Seedless-electroplating process development for micro-features realization

Yudan Whulanza, author

Abstrak

This study aims to combine the seedless-electroplating process with maskless-lithography, as an alternative for Lithografie, Galvanoformung, Abformung (LIGA) or Lithography, Electroplating and Molding with a normal, simpler, and cheaper semiconductor process with tolerable results for nickel electroplating. This study reports the results of various voltages on seedless-electroplating over time, where the optimal combination occurs at an exposure of 7.5 Volts of Direct Current (VDC) for 30 seconds. The thickness of electroplated metal is at a range of ±1.5µm. Moreover, a resolution of ±10µm and roughness (Ra) of ±0.31µm was achieved during the metal deposition process.