



## Introduction

The GL8 CLIV Gen2 is GermanLitho's latest semi-automatic, full-field, high-resolution UV nanoimprint equipment. The proprietary CLIV (Contact Litho into Vacuum) technology guarantees the accuracy and replication fidelity of imprinted structures. The GL8 CLIV Gen2 enables semi-automatic imprinting of high resolution (higher than 10nm\*) and high-aspect-ratio (greater than 10: 1\*) nanostructures on up to 200mm wafers. The equipment supports automatic replication of flexible composite working stamps, allowing high resolution and a long service life, as well as significantly reducing the cost of large-area molds in nanoimprint processes. The GL8 CLIV Gen2 is suitable for R&D and pilot production of DOEs, AR / VR waveguides (including slanted gratings), WGPs, metalenses, biochips, LED PSSs, MLAs and other applications.

# GL8 CLIV Gen2

## 200mm High-resolution UV nanoimprint lithography equipment

### Technical Data

|                                      |   |
|--------------------------------------|---|
| Substrate size                       | 2inch, 100mm, 150mm, 200mm<br>(Special sizes can be customized)   |
| Substrate material                   | Silicon, glass, quartz, plastic, metal, etc.  |
| Wafer loading & unloading            | Single wafer automatic loading and unloading  |
| Wafer pre-alignment                  | Optical pre-alignment   |
| Supported NIL process                | UV-NIL with GermanLitho proprietary CLIV (Contact Litho into Vacuum) technology guarantees the accuracy of imprinted structures and replication fidelity. |
| Resolution                           | Higher than 10 nm*  |
| Aspect ratio                         | Greater than 10:1*  |
| Residual layer thickness (RLT)       | Less than 10nm*   |
| UV curing light source               | High power UV LED panel light source (365nm, light intensity >1000mW/cm <sup>2</sup> , water cooling, (2000mw/cm <sup>2</sup> optional)                   |
| Mini-environment and climate control | Standard, external environment class 100, internal environment better than class10*   |
| Automatic imprinting                 | Supported   |
| Automatic separation                 | Supported   |
| Automatic working stamp replication  | 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

- Volume-proven full-filled nanoimprint equipment for high-resolution, high-aspect-ratio nanostructures on up to 200mm wafers.
- CLIV imprinting technology guarantees the accuracy and replication fidelity of imprinted structures.
- Automatic internal replication of flexible composite working stamp, reducing the cost of large-area molds in nanoimprint processes.
- Fully-automatic nanoimprinting processes including working stamp replication, alignment, imprinting, curing and separation.
- High power UV LED panel (365nm, light intensity >1000mW/cm<sup>2</sup>) 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.
- High power UV LED panel light source (365nm, light intensity >1000mW/cm<sup>2</sup>) with water cooling, possible customization of power and wavelength of the light source, perfectly support a variety of commercial nanoimprint materials.
- Mini-environment and electrostatic elimination device equipped as standard.
- 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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