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Establishment of Next Generation HBM4 Packaging Technology

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Securities code:	6315
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TOWA CORPORATION announces that we have established a new packaging technology, which is expected to be utilized in the manufacturing of advanced semiconductor packaging such as HBM semiconductors for generative AI.

1. About the Technology

(1) Overview

While the performance enhancement of semiconductors supporting the AI era is rapidly advancing, challenges related to cost, productivity, and quality in the semiconductor manufacturing process have emerged, hindering further performance enhancement. As a result, attention has been focused on the technology of semiconductor packaging processes, particularly in the advanced semiconductor field, where solutions through new semiconductor packaging technologies are required.

In recent years, the semiconductor molding process for generative AI has demanded technology to fill resin into very narrow gaps due to package thickness constraints and thermal issues and TOWA has resolved various customer challenges with its original compression technology. This time, we have established a new packaging technology that further evolves this technology.

This technology (Ultra narrow gap Mold Underfill) can accommodate the narrow gaps of next generation HBM4 and is optimal for the molding of semiconductor packages stacked vertically with multiple chips. By utilizing this technology, it is expected to stack more layers of semiconductor chips compared to conventional methods and improve the quality and productivity of semiconductor packaging manufacturing.

(2) Technology Name: Ultra narrow gap Mold Underfill

(3) Technology Category: Compression Technology

(4) Products Planned for Application of This Technology: CPM Series

2. Future Developments

We are currently developing a new equipment that applies this technology and conducting evaluation and validation, with sales starting in August. It is expected to be primarily utilized for next generation HBM4 semiconductors for generative AI.