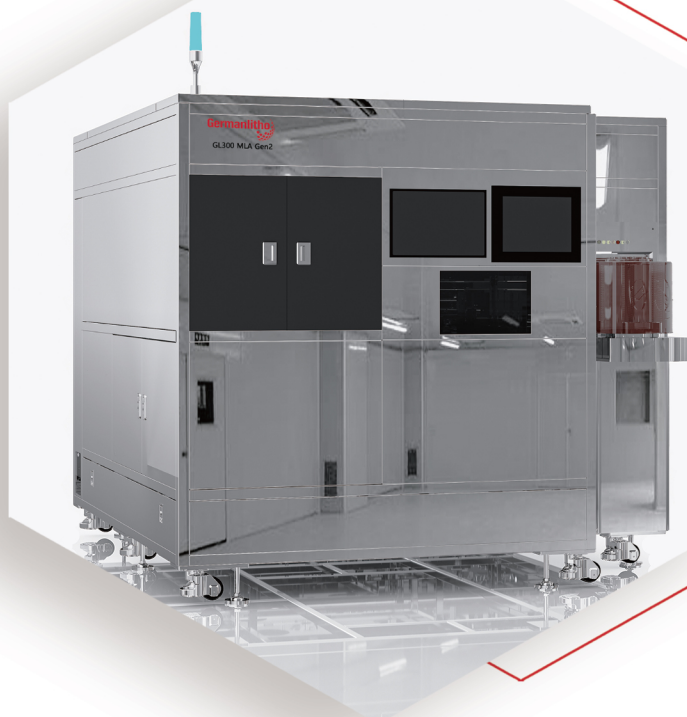


Introduction

The GL300 MLA is GermanLitho's latest fully-automatic UV nanoimprint lithography equipment, which is capable of parallel imprinting micro- and nano-optic polymer components on 200/300 mm wafers, specifically developed for Wafer Level Optics (WLO) processes. The equipment supports both cassette-to-cassette automatic wafer loading and unloading, as well as automatic flexible composite working stamp replication and loading and unloading. All process steps are carried out in a closed and clean environment to guarantee the imprint quality. The integrated high-precision automatic resist dispensing system, APC (Active mold/substrate Parallel Control) technology and automatic separation function guarantee replication fidelity, uniformity (TTV), and yield for large-area WLO production. The automatic alignment system enables the Wafer Level Stacking (WLS) process. The GL300 MLA is suitable for development and mass production of DOEs, Diffusers, MLAs, Fresnel lenses and myriad other products.

GL300 MLA

200/300mm WLO process UV nanoimprint lithography equipment for mass production
Wafer Level Optics (WLO) manufacturing



Technical Data

Substrate size	200mm (Open cassette, SMIF customized) / 300mm (FOUP) (Special sizes can be customized)
Substrate material	Silicon, glass, quartz, plastic, metal, etc.
Wafer loading & unloading	Cassette to cassette automatic wafer loading/unloading
Wafer pre-alignment	Optical pre-alignment
Supported NIL process	UV-NIL with APC (Active mold/substrate Parallel Control) technology, suitable for large area WLO, WLS and other processes
Resolution	Higher than 10 nm*
Aspect ratio	Greater than 10: 1*
TTV control	Micrometer accuracy* (200/300mm wafer)
UV curing light source	High power UV LED panel light source (365nm), light intensity >1000mw/cm ² , water cooling, (2000mw/cm ² optional)
Mini-environment and climate control	Standard, external environment class 100, internal environment better than class10*
Automatic imprinting	Supported
Automatic separation	Supported
Automatic resist dispensing	Supported
Automatic working stamp replication	Supported
Automatic working stamp exchange	Supported
Automatic alignment	Optional

* Parameters depend on the mold, material, process and operating environment, not equipment limits

* GermanLitho reserves the right to interpret the information

Features

- Fully-automatic nanoimprint lithography equipment for 200/300mm WLO processes.
- APC (Active mold/substrate Parallel Control) technology guarantees large area TTV uniformity of imprinted wafers.
- Cassette to cassette automatic wafer loading and unloading with optical pre-alignment.
- Automatic flexible composite working stamp replication and working stamp loading/unloading, suitable for mass production.
- Automatic high-precision resist dispensing system.
- Fully-automatic nanoimprinting processes including working stamp replication, alignment, imprinting, curing and separation with all process steps carried out in a closed and clean mini-environment to guarantee the imprinting quality.
- High power UV LED panel (365nm, light intensity >1000mW/cm²) with water cooling, light sources of different power and wavelength can be provided according to customer specifications, perfectly supporting a variety of commercial nanoimprint materials.
- Based on our experiences, we have created nanoimprint process and material starter-kits to be delivered with our products, enabling our customers to immediately make use of the world-leading level of nanoimprint technology.

OUR CONTACT!

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