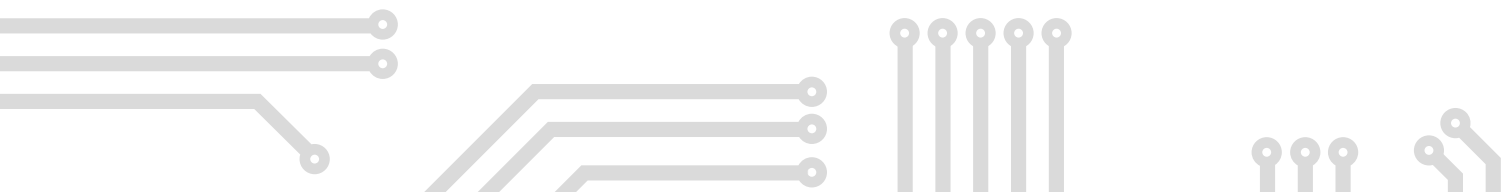
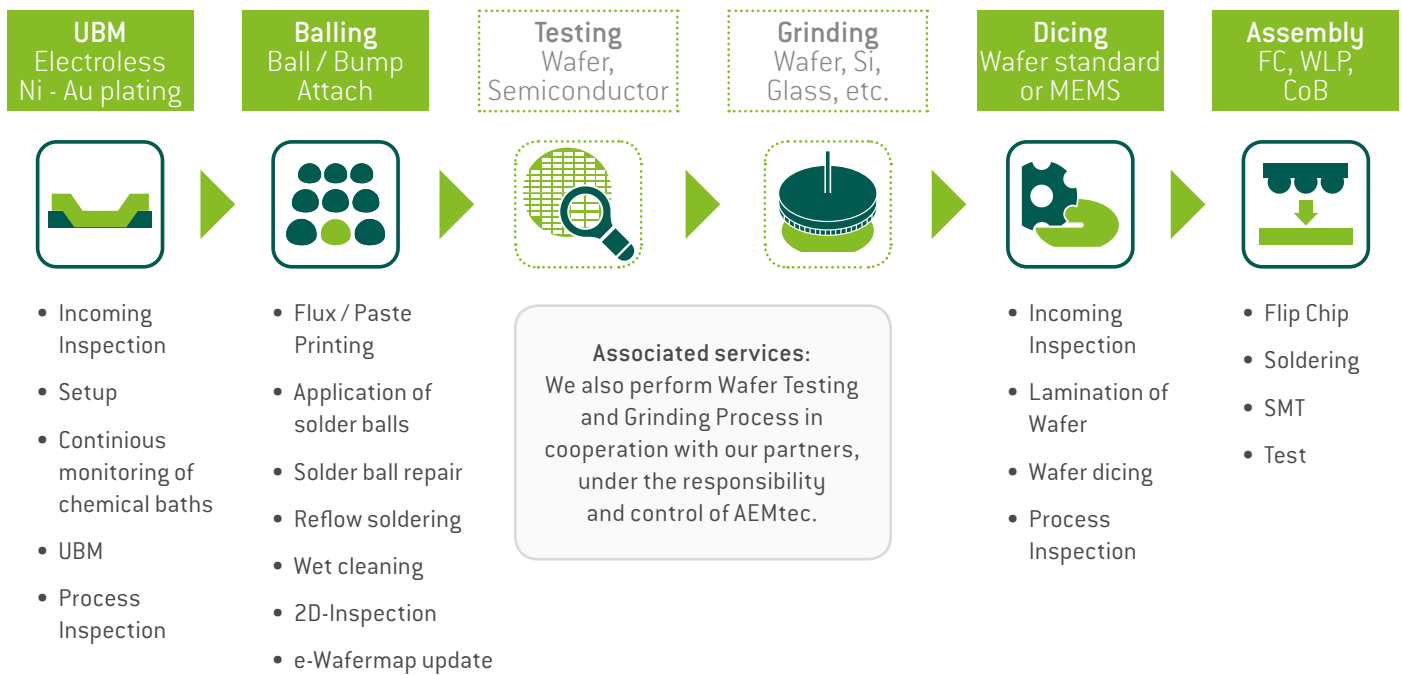


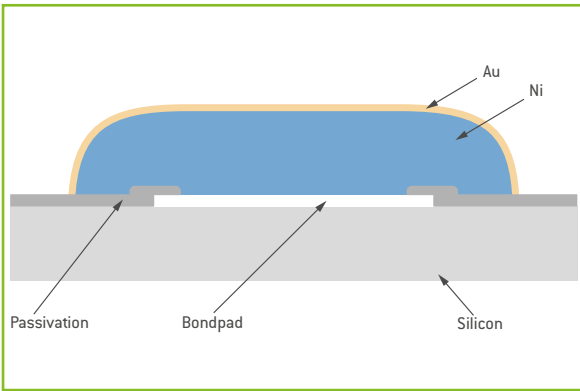


WAFER BACK-END SERVICES

FROM WAFER TO PACKAGING

AEMtec offers its customers Back-End production stages from wafer to complex micro and optoelectronic module assembly, from one source. The latest technologies for processing the sophisticated microchips, such as UBM and Balling, facilitate significant optimization of lead times and quality. By taking over the entire Back-End processes (“one face to the customer”), AEMtec optimizes time-consuming goods inwards and goods outwards checks, coordination processes with suppliers and interface losses. Furthermore, long transport times can be reduced to a minimum. AEMtec’s performance capabilities along the Wafer Back-End value chain are comprised of:





