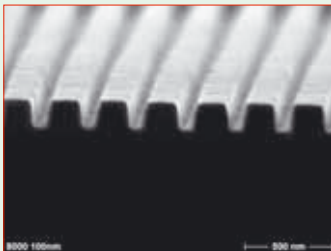


X-mas news

New Products and Applications 2005

Thermoplastics for NIL

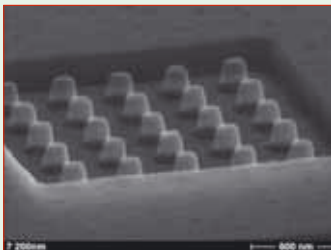


100 nm trenches

New thermoplastic polymers **mr-I 7000E** and **mr-I 8000E** with improved imprint behaviour: The two series make imprinting with **lower imprint pressure** possible, they allow shorter cycle times due to faster imprint and enable lower residual layer thickness compared to **mr-I 7000** and **mr-I 8000**.

Further features are excellent film quality, attainable smallest feature size of at least 50 nm and plasma etch resistance superior to PMMA.

Curing polymer for NIL



200 nm dots

New thermally curing polymer **mr-I 9000E** with improved imprint behaviour: The new thermosetting polymer combines several outstanding characteristics ideal for the application in pattern transfer processes - **low imprint temperatures**, short cycle times due to isothermal imprint process, minimum residual layer thickness and high thermal stability of the imprinted nanostructures. Further features are excellent film quality, attainable smallest feature size of at least 50 nm and plasma etch resistance superior to PMMA.

Polymer waveguides



Wafer guides, 50 µm l., 200 µm s.

EpoCore and **EpoClad** are chemically amplified negative tone photoresists with high sensitivity to UV and X-ray exposure. **Optical polymer waveguides** for the integration into PCBs are obtained by a combination of the two resists with adjusted refractive indices. They exhibit high thermal stability and low optical loss in visible light.

Adhesion Promoter



SEM of replicated microlenses in sol-gel material (CSEM)

Ormoprime is a new **adhesion promoter** for our ORMOCER® product line. It is a set of three chemicals developed to enhance the adhesion of Ormocore, Ormoclad and Ormocomp to various substrates, like silicon, glass and some metals. It creates an extremely organophilic surface and is even capable of forming covalent bonds to both the substrate and the ORMOCER® material.