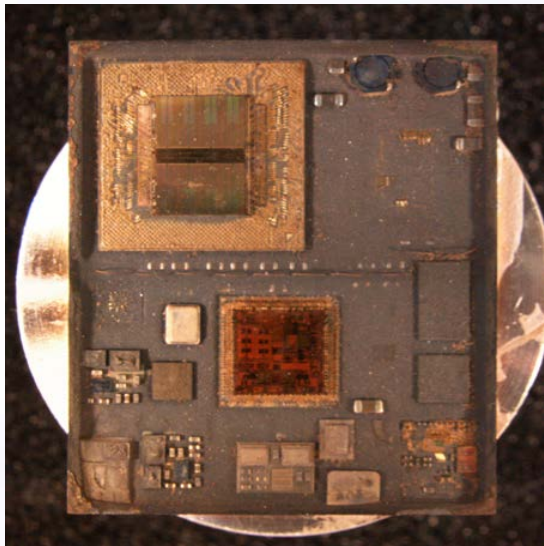


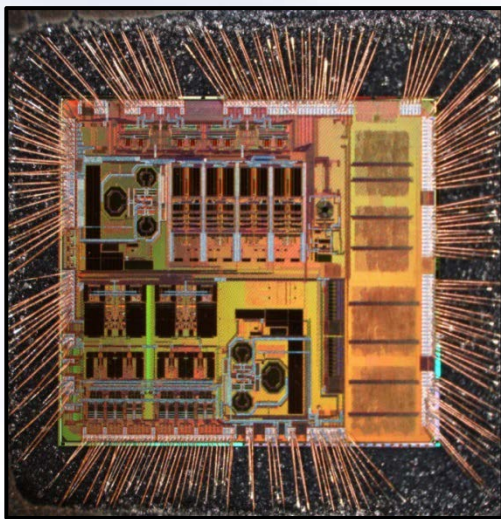
## Laser/chemical/mechanical decapsulation

A lot of different decapsulation methods are available at MASER Engineering. A wide range of chemicals are used for the removal of moulding compound, metals, glass and polyimide layers. An automated selected area polishing system is also available for mechanical sample preparation.



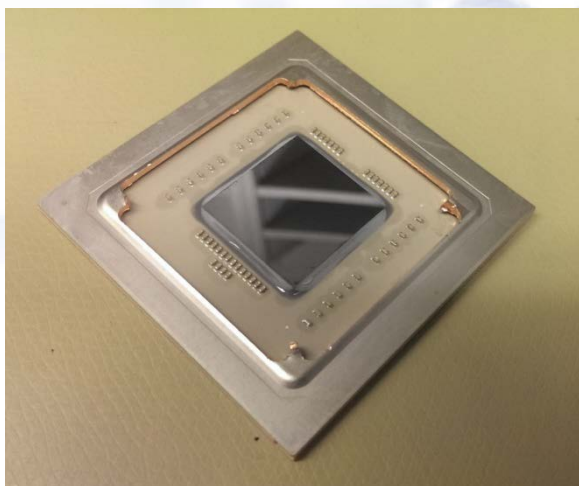
### LASER DECAPSULATION:

- Laser assisted decapsulation to minimize the amount of chemicals necessary for plastic package decapsulation.
- Exposure of bond wires/wedge bonds without using any chemicals
- Laser marking ability for a lot of different materials
- Ability to cut glass and remove glass covers of sensors



### CHEMICAL DECAPSULATION:

- Plastic package decapsulation using a variety of different chemicals
- Polyimide layer removal of semiconductor products
- Decapsulation of devices soldered to a PCB
- RDL removal of WLCSP devices
- Complete package removal keeping the die intact



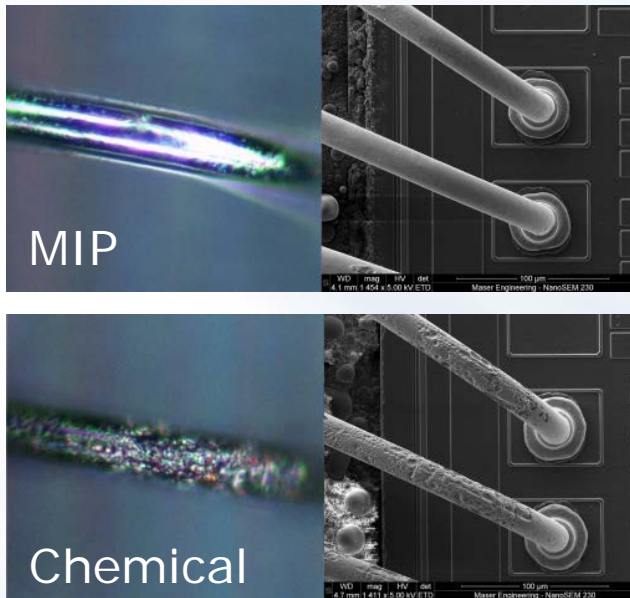
### MECHANICAL DECAPSULATION:

