

Precision Meets Innovation: Eurofins EAG's New Sample Prep Solution

Eurofins EAG Laboratories is excited to announce our latest sample preparation capability to address the emerging challenges of complex and advancing technologies. This system utilizes precision CNC-based, 5-axis controls with in-process interferometer measurement/monitoring to enable mechanical preparation of a wide variety of samples for failure analysis, imaging, modification, characterization, and other applications that demand precision and accuracy.

The advancement of innovation continues to create novel but complex products and assemblies, which generally get larger (incorporating, consolidating) or smaller (thinner, miniaturizing, more compact) using modern manufacturing processes and materials. It has become increasingly challenging to prepare these complex samples for analytical or engineering purposes using manual, imprecise, or outdated equipment and techniques. To successfully prepare and modify these samples, our new capability enables highly precise and repeatable movements to navigate within these complex structures.

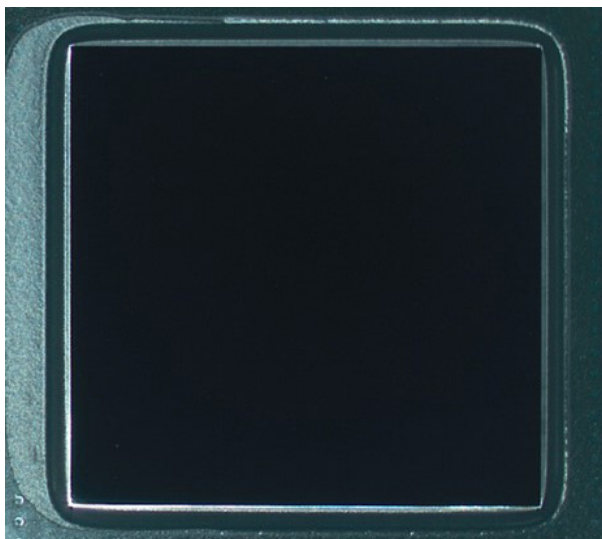


Figure 1: Backside Si thinned and polished for SIL lens application

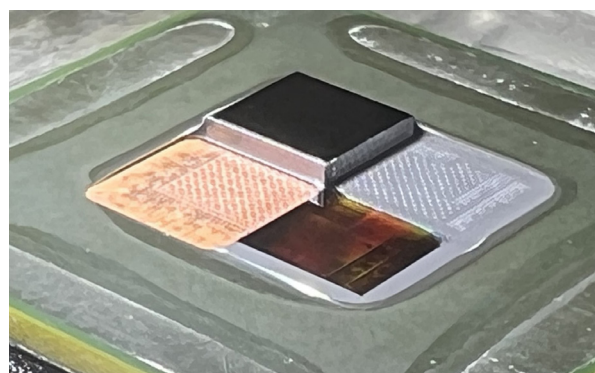


Figure 2: Portions of the die removed and thinned to different thicknesses on a flip chip BGA device.

Capabilities

- 5-Axis CNC-based Control
- Interferometer Measurements
- 3D Contour Warpage Correction
- Micron Accuracy and Resolution

Applications

- Backside Die Thinning (Radiation Susceptibility)
- Analysis Preparation (SIL, LVP, OBIRCH, IR)
- Enable Backside FIB Circuit Edit
- Precision and Selective Removal (SMT, Devices, Material)
- PCB Delayering
- De-lidding, Milling, Cavity, Planarization (Heat spreader, Shields, Traces)

Samples

- Integrated Circuits, Flip Chip BGA, CSP, Wafer Pieces, Components
- 2.5D/3D, MCM, Hybrid
- Si, V-III, SiC, GaN, Laser diodes
- Power Devices, IGBT, MOSFET
- Printed Circuit Boards and Assemblies

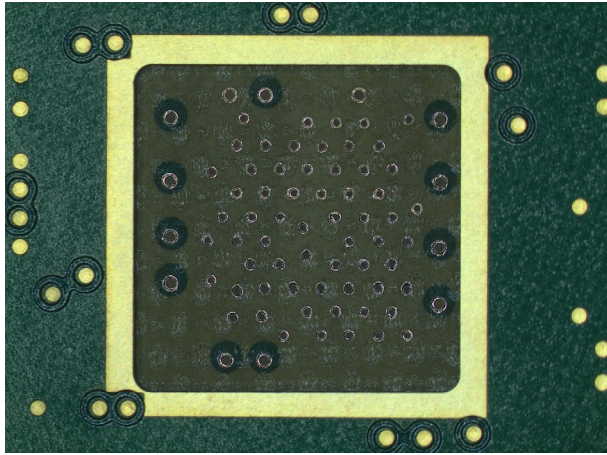


Figure 3: Delayered portion on a printed circuit board.

Failure Analysis at EAG

At EAG, we provide comprehensive failure analysis services to support our clients in delivering high-quality, reliable products. Our global network of laboratories and broad range of engineering capabilities make us a trusted, single-source partner for in-depth technical investigations.

Our approach combines proven methodologies with the flexibility to tailor processes to your specific project, operational, and business needs. Whether conducting a full root cause investigation or applying targeted analytical techniques, our team delivers expert insights and engineering assessments that uncover the underlying causes of failure—helping you make informed decisions and drive continuous improvement.

Contact EAG

At EAG, our Engineering Sciences division offers a broad spectrum of specialized services to support diverse technical needs. We excel in ATE Test Development and Pilot/Production Test, Burn-in and Reliability Qualification, ESD and Latch-up Testing, Debug and FIB Circuit Edit, Failure Analysis, and Advanced Microscopy techniques including SEM, TEM, and Dual Beam FIB/PFIB. Additionally, our in-house PCB Design team provides custom hardware needs to facilitate various engineering groups to comprehensively support new product introduction (NPI), production, qualification and design debug programs.

With decades of direct experience with perpetually advancing technologies across virtually every industry, EAG is the perfect partner for engineering success. Contact EAG today.

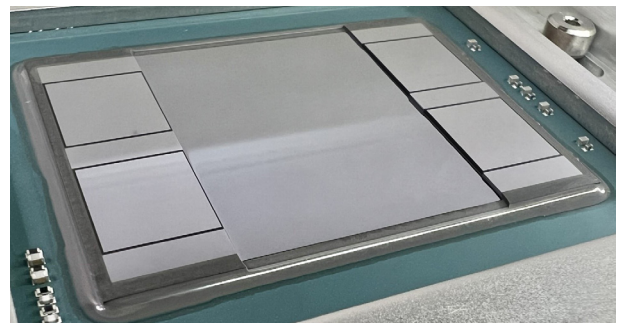


Figure 4: Selective thinning and polishing of the main, center die on an AI processor chip.



Scan here to learn more about our services and capabilities.