**MICROLENS ARRAYS**

**Objective**
Reproducible fabrication of refractive microlenses with parameters derived from system design calculations.

**Technology**
- Mastering by lithography and reflow
- Replication by UV polymer molding or transfer to silicon, glass or fused silica by reactive ion etching
- AR-coating, dicing
- Integration of aperture-/filter structures
- Double-sided patterning (tandem arrays)

**Geometry of the lens arrays**
- Spherical, cylindrical or elliptical lenslets; sag up to 100 µm
- Layout and focal length varying across the array or wafer (“Chirp”)
- Lens diameter: 5 µm – 3000 µm

**Applications**
- Laser/fiber collimation
- Beam forming elements, homogenizer
- Fill factor enhancement on detector arrays
- Field-of-view matching for displays
- Miniaturized imaging systems, sensors