

ULVAC, Inc.

IR Seminar 2025 (Held on October 3, 2025)

Main Q&A

<Semiconductor Production Equipment>

1. Advantages of Sputtering and Overcoming the “Sputtering Limit”

Q: You mentioned the advantages of sputtering. How did you overcome what was once called the “sputtering limit”?

A: Basically, sputtering is not as good at achieving conformal film deposition as CVD or ALD, and it is generally difficult to deposit films in high-aspect-ratio trenches and holes.

Although Cu barrier and seed layers (Cu B/S) are deposited by sputtering, it is not possible to fully cover the regions where only CVD can handle the process.

However, in recent years, CVD films have been found to contain impurities (mainly hydrogen), and their deposition temperature tends to be high. Consequently, more customers are showing interest in adopting sputtered films—even if it requires slight design modifications.

In response to these needs, we are actively working to expand the application range of sputtering technology.

2. Technologies for Extending the Life and Applications of Sputtering

Q: In the past, companies like APPLIED MATERIALS addressed the sputtering limit by using oblique incidence and wafer rotation. Do these technologies still contribute to expanding the range of sputtering applications?

A: We also possess wafer rotation technology, but beyond that, we have optimized magnetic structures and ion transport based on a long-throw sputtering platform.

This has enabled significantly more conformal film formation, making these innovations one of the key factors in overcoming the traditional sputtering limit.

3. Competitive Landscape and Outlook

Q: Could you share your views on the competition and outlook for Metal Hard Mask (hereafter, “MHM”), surface treatment equipment, and XPS?

A:

[MHM]

Although our overall market share in global PVD processes remains small, we focus on leading-edge customers and have been increasing business with major manufacturers that lead the market in both technology and productivity.

As a result, while our overall share is modest, our share in key focus areas is steadily rising.

Despite strong competitors, we aim to compete fairly based on technology strength and product value rather than price competition.

[Surface Treatment Equipment]

Traditionally, our ashing equipment has been used in descum and desmear processes for foundries and OSATs.

We are now expanding its applications to hybrid bonding and panel-level packaging, thereby increasing business opportunities and broadening equipment applicability.

[XPS]

In the analytical instrument segment (laboratory use), we hold a top share for R&D applications.

In contrast, in the fab (production line) inline inspection market, Israeli company NOVA currently holds a dominant position—making it a challenging area for us.

Nevertheless, our analytical systems have a strong advantage in detecting and visualizing a wide range of unknown materials, which we intend to leverage as we expand into inline applications.

4. New POR Acquisition in the Memory Segment

Q: Please provide details on the progress of new POR (Process of Record) acquisitions in the memory segment.

A: While we cannot disclose customer names, we have achieved new adoptions for aluminum-related processes (such as top wiring and RDL) with customers who had not used our equipment before.

In NAND, we have also won new PORs in tungsten wiring processes.

For Cu, we already have customers using our equipment in mass production, and final evaluations for adoption by two to three additional customers—both in memory and logic—are now underway.

5. Progress Toward POR Targets

Q: Could you update us on the progress toward your POR targets?

A: Although we faced some challenges in FY25/6, we are now achieving results in line with our plan and steadily progressing toward our goal of increasing PORs with key customers.

6. Chart on Page 6 of the Presentation

Q: It appears that logic shipments decreased in FY25/6, even though POR acquisition is progressing well. Could you explain the background?

A: Although PORs have increased, shipments temporarily declined due to investment delays and timing shifts among North American customers.

While we partially offset this decline with demand from legacy nodes in China, it was not enough to fully compensate.

Nevertheless, overall trends remain positive, and we expect recovery in line with our growth trajectory.

7. Outlook Beyond FY26/6 and Timing of ENTRON Platform Contributions

Q: Will future growth be driven mainly by increased customer investment or by new PORs? Also, when will the ENTRON-EXX platform begin contributing?

A: Growth will be supported by both customer investment recovery and increased PORs from new customers and mature logic processes.

As for ENTRON-EXX, we are aligning its rollout with customer line transitions and process updates, aiming for the earliest possible deployment.

8. Front-End Strategy and Competition with APPLIED MATERIALS

Q: With your participation in Imec, you can now access N+2 process information. Does this mean you are finally on the same playing field as APPLIED MATERIALS? Also, what is your competitive strategy?

A: We have already been engaged in co-development with leading-edge customers covering the N+2 domain, but participation in Imec now enables us to understand both general technology trends and customer roadmaps, improving our development accuracy.

Our main competitor is APPLIED MATERIALS with another company (“N”) active in the Chinese market. Rather than engaging in price competition, we will focus on differentiation through technology. Building on TiN MHM, we aim to create new success cases, including a-Si applications.

<Electronics Production Equipment>

9. Focus on Hybrid Bonding (D to W vs. W to W) and Market Outlook

Q: It seems W to W could reach mass production earlier. Why are you focusing on D to W instead? Also, when do you expect mass production, and what is the projected sales scale?

A: We are developing both W to W and D to W, but our core strengths are best leveraged in the D to W domain.

In particular, we have strong advantages in dicing frame transfer technology, enabling higher added value and premium pricing.

We expect D to W mass production to begin in approximately two years.

10. Competition in the Hybrid Bonding Market

Q: In D to W, BESI is a strong player and partners with APPLIED MATERIALS for pre-process. Will such alliances make market entry difficult for ULVAC?

A: Independent entry would indeed be challenging. Therefore, we are pursuing collaborative solutions that encompass both pre- and post-bonding processes.

We have already received positive feedback from multiple potential customers.

<Surface Analysis Instruments>

11. Challenges and Strategy for Entry into Semiconductor Inline Inspection

Q: You aim to commercialize by FY27/6. What factors are essential to outperform existing major players?

A: XPS possesses a highly versatile technology platform. We have already completed a prototype and are conducting customer demonstrations, currently entering the co-development and joint evaluation phase. Moreover, ULVAC Group has accumulated extensive know-how in semiconductor production lines, and

we are leveraging group synergies to accelerate our expansion.

12. Competitive Landscape for XPS

Q: Besides NOVA, companies like Rigaku and Thermo Fisher are also major players in semiconductor inline inspection. How does your approach differ?

A: Rigaku's XRF mainly targets relatively thick film regions, while our XPS is designed for analyzing extremely shallow regions—around 5 nm—making it more specialized for advanced technology nodes.