UBM (Under Bump Metallization) / ENB (Electroless Nickel Bump)

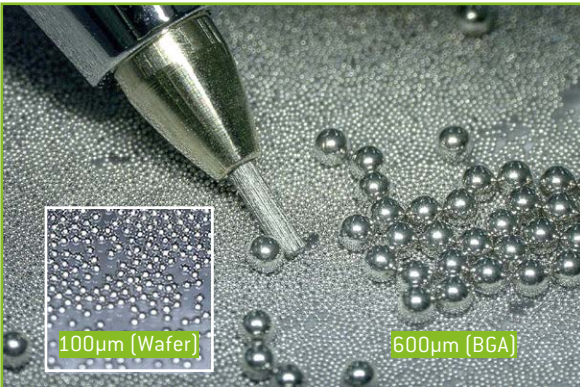
Application of the UBM is performed in accordance with the electroless plating process, a technology developed by Fraunhofer with which the contacts are made chemically by deposition of nickel and gold. If required, a UBM for solder contacts or nickel bumps can be generated for flip chip bonding. The entire process is performed without the necessity of extensive manufacturing of individual masks. This reduces cost and accelerates the production process.

WAFER THICKNESS (Si- or Glass-Wafers): > 200µm

PAD-METALLIZATION: Al or Cu

BUMP-METALLIZATION: NiAu, NiPdAu, typical bump height 5µm or 20µm

TARGET APPLICATION: UBM for Solder Ball/Bump Mounting, ENB for Flip Chip Mounting (ACA or ICA gluing)

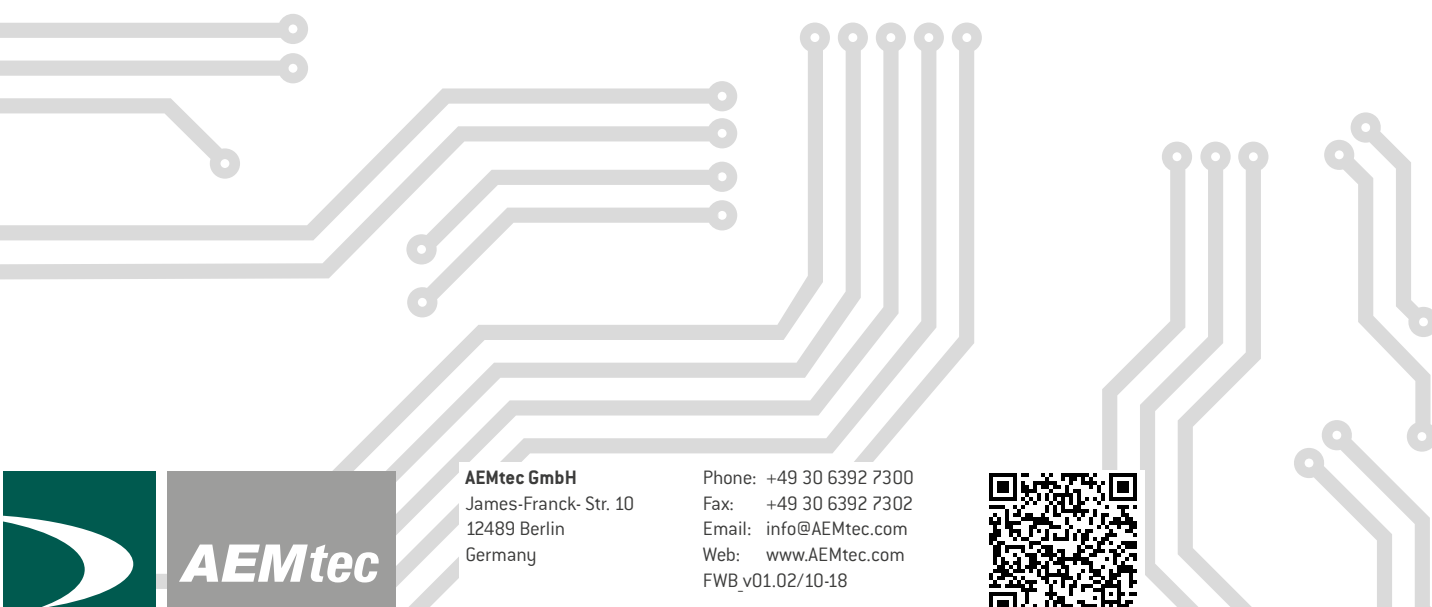


SOLDER BALLING

AEMtec has manual and fully automated systems for the application of solder balls in the printing or ball drop process at wafer level. The balling of the wafers (6 to 12 inches) must be emphasised with solder ball diameters between 50 and 400 µm in every available alloy. Part of the system is a fully automated control and repair of the solder balls. This guarantees a consistently high yield with a very limited process time, and reliable positioning even with the smallest ball diameters.

TARGET APPLICATION: Flip Chip, Wafer Level Packages

WAFER THICKNESS: > 200µm



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