September 3, 2025

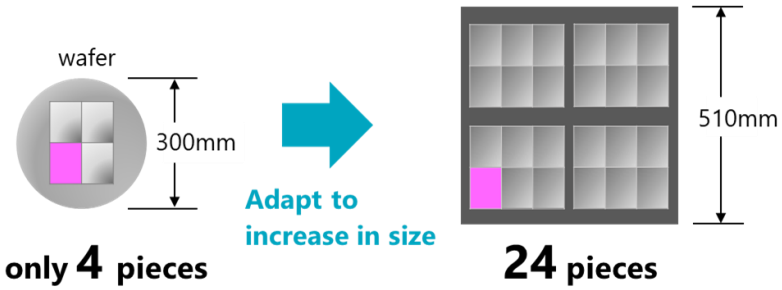
MEC COMPANY LTD.

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

MEC COMPANY LTD. (President and CEO: Kazuo Maeda, hereinafter “MEC”) has 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 has 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.



MEC, a chemical manufacturer in the development, production, and sales of chemicals related electronic substrates and component manufacturing, is proud to announce its participation in “JOINT3”. Our chemicals are widely used in semiconductor substrate manufacturing and are recognized as an indispensable part of the process.

By leveraging its advanced metal surface treatment technologies and deep expertise cultivated over many years in this field, MEC aims to drive technological innovation and progress in the semiconductor industry. Through collaboration with industry-leading companies with advanced technological capabilities, MEC is committed to creating new value and driving forward the future of semiconductor packaging.

Through its participation in the consortium, MEC hopes to contribute to the evolution of next-generation semiconductor packaging technologies and contribute to the realization of a digital and sustainable society.

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 Corporation, 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

[About Resonac]

Resonac is a functional chemical company established as a result of the integration of Showa Denko and former Hitachi Chemical in January 2023. The Company’s sales revenue of semiconductor and electronic materials business for 2024 was about 450 billion yen. The Company is a world-class leader particularly in semiconductor materials for packaging process. The integration of the two companies has enabled Resonac to design functions of materials as well as to develop them in-house, going all the way back to raw materials. The trade name “RESONAC” was created as a combination of two English words, namely, the word of “RESONATE” and “C” as the first letter of CHEMISTRY. The Company will make the most of its co-creative platform, and accelerate technological innovation with semiconductor manufacturers, material manufacturers, and equipment manufacturers inside and outside Japan.

For detail, please refer to our Website.

Resonac Holdings Corporation: https://www.resonac.com/

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