Plasma Etcher
STP 2020

R3T's Remote Plasma Source inside

Water cooled plasma zone

Very low thermal load for the substrates

Optimized for SU-8 ashing and
silicon etching (e.g. MEMS applicatons)

Etch rates:
More than 20 µm/min for SU-8 samples
Up to 90 µm/min for silicon samples

Temperature control up to 120 °C

Substrate size up to 460 mm x 460 mm

Field proven

High Environmental Compliance

Plasma Solutions

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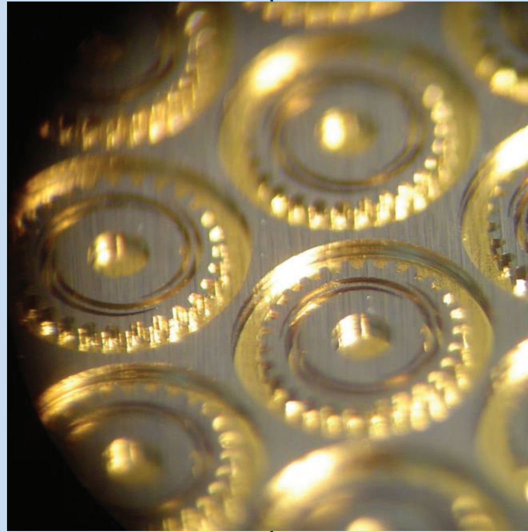

Small gears after SU-8 resist removal

SU-8 ASHING – SPECIAL FEATURES:

High etch rate i.e. more than 200 µm/h on large areas (e.g. batch of 9 x 6“ wafers) independent of thickness; more than 20 µm/min for small samples

Etch rates nearly independent of pretreatment as hard bake conditions: differences in etch rate smaller than 10 % between no HB and 200 °C HB

Stripping of very thick resist layers (> 1 mm) possible

Pure chemical etching: No damage by ions, heat impact only by reaction energy

No attack to metals like Ni, Ni/Fe, Au, Cu etc.

Only very slight attack to Si and Si compounds as SiO_2 or Si_3N_4

No organic residues; inorganic residues removable by additional cleaning step

Simultaneous etching of substrates with different resist thicknesses possible

End point detection for each individual substrate

SPECIFICATIONS:

- Compact design, dimensions, w x d x h: 800 mm x 800 mm x 1950 mm
- Plasma chamber, inner w x d x h: 500 mm x 500 mm x 400 mm (e.g. 9 x 6“ wafers)
- Pulse mode possible
- Max. Power: 2000 W / 3000 W
- Pressure range: 40 Pa – 530 Pa respective 0.3 Torr – 4.0 Torr
- Excitation frequency: 2.46 GHz +/- 10 MHz

Also available:

- Commissioning Processing
- Customer tailored process development
- Equipment on loan

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