

## **SoundSoldering application**

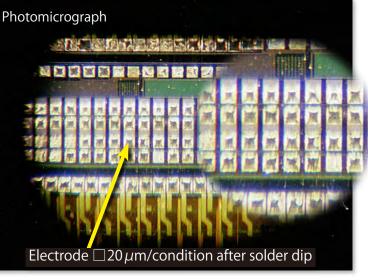
< Semiconductor wafer / Dipping by micro
soldering on Aluminum electrodes at once>

Fine Cavitatio	

Calm diffusion bonding that destruction by inertia and impact doesn't occur because of cavitation generated from surface of wafer. It is resonated with beautiful SoundPower with chaotic motion



CSS Lab system Cavity Soldering System



- $\star$  Micro soldering without flux (in N<sub>2</sub> purge)
- $\star$  Fine pitch soldering does not generate bridges between Aluminum bumps  $\Box$  20  $\mu$ m
- $\bigstar$  Available for Pb free solder and Tin
- $\star$  No time-dependent changes by diffusion bonding in solder
- $\star$  No damages by beautiful sound vibration and no voids by emission effect of sound vibration
- $\bigstar$  No dendrite (No whisker) because of no residual stress
- ★ Yield rate 100%
- $\bigcirc$  Breakdowns of machines by corrosion seldom occur without flux
- $\ensuremath{\bigcirc}$  Clean working environment because of no gas generation and others





Si wafer