

Obducat's Foundry Services



We provide industry leading prototyping and production services based on our nanolithography capabilities and exceptional process know-how in Nanoimprint Lithography.

www.obducat.com



Foundry Services

GENERAL INFORMATION

Key Benefits

Obducat can act as your manufacturing partner for production if you follow a fabless strategy. Obducat also offer the service to do initial pilot production for evaluation purposes, to enable a more data driven investment decision for the setup of your own internal production capability.

Based on our patented NIL-technology, Obducat has the capability to replicate extremely accurate micro- and nanosized structures from a master stamp onto a target substrate which can be anything from a flexible polymer film to a solid substrate material.

Our technology enables us to replicate patterns and structures onto non-flat substrates, such as camera lenses with concave or convex surfaces.

All our NIL-systems perform Full Area Imprint, meaning that the entire surface is replicated in one single step and not in several smaller steps which gives quality and cost benefits.



Obducat can act as your manufacturing partner for production or offer the service to do initial pilot production for evaluation purposes.

Obducat's NIL Process Technologies

Obducat's patented NIL technologies offers industry leading Cost-of-Ownership and performance.

IPS® - Intermediate Polymer Stamp

The patented IPS® technology is based on making a replication of the master stamp into a soft Intermediate Polymer Stamp (IPS®). The IPS® is then used in a second imprint step to transfer the structures onto the target substrate.

The IPS® enables contamination control, increases the master stamp lifetime and makes the imprint process less sensitive to substrate contaminations and surface roughness.

SoftPress®

With Obducat's patented SoftPress® technology, the imprint pressure is applied using compressed gas, ensuring pressure uniformity over the entire imprint area. This allows the stamp or IPS® to conform to the substrate, eliminating negative effects from thickness variations, bow or waviness. SoftPress® enables thin and uniform residual layer across the substrate, which is critical for enabling high-resolution imprinting and pattern transfer fidelity.

STU® - Simultaneous Thermal and UV

The patented STU® technology combines, in one imprint sequence, the simultaneous use of thermal- and UV based imprint processes. The STU® process allows for increased polymer flow rate giving a shorter process time as well as enabling improved material compatibility and thereby a wider selection of workable imprint materials.

Automated IPS® application and demolding

The patented automated demolding function developed by Obducat for use with the patented IPS® and SoftPress® technologies makes the application of the IPS® material accurate and repeatable, ensuring that the pattern fidelity is maintained. The automated demolding function also protects the stamp from any manual handling during the imprint process.

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