higher-power applications. Management remains focused on technically demanding, higher-margin sockets rather than maximizing market share broadly. "Second-wave" customers should become meaningful in CY27/28 and could collectively reach the size of one large hyperscaler by CY28/29; these customers require less customization and could support somewhat better operating margins.

- **800V Transition —** Management remains constructive on 800V and explicitly expects content per rack to increase, consistent with prior architecture transitions. CY27 is expected to be primarily a design-win year, with meaningful 800V revenue beginning in CY28 and ramping through CY29. AEIS is pursuing a modular architecture that can be configured for different customer requirements as standards remain fluid.

- **800V Architecture / Sidecar —** AEIS said it has solutions for both sidecar/power-rack architectures and more conventional in-rack designs. On DC/DC, A modular PDU approach can combine different 800V conversion modules and support architectures ranging from 800V to an intermediate bus to potentially direct lower-voltage conversion. Management believes this flexibility positions AEIS well regardless of which architecture customers ultimately adopt.

- **800V Engineering Bottleneck —** The key constraint is engineering talent rather than manufacturing capacity. Higher-power architectures require simultaneous improvements in power density, efficiency, thermal performance, reliability and manufacturability. AEIS is adding engineers and reusing IP/modules generation-to-generation to shorten development cycles while focusing on a limited set of customers where it can execute deeply.

- **Capacity —** AEIS has >$3B of manufacturing capacity today and expects >$5B by CY28 as the new 500,000 sq ft Thailand facility ramps, up from the prior ~$3.5–4B framework. Management has deliberately biased investment toward capturing upside, including higher inventory and roughly 2x normal CapEx, but views the risk of overbuilding as manageable given fast paybacks and fungible final-assembly/test capacity.

- **Industrial & Medical —** I&M has returned to growth, driven by factory automation, robotics and other "physical AI" applications, with prior design wins now ramping. AEIS expects sequential improvement into CY27 and has resolved the execution issues that constrained shipments earlier this year. Capital allocation remains focused on internal investment in semi/data center, while M&A is more likely to target I&M to build scale in the fragmented market.

Tokyo Electron

Mark Dougherty -President and General Manager of Tokyo Electron America, Inc

- **WFE Outlook —** TEL remains highly constructive on CY26/27, with CY26 WFE >$150B and CY27 at least $190B. Customers provide 18–24 months of investment visibility, while firmer bookings typically come within ~6 months. Management also sees continued strength into CY28 as fabs currently under construction begin contributing from 2H28 and beyond, though it is not yet providing a formal CY28 WFE estimate.

- **Supply —** Management does not see any structural bottlenecks today across factory space, labor or supply chain. TEL has been expanding R&D, production and logistics capacity for several years and shares long-range forecasts with suppliers. Etch is the key capacity focus given rising etch intensity across logic and memory; TEL's smart-factory investment should ultimately enable roughly 3x etch capacity, while broader capacity expansion varies by product.

- **Memory —** TEL continues to expect strong memory growth, with DRAM up ~30% to the low-$40B range and NAND up ~40% from a low base in CY26. Management emphasized that AI is now pulling on logic, DRAM and NAND simultaneously rather than producing more isolated investment cycles. Timing and mix may shift depending on system architecture, but TEL sees the aggregate demand backdrop remaining strong.

- **F/L Share Gains —** TEL sees continued process-of-record gains as GAA/nanosheet, backside power and future 3D architectures increase complexity. Coater/developer remains dominant, including effectively unique positioning in EUV/High-NA, while management sees incremental share opportunity in conductor etch and deposition where new architectures create more difficult process requirements. Winning new insertions is viewed as the key leading indicator because POR wins can translate into revenue over a 5–6+ year horizon.

- **NAND / Cryogenic Etch —** Cryogenic etch becomes increasingly important for 400+ layers NAND, where conventional approaches become more challenging. TEL expects the technology to become more noticeable in revenue during CY27 and then expand as more customers and layer counts adopt it. Management believes TEL has a leadership position and already has early customer wins.

