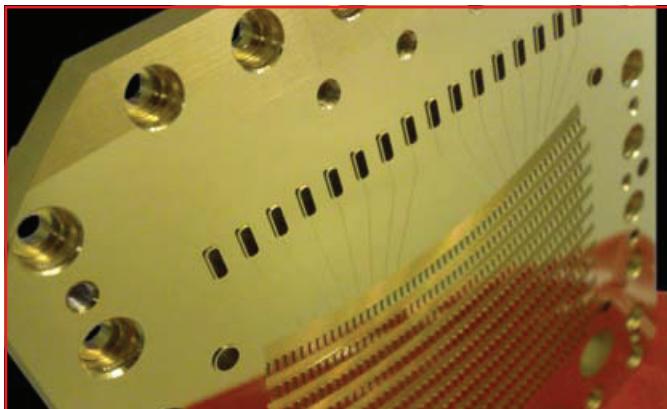


Replication-Tools

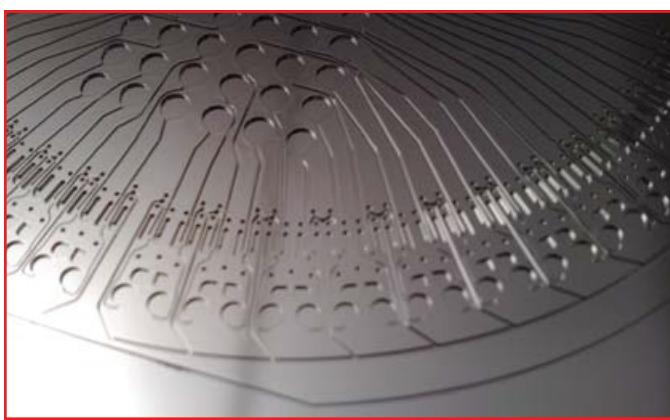
Microstructured Nickel-stamps of highest quality for microoptics and microfluidics.

applied microSWISS is an innovative manufacturer of Nickel-stamps for hot-embossing and inserts for injection-moulding for more than 20 years. Our tools are shipped ready-to-use.

We are your partner for your micro- / nanostructured tools. We have profound experience and solutions for features-sizes from 50nm to 500µm. We can manufacture micropattern with adjustable sidewall draft angle for efficient demoldig and anti-sticking coatings.



Detail of 2-level microfluidic Ni-insert with wire-cut through-holes and mounting features.



Detail of 2-level microfluidic Ni-insert with wire-cut

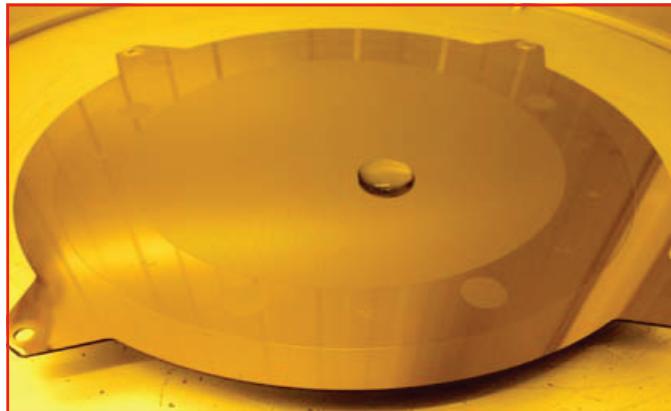
Specification highlights

- Structural range = 50nm - 500µm
- Step height uniformity = 3–5 %
- Manufacturing according to LiGA-process
- Number of patterned levels = 4
- Alignment-precision level-to-level $\leq 3\mu\text{m}$
- Alignment-precision micropattern to machined features $\leq 20\mu\text{m}$
- Extraordinary tool flatness $<10\mu\text{m}$
- Parallelism to lapped backside $\leq 10\mu\text{m}$
- Stamp thickness: 0.5–12 mm
- Robust handling
- Integration of mounting features
- Ready-to-use stamps according to customer drawing
- Contour wire-electrodischarge machined
- Compatibility to EVG, Obducat, Jenoptik and more
- Available antisticking-coating (fluoro-based)
- Available wear-protection coating (TiN)

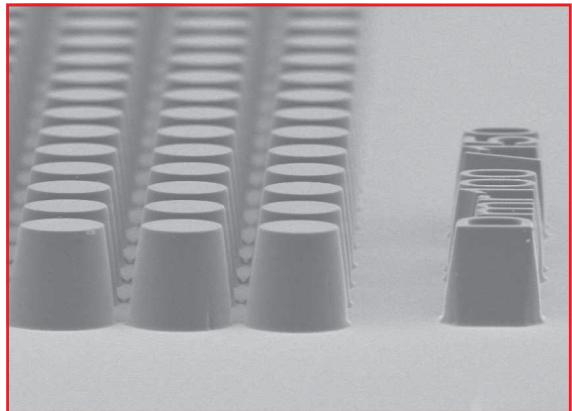
Exclusive

Adjustable drafted sidewalls ($< 15^\circ$)
(easy mold release)

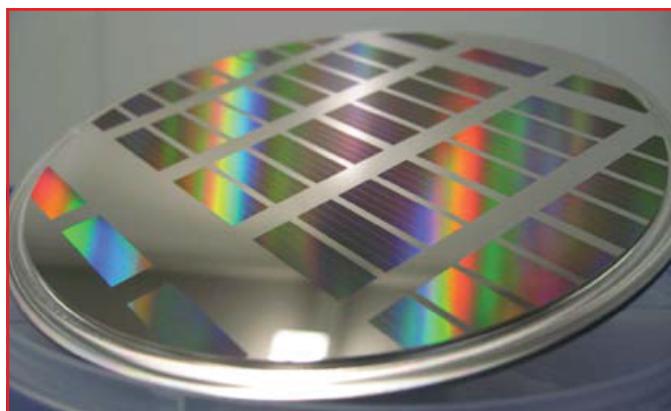
applied microSWISS was a founding member of NILCom-Consortium **NanoImprint Lithography**



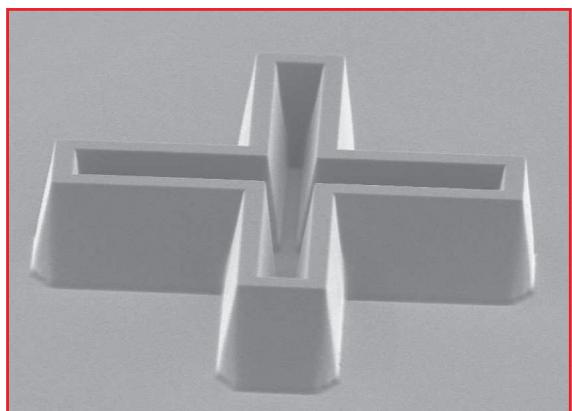
Hot-embossing stamp for microoptic-replication, coated with teflon-like antisticking-layer



SEM-picture of micropattern with drafted sidewalls



Ready-to use hot-embossing stamp ($\varnothing 120 \times 3 \text{ mm}$)



SEM-picture of micropattern with drafted sidewalls

Technical data and remarks on tolerances

