In the permanent bonding market, EV Group is leading, Applied Materials and Tokyo Electron are merging ... What will happen next?

Permanent Wafer Bonding report from Yole Développement

Lyon, France – April 18, 2014 – With the SOI business decreasing, the 3D TSV stack beginning, and the competitive environment changing with EV Group, Applied Materials, Tokyo Electron and many new entrants ... Yole Développement analyzes the permanent bonding market & technology trends and announces today its new study: Permanent Wafer Bonding report.

Permanent bonding technology is a key process for a wide range of applications in the semiconductor industry such as MEMS, advanced packaging, LED devices, and SOI substrate applications: “These have been the 4 main leading applications for permanent bonding for several years. Permanent bonding processes are increasingly more importance within the semiconductor industry”, announces Amandine Pizzagalli, Technology & Market Analyst, Advanced Packaging & Manufacturing, Yole Développement (Yole).

Under this Permanent Wafer Bonding report, Yole’s analysts give an overview of technical characteristics for each existing permanent bonding processes and related applications. They review key technical insight into future permanent bonding technologies trends and challenges. Yole’s experts also analyze the market trends and provide a clear mapping of this industry including market metrics & dynamic from 2013 and 2019.

The permanent bonding market is evolving, and currently dominated and fragmented by three main permanent bonding equipment suppliers: EV Group, SUSS MicroTec, and Tokyo Electron. “These three vendors today account for almost 80% of the permanent bonding equipment market by focusing on MEMS and Advanced Packaging applications including BSI CMOS Image Sensors, CIS capping WLP, and 3D stack TSV”, ensures Amandine Pizzagalli, from Yole Développement.
EV Group is still the market leader in permanent bonding technology with more than 70% of market share, but will be challenged by the merging of Tokyo Electron and Applied Materials, two of the largest semiconductor equipment suppliers in the world. The entrance of aggressive new players is likely to challenge established players in the permanent bonding market:

- Some players have recently entered the market with low barriers of entry such as Mitsubishi Heavy Industry; mainly with customers involved in the R&D sector.
- Other big equipment suppliers have created a challenging environment and stimulate technology innovation for further improvements in the advanced packaging area.
- Tokyo Electron has gained more market share in 2013 from permanent bonding technologies - with significant market share achieved due to their deep involvement in 3D TSV stack bonding technology performed at room temperature.

The merger of Tokyo Electron and Applied Materials questions the involvement of permanent bonding equipment suppliers in future development.

In parallel, SUSS MicroTec, who provided automatic bonders for production for 10 years, stopped making them in 2013. This demonstrates that the permanent bonding market is very challenging. This big change in the permanent bonding market environment will create a new battle in this field, which is going to be very interesting in the next five years.

Yole Développement’s report provides an in-depth competitive analysis of key permanent bonding equipment suppliers, with profiles of the main equipment vendors, and their future in the permanent bonding market. More info. on www.i-micronews.com, reports section.

About Permanent Wafer Bonding report

- **Author:** Amandine Pizzagalli is in charge of equipment & material fields for the Advanced Packaging & Manufacturing team at Yole Développement after graduating as an engineer in Electronics, with a specialization in Semiconductors and Nano Electronics Technologies. She worked in the past for Air Liquide with an emphasis on CVD and ALD processes for semiconductor applications.

- **Companies cited in the report (non-exhaustive list)**
  AMD, AML, Applied Materials, Avago, Bosch, Discera, EVG, Infineon, InvenSense, Lemoptix, Luxtera, Mitsubishi Heavy Industries, Murata / VTI, Nemotec, OSRAM, PlanOptik, Samsung, Sensonor, Silicon Labs, SOITEC, STMicroelectronics, SUSS MicroTec, Sony, Teledyne DALSA, Tokyo Electron, Ziptronix, IMEC, Leti, Texas Instruments, Tezzaron, WiSpry, Ziptronix, and more...

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  For special offers and the price in dollars, please contact David Jourdan (jourdan@yole.fr or +33 472 83 01 90).


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