- **China —** China remains roughly ~30% of TEL sales and management currently expects that mix to stay relatively stable. Competition from domestic OEMs is highest in mature, commoditized tools where pricing is more intense, but TEL still sees differentiated opportunities in more advanced applications where local suppliers remain less competitive. Stability reflects both continued China investment and faster growth elsewhere.

- **Advanced Packaging —** TEL sees advanced packaging as a broadening opportunity across test, bonding, laser processing and increasingly front-end-like processes. Wafer/die probers benefit as customers add more test insertions across stacked architectures, while TEL also claims a leading position in wafer bonding and has capabilities in wafer-edge treatment, lift-off and debonding. Management expects more traditional front-end processes to migrate into packaging over time. For prober, advanced packaging is increasing both the number and timing of wafer/die probe steps, benefiting TEL's prober franchise. Management highlighted differentiated products specifically designed for advanced packaging applications and sees test as one of the clearest direct beneficiaries of HBM and heterogeneous integration.

- **Gross Margins —** TEL remains committed to reaching ~50% gross margin by early FY28 from 46.8% most recently. The bridge includes inflation-related pricing recovery, value-based pricing where differentiated products have limited alternatives, higher factory absorption and broader operating efficiencies. Management did not quantify the contribution from each lever but indicated pricing is an important component alongside scale and productivity.

Veeco (VECO)

John Kiernan – CFO
Alex Delacroix - Head of IR

- **InP MOCVD—** Management sees a large and fast-growing indium phosphide MOCVD opportunity driven by optical/laser demand, with customers discussing requirements of ~100–120 chambers annually, implying roughly a $400–500M system TAM. VECO's share is currently low, but management believes Lumina+ is highly competitive given higher productivity and much lower maintenance intensity. Customers building greenfield capacity are increasingly open to dual sourcing, which gives VECO the opportunity to win customers.

- **Lumina+ Competitive Position —** VECO sees productivity as its key edge against incumbency. Management said the VECO reactor can operate for roughly a month between maintenance cycles versus competitors requiring maintenance after each run, reducing operator burden and improving output per footprint. Larger, established customers are viewed as the best initial targets because they have the technical resources to support a dual-vendor process strategy.

- **Laser Facet Coating —** VECO also sees a significant opportunity in IBD for reflective/anti-reflective coatings on higher-power InP lasers. Historically this

was a small niche business, but tighter requirements for laser performance and reliability are making ion-beam coatings more valuable. Management said customer engagement and orders are rising meaningfully and expects this business to be a substantial CY27 growth contributor.

- **Advanced Packaging —** Advanced packaging is becoming a major growth vector, with CY26 revenue around ~$160M, roughly 2/3 wet processing and 1/3 lithography. VECO expects both businesses to grow at similar rates into CY27 and is installing capacity to more than double current output. Management already has significant orders covering a good portion of CY27.

- **Wet Processing / CoWoS —** VECO is PTOR for a critical micro-bump flux-clean step in CoWoS at the leading Taiwan foundry, having solved a difficult cleaning challenge and displaced local competition. That initial win has turned into broader roadmap engagement, including additional CoWoS variants, SoIC, panel-level processing and other packaging steps. Overflow from the foundry to OSATs is now creating incremental demand because VECO's process-of-record status is carrying over into outsourced capacity.

- **OSAT —** Management highlighted unusually strong OSAT visibility, with hard orders and deposits extending through CY27 and forecasts into CY28. OSAT capex plans have increased dramatically, forcing customers to secure supply chain capacity much earlier than historically. VECO therefore has substantially better confidence to add packaging capacity than it would based on non-binding forecasts alone.

- **China Rev —** VECO's CY26 semiconductor growth has been held back by China, where laser annealing exposure was concentrated in 40/28nm greenfield projects that peaked in CY23/24. China should be roughly 15% of revenue this year and could be flattish in dollars in CY27, implying further mix decline as the rest of the business grows.

