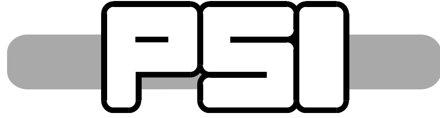

PICO

Eulitha PhableR 200C

Responsible

Konstantins Jefimovs

System Description

Displacement Talbot lithography system for periodic structures on large area. Collimated laser beam of 377 nm and 445 nm wavelength are available. Beam diameter 205 mm. The exposure principle is somewhat similar to interference lithography with a difference that the interfering beams are formed by the diffraction from the mask and the sample is scanned in the vicinity of the mask along the beam propagation direction. As the exposure is essentially non-contact and have high depth of focus, the patterns are insensitive on the flatness (TTV parameter) of the wafers.

Typical structures:

- linear gratings with period down to ~250 nm
- square hole (or dot) arrays with periods down to ~350 nm
- hexagonal hole (or dot) arrays with periods down to ~600 nm

More complicated structures, such as ring arrays, chessboard, triangular arrays or structures with high order rotational symmetry or others are possible with advanced design of the mask.

Please, contact system responsible to discuss the details.

The system has programmable XYZ piezo stages, which allow the realization of more complex structures, for example – by moving the dot array pattern within a single period.

Sample size:

Holders for 100 mm, 150 mm and 200 mm are available

Mask size:

5 inch, 7 inch, 9 inch (top loaded), 6 inch (bottom loaded). The bottom loaded mask holder allows exposure on wafer sizes larger than the mask size. Maximum wafer size for top loaded holders is ~1 inch smaller than the mask size.

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