

# Injection mold insert: Specifications

- Pattern size range > 70nm
- Pattern height / uniformity = 50nm - 500µm / 3 – 5 %
- EXCLUSIVE: adjustable drafted sidewalls up to 15° (easy demolding)
- Manufacturing according to adapted LiGA-process
- Multilevel pattern available (micro+nano)
- Alignment-precision level-to-level  $\leq 3\mu\text{m}$
- Alignment-precision micropattern to machined features  $\leq 10\mu\text{m}$
- Typical mold insert thickness = 3 - 8 mm
- Maximal mold insert dimensions = 300 x 300mm
- Maximal patterned area = 200 x 200mm
- Parallelism Frontside-to-backside  $\leq 20\mu\text{m}$  (Backside surface grinded)
- Integration of mechanical mounting features
- Robust handling
- Ready-to-use mold-inserts according to customer drawing
- Contour wire-electrodischarge machined (tolerance =  $\pm 10\mu\text{m}$ )
- Available antisticking-coating (fluoro-based)
- Available wear-protection coating (e.g. TiN)
- Compatibility to most patterning methods:
  - e-beam resists (PMMA, HSQ)
  - XIL- resists
  - UV-lithography AZ positive resists, MicroChem SU-8
  - Hot-embossed polymers, Thermal imprinting,...