- **Laser Annealing / Advanced Logic —** Outside China, advanced F/L is performing well, supported by 2nm/GAA ramps. VECO now has order/evals in NSA across all leading F/L customers, including an initial follow-on order from one long-running eval customer and a new CY26 eval at a third leading logic customer. Another customer (we believe Rapidus) has purchased NSA tools outright for its 2nm process.

- **Memory Annealing —** VECO is in the early stages of expanding laser annealing into memory. One HBM/DRAM customer is already contributing, a second customer has an important evaluation underway that could drive CY27 revenue, and VECO is working with the third major DRAM supplier. Management is also pursuing initial NAND applications with two customers.

- **300mm GaN —** VECO is well positioned in the emerging 300mm GaN-on-silicon market and is in a head-to-head qualification with the incumbent competitor. VECO received the pilot line order first and expects delivery around YE26/early CY27. The customer continues to discuss a long-term requirement of >100 reactors, although meaningful VECO revenue is more likely in CY28–30 than CY27. Management also noted broader industry interest, including participation in imec's 300mm GaN consortium.

- **China Competition —** Management views Chinese competitors as credible in GaN and is effectively out of the domestic China GaN market. For arsenide/phosphide MOCVD, however, local Chinese competition remains

weaker; VECO is prioritizing leading Western customers and views any China opportunity as upside rather than part of the base case.

- **Gross Margin —** Management expects gross margins to improve in CY27 as higher volumes absorb capacity investments. Revenue should build sequentially through the year as incremental capacity comes online, particularly from late 2Q into 3Q. Opex dollars will rise with growth but should decline as a percentage of revenue.

- **Axcelis Merger —** VECO still expects the transaction to close in 2H26, with China regulatory approval the only remaining condition. The filing has moved from simplified to standard review as expected, and management said nothing unusual has emerged so far. VECO expects approval before year-end but acknowledged potential remedy discussions; Neither company is obligated to license technology to obtain approval.

Advantest

Ryusuke Semba - Office Manager IR Dept

- **Pricing —** Advantest's pricing philosophy remains value-based rather than broad-based price taking. The company raises pricing when customers require richer tester configurations, additional modules or higher-value capabilities, while prioritizing long-term customer relationships. Memory-component inflation is also being negotiated through where possible, but management did not indicate a structural change toward aggressive pricing.

- **GPU / Compute Share —** Management said it does not see a share change today in GPU, CPU or ASIC test and emphasized that customers prioritize yield, quality assurance and operational consistency. Advantest believes its installed base, test-language familiarity and long customer relationships create significant switching friction, particularly in GPU, where it has supported leading customers since the 1990s.

- **ASIC Competition** — Custom ASIC is more competitive than GPU because some customers are already familiar with competitor platforms, but Advantest believes it remains in a leading position and is engaged with essentially all major design houses and hyperscalers. Its broad customer base and large installed base at foundries/OSATs are key advantages.

- **Capacity —** Advantest has accelerated tester capacity aggressively, moving from roughly ~3,000 units/year in mid-2025 toward ~5,000 units/year today, with the longer-term goal of ~10,000 units pulled forward from the original late-CY28/early-CY29 timing. OEM manufacturing capacity is not the main bottleneck; component procurement is now the bigger focus, with memory, cables, connectors and other parts periodically constraining output.

- **Visibility —** Customer conversations now extend roughly ~18 months, though this is planning visibility rather than firm backlog. Firm orders typically come closer to ~3–6 months before shipment. Management uses those longer-range project discussions to size production and supply-chain capacity ahead of demand.

- **Compute ASP / Configuration —** GPU, custom ASIC and CPU testers all use the same core V93000/EXA Scale platform, but module configuration varies

significantly by device. High-performance compute typically requires richer configurations with more digital, power and high-performance modules, driving ASPs above company average.

