Huge business opportunities in the advanced packaging market are driving photolithography equipment demand


LYON, France – July 16, 2015: Within the photolithography equipment market reaching US150$M 2014 (Source: Photolithography Equipment & Materials for Advanced Packaging, MEMS and LED Applications report, June 2015), advanced packaging applications have the strongest growth. Yole Développement (Yole) estimates that more than 40 systems have been installed in 2014, with a compound annual growth rate (CAGR) representing 10% between 2014 and 2020. In the meanwhile, MEMS photolithography equipment looks set for 7% CAGR and LEDs 3%.

Yole released last month its technology & market analysis dedicated to the manufacturing process, photolithography. Under this analysis entitled “Photolithography Equipment & Materials for Advanced Packaging, MEMS and LED Applications”, the “More than Moore” market research and strategy consulting company proposes a comprehensive overview of the equipment and materials market dedicated to the photolithography step. Yole’s analysts performed a special focus on the advanced packaging area. They highlighted the following topics: current and emerging lithography technologies, technical specifications, challenges and technology trends, market forecast between 2014 and 2020, market shares and some case studies ...

“The advanced packaging market is very interesting and is growing dynamically as it includes many different players along the supply chain,” comments Claire Trodec, Technology & Market Analyst at Yole. It encompasses outsourced assembly at test firms (OSATs), integrated manufacturers (IDMs), MEMS foundries and mid-stage foundries.

In comparison, even if the MEMS & Sensors industry is growing at a fast pace, components are also experiencing die size reduction due to strong cost pressure in the consumer market. Consequently wafer shipments are not following the same trend as unit shipments. Lastly, LED equipment growth is back to a normal rhythm, after big investments made in recent years.
Advanced packaging has very complex technical specifications. Warpage handling as well as heterogeneous materials represent big challenges to photolithography. Due to aggressive resolution targets in advanced packaging, performance must be improved. The current minimum resolution required is below 5 μm for some advanced packaging platforms, like 3D integrated circuits, 2.5D interposers, and wafer level chip scale packaging (WLCSP). A lot of effort is being made to reduce overlay issues due to shifting dies and obtain vertical sidewalls for flip-chip and WLCSP. Although steppers are already well established in the packaging field, new disruptive lithography technologies are also emerging and could contribute to market growth from 2015-2016.

“Huge business opportunities in the advanced packaging market are therefore driving photolithography equipment demand”, highlight Amandine Pizzagalli, Technology & Market Analyst at Yole. “Given the high growth rate of this market, there is no doubt that already established photolithography players and new entrants will be attracted”, she adds.

A detailed description of this report is available on i-micronews.com, manufacturing section.
About Photolithography Equipment and Materials for Advanced Packaging, MEMS and LED Applications report:
Rates: Euros 5,990.00 (Full report - Multi user license). For special offers and the price in dollars, please contact David Jourdan (Phone: +33 472 83 01 90).

“Photolithography Equipment and Materials for Advanced Packaging, MEMS and LED Applications” report from Yole Développement will be available on July 6, 2015.

• Authors:
Amandine Pizzagalli is in charge of the equipment and material areas for the Advanced Packaging and Manufacturing team at Yole Développement. She graduated as an electronics engineer, with a specialization in semiconductors and nanoelectronic technologies. In the past, she worked for Air Liquide with an emphasis on CVD and ALD processes for semiconductor applications.
Claire Troadec has been a member of the MEMS manufacturing team at Yole Développement since 2013. She graduated from INSA Rennes in France with an engineering degree in microelectronics and material sciences. She then joined NXP Semiconductors, and worked for 7 years as a CMOS process integration engineer at the IMEC R&D facility. During this time, she oversaw the isolation and performance boost of CMOS technology node devices from 90 nm down to 45 nm. She has authored or co-authored seven US patents and nine international publications in the semiconductor field and before joining Yole Développement managed her own distribution and e-commerce company.
Jérôme Azémar is a member of the Advanced Packaging & Manufacturing team. Upon graduating from INSA Toulouse with a master’s in Microelectronics and Applied Physics, he joined ASML and worked in Veldhoven for three years as an Application Support Engineer, specializing in immersion scanners. During this time he acquired Photolithography skills which he then honed over a two-year stint as a Process Engineer at STMicroelectronics. While with ST he developed new processes, co-authored an international publication and worked on metrology structures embedded on reticules before joining Yole Développement in 2013.

• Companies cited in the report:

About Yole Développement
Founded in 1998, Yole Développement has grown to become a group of companies providing marketing, technology and strategy consulting, media and corporate finance services. With a strong focus on emerging applications using silicon and/or micro manufacturing, the Yole Développement group has expanded to include more than 50 collaborators worldwide covering MEMS, Compound Semiconductors, LED, Image Sensors, Optoelectronics, Microfluidics & Medical, Photovoltaics, Advanced Packaging, Manufacturing, Nanomaterials and Power Electronics. The group supports industrial companies, investors and R&D organizations worldwide to help them understand markets and follow technology trends to develop their business.

CONSULTING
• Market data & research, marketing analysis
• Technology analysis
• Reverse engineering & costing services
• Strategy consulting

REPORTS
• Collection of technology & market reports
• Manufacturing cost simulation tools
• Component reverse engineering & costing analysis
• Patent investigation
• Patent analysis

FINANCIAL SERVICES
• Mergers & Acquisitions
• Due diligence
• Fundraising
More information on www.yolefinance.com

MEDIA & EVENTS
• i-Micronews.com, online disruptive technologies website and its weekly e-newsletter, @Micronews
• Technology Magazines
• Communication & webcasts services
• Events: Yole Seminars, Market Briefings

CONTACTS
Consulting & Financial Services: Jean-Christophe Eloy (eloy@yole.fr)
Reports business: David Jourdan (jourdan@yole.fr)
Press relations: Sandrine Leroy (leroy@yole.fr)

###