- Automated selected area polishing tool for local removal of materials
- De-lidding of ceramic devices
- Back-side QFN sample preparation keeping the down bonds intact
- Mechanical opening of round TO-xx devices
- Through PCB sample preparation for failure localisation

For more info please visit [www.maser.nl](http://www.maser.nl)  
For inquiries please contact : [info@maser.nl](mailto:info@maser.nl) or call +31 53 480 26 80

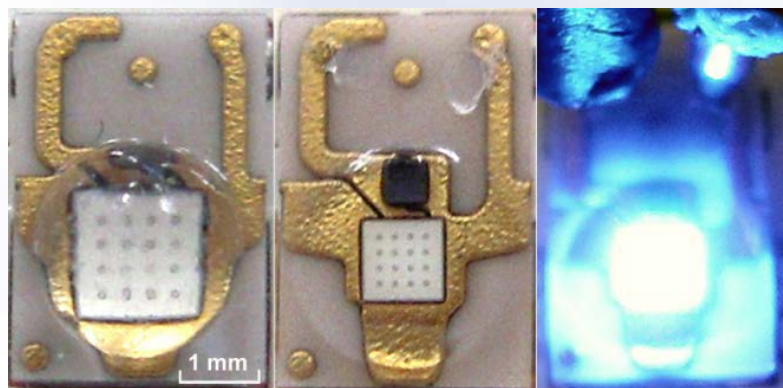
## Microwave induced plasma (MIP) decapsulation service

Microwave induced plasma (MIP) is a powerful decap tool for copper wired packages and for the removal of clear moulding compounds. The tool is also very suitable for the removal of LED lenses and silicon based plastics. The first prototype of the JIACO MIP decapsulation tool is available at MASER Engineering



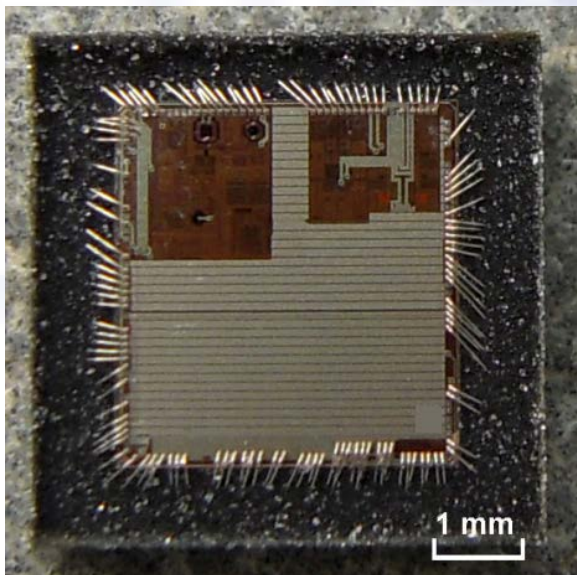
### COPPER WIRE DECAPSULATION:

- Plasma decapsulation of copper bond wire packages
- No passivation layer/die damage due to the decapsulation process
- Cu protecting palladium coating completely unharmed
- Effective decapsulation method for harsh environmental tested samples
- Keeps EOS damage intact
- Chemical free decapsulation process



### LED LENS REMOVAL:

- Fast and clean removal of silicon LED lenses
- Organic solvent decapsulation takes up to 100 times more processing time
- LEDs will keep functionality after lens removal
- Decapsulated LEDs are very suitable for advanced failure analysis



### HIGH PIN COUNT PACKAGE DECAP:

- Suitable for decapsulation of all kinds of semiconductor packages
- Clean decapsulation of high-power packages
- Preparation tool for SEM/EDX/FIB analysis and failure localisation
- Contaminants still present after decapsulation process (no chemicals)

For more info please visit [www.maser.nl](http://www.maser.nl)  
For inquiries please contact : [info@maser.nl](mailto:info@maser.nl) or call +31 53 480 26 80