- **GPU / ASIC Test Intensity —** Management sees test time, content and insertions continuing to increase generation-to-generation across advanced compute. The exact magnitude is highly device- and yield-dependent and can move up or down as customers add or remove test content. Some custom ASICs could even require longer test times than GPUs if customers lack mature yield-learning and therefore need more diagnostic/test coverage.

- **GPU vs. ASIC Demand —** GPU remains the largest compute tester market today by volume, followed by custom ASIC and then CPU. Management acknowledged that aggregate ASIC demand could eventually surpass GPU demand, but tester demand will depend not just on units shipped, but also device complexity, yield and test content, making a direct unit-to-tester comparison unreliable.

- **Burn-In / SLT —** Advantest is actively evaluating solutions for both burn-in and system-level test for high-performance-compute customers. Management sees initial revenue contribution potentially beginning from 2H of the current fiscal year, though timing remains uncertain.

- **Silicon Photonics / CPO —** Advantest has already received a production-volume purchase order and is positioning itself as a broader test-flow integrator rather than tying itself to a single insertion. Management said customers are still optimizing the full CPO test flow and Advantest can combine its own testers with third-party solutions where needed. The company expects the silicon-photonics business to 2x next year and 2x again in CY28, but is not yet ready to size the long-term revenue contribution.

Lasertec

Raiji Hanashima - Manager, PR & IR Office, Corporate Planning & Control Department
Hiroo Nishi - IR Coordinator

- **Mask Inspection Share / Competitive Position —** Management cited Gartner data showing Lasertec at ~41% of the overall mask-inspection market in CY25, roughly comparable with KLA at ~40–41%. Lasertec's key differentiation remains its monopoly in actinic inspection, while KLA is stronger in legacy/DUV inspection, particularly in China. Management's near-term priority is to expand actinic adoption as broadly as possible before competing solutions emerge.

- **Order Momentum / Visibility —** Customer forecasts have increased sharply over the past three to six months, with stronger order intensity across essentially all logic and memory customers. Customers typically provide ~1–1.5 years of forecasts, although near-term forecasts carry greater confidence, and Lasertec's production lead time has lengthened modestly to just over one year. Management is already revising its order outlook upward as customer forecasts strengthen and noted that customers are increasingly asking for earlier deliveries.

- **Actinic Adoption / A200 —** Management sees a significant growth opportunity from broader actinic adoption as leading-edge customers migrate to smaller geometries. At 3nm/2nm, only a small portion of ~20 EUV mask layers are

currently inspected actinically, with most still using DUV inspection. The higher-throughput A200 should materially reduce actinic cost per mask, potentially allowing actinic to replace some DUV inspection layers in addition to replacing the existing actinic tool on new capacity.

- **3nm/2nm Upside —** Lasertec does not expect significant replacement demand in already-installed 3nm/2nm fabs, but new capacity additions should require incremental mask-inspection tools. Management believes new 3nm/2nm lines could adopt the A200 for existing actinic layers and potentially expand actinic into layers currently inspected by DUV. Larger AI die sizes and higher chip values should also increase inspection intensity given the greater yield cost of individual defects, although management cannot quantify the uplift.

- **1.4nm / Actinic Intensity —** Management still expects the largest step-up in actinic adoption around the 1.4nm generation, where customers are building inspection strategies and capacity largely from scratch. Actinic intensity should rise meaningfully versus 3nm/2nm, making this a larger order opportunity. The company also sees rising adoption from memory mask shops, providing an additional longer-term growth vector.

- **Large Mask / High-NA —** Development of an actinic inspection system for larger masks appears to be moving faster than Lasertec originally expected as High-NA and large-mask discussions accelerate. The product would build on the A300 platform, but requires chamber modifications and substantial throughput improvements because doubling mask area would otherwise roughly halve throughput. The broader ecosystem, including mask handling and potentially lithography infrastructure, would also require redesign around the larger format.

