September 3, 2025
TOKYO OHKA KOGYO CO., LTD.

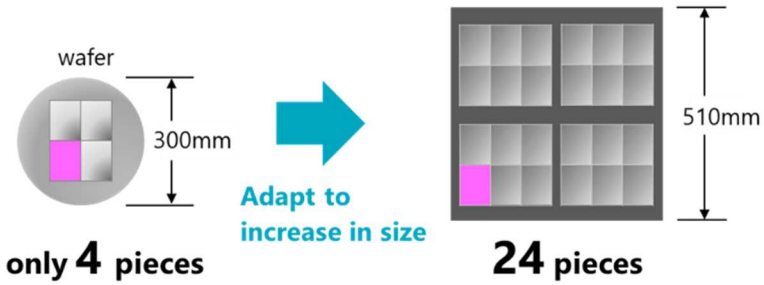
Participating in "JOINT3" Consortium to Develop Next-Generation Semiconductor Packaging

TOKYO OHKA KOGYO CO., LTD. (Headquarters: Kawasaki, Japan/ President: Noriaki Taneichi) have joined "JOINT3" consortium to develop next-generation semiconductor packaging.

JOINT3 is a co-creation evaluation framework established by Resonac Corporation (President and CEO: Hidehito Takahashi, hereinafter “Resonac”) with the aim of accelerating the development of materials, equipment, and design tools optimized for panel-level organic interposers through collaboration among material, equipment, and design companies. JOINT3 brings together global leaders in semiconductor supply chain. Using a prototype line for 515 x 510mm panel-level organic interposers, the consortium promotes the development of materials, equipment, and design tools optimized for panel-level organic interposers.

In recent years, packaging for back-end processes have emerged as a key technology in the field of next-generation semiconductors. This includes 2.xD packages, whereby multiple semiconductor chips are arranged in parallel and connected via interposers, demand for which is expected to grow in line with the need for increased data communication capacity and speed. As semiconductor performance improves, interposers are becoming larger, and there is a shift from silicon interposers to organic interposers made from organic materials.

Conventional manufacturing methods involve cutting rectangular pieces from circular wafers. However, as interposers increase in size, the number of them that can be obtained from a single wafer decreases, posing a significant challenge. To address this issue, a manufacturing process that transitions from circular wafer shapes to square panel shapes is gaining attention, as it allows for an increased number of interposers to be produced from a given area of wafer.



Since our successful development of photoresist for semiconductors in 1968—the first of its kind in Japan—our company has led the industry in advancing semiconductor technology. We have consistently contributed to the realization of a prosperous and sustainable society.

At JOINT3, we leverage the world-class microfabrication and ultra-high-purity technologies cultivated since our founding to accelerate the evolution of next-generation semiconductors. Through high-performance, high-purity photoresist and related products, we continue to create value by responding to society's expectations through chemistry.

Overview of JOINT3

Name	JOINT3 (JOINT:Jisso Open Innovation Network of Tops)
Objectives	Accelerate the development of materials, equipment, and design tools optimized for panel-level organic interposers through co-creation with participating companies.
Participating Companies (listed in alphabetical order)	27 companies (as of September 3, 2025) Resonac Corporation, AGC Inc., Applied Materials, Inc., ASMPT Singapore Pte. Ltd., Brewer Science, Inc., Canon Inc., Comet Yxlon GmbH, EBARA Corporation, Furukawa Electric Co., Ltd., Hitachi High-Tech Corporation, JX Advanced Metals Corporation, Kao Corporation, Lam Research Salzburg GmbH, LINTEC Corporation, MEC COMPANY LTD., Mitutoyo Corporation, NAMICS Corporation, Nikko-Materials Co., Ltd., OKUNO CHEMICAL INDUSTRIES CO., LTD., Synopsys, Inc., Tokyo Electron Ltd., Tokyo Ohka Kogyo Co., Ltd., TOWA Corporation, ULVAC, Inc., Ushio Inc., ZUKEN Inc., 3M Company
Location	- Advanced Panel Level Interposer Center "APLIC" (Yuki City, Ibaraki Prefecture, Japan (within the Resonac Shimodate Plant (Minami-yuki))) - Packaging Solution Center (Kawasaki City, Kanagawa Prefecture, Japan)

Activities	- Developing materials, equipment, and design tools for organic interposers using a panel-level (515 x 510 mm) prototype production line - Promoting development through co-creation by having material and equipment manufacturers produce common prototypes - Utilizing JOINT3 as a “training ground” for technology and equipment manufacturers to further enhance technologies related to panel-level organic interposers

The APLIC building (exterior image)

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