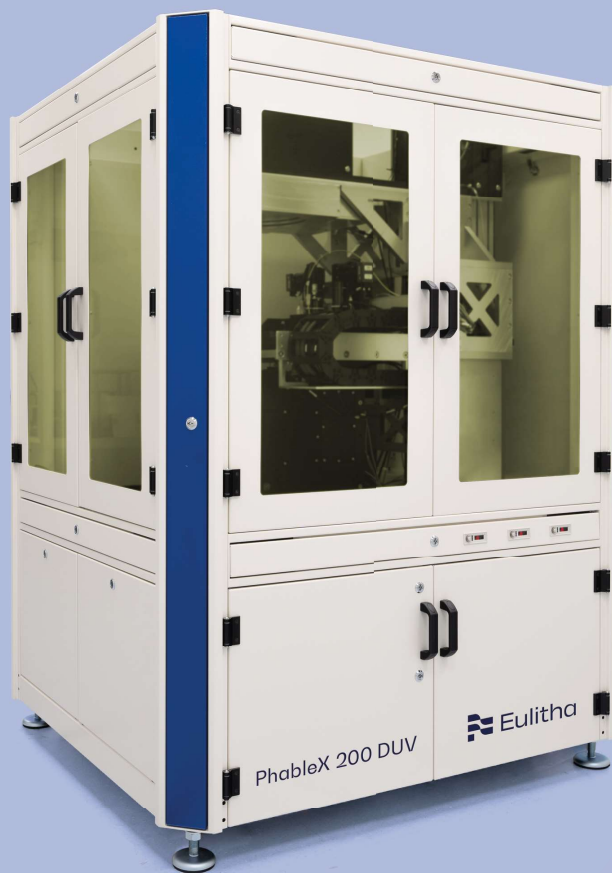


Designed for Waveguide Fabrication

Field