- **Supply / ACTIS Capacity —** Rising forecasts have modestly lengthened production times, but management does not currently see a major supply bottleneck. EUV optics from Nikon remain a key long-lead component, and rapid forecast changes could create constraints. Lasertec is investing ~¥3–3.5B this year to secure dedicated third-party cleanroom capacity for ACTIS production, reflecting expectations for broader actinic adoption across logic and increasingly memory.

- **Intel / TerraFab —** Intel order momentum has recovered strongly after weakness around FY25/26 and remains an important customer. Management is also enthusiastic about TerraFab given its expected use of Intel's 14A process, which should require a similar mask-inspection tool mix. Initial opportunity would likely be R&D tools, followed by a materially larger HVM opportunity if the process successfully scales.

- **Logic / Memory Mix —** Lasertec's typical revenue exposure is roughly 80% logic / 20% memory, reflecting both higher mask counts and faster actinic adoption in logic. Memory could become a somewhat larger share if actinic usage expands, though management does not expect a dramatic mix shift because EUV layer counts and inspection intensity are also increasing in leading-edge logic.

- **China —** China has represented roughly 8–9% of sales over th
and consists entirely of legacy DUV inspection rather than EU
Lasertec's competitive position in China is weaker than KLA's
relatively small in the overall revenue mix.

- **Gross Margins / Pricing —** Actinic tools carry somewhat abov
average gross margins, so a rising ACTIS mix should be mode



However, management is deliberately not aggressively raising actinic pricing despite tight demand, prioritizing rapid adoption and installed-base expansion ahead of future competition. Rising input costs such as memory are being passed through to customers, limiting the gross-margin impact from cost inflation.

Celestica (CLS)

Matthew Pallotta - Head of IR

- Supply remains tight; they have amount available for growth but there is a significant delta relative to demand. Their guidance for accelerating growth in 2027 includes supply constraints. In Asia it takes 12 mos lead time to build capacity. Customers are providing visibility especially on future iterations/generations of products, especially if they want dedicated facility space.

- $3.5B equity raise is for 2 things: capex and working capital. On track to spend $1B this year, $1.5B next which could be $2B. So ~$1B of capital raise goes to that. The rest is to support working capital which underwrites 2027 and 2028 growth expectations. They view the equity as optionality, they can still raise debt or do converts if needed. 1-2 years out it is hard to anticipate needs. For the growth they see they need to invest. If revenues grow 70%, they can only push their existing payables so far, not beyond 90 days. Cash cycle days came down in 2026 but can't do that again.

- Facilities investments are for new sites in TX (new build) as well as refurbs to existing (Thailand) where they need to upgrade power infrastructure as L11 work requires. Purchase commitments growth relative to other metrics may be skewed by some longer term commitments/ some may be booked as capex purchase commitments. While customers could give CLS funding to carry inventory, CLS hasn't asked for it.

- Haven't seen signs that customers lacking readiness (power/ shell) slowing growth for CLS

- CLS fundamentally agrees with the trend of higher demand vs 2027 by AVGO but is not ready to give numbers. They would not be investing if they didn't think 2028 would be a very good year.

- CLS is currently working on the 1st gen Helios now (only) not precluded from working on AMD switch trays, it's an open source architecture; hyperscalers are able to do their own Helios architecture, they can opt out of CLS. CLS is not sure if HPE is selling part of the rack or a separate switch.

- GM is sensitive to mix; AMD is still networking, not full racks, so positive for mix/margins; compute is a drag on GM vs networking. ATS will improve – some leverage there; GM will be flat in 2026; if compute is > networking , will be a drag on GM. Network pricing is strong and some leverage with higher topline. Meaningful room for OpMgn to go higher in 27 whether GM is flat or down; Hard to forecast GM, OpMgn more controllable no matter what happens to GM. CLS goal is for networking GM to maintain. Some SKUs higher, some lower, at a portfolio level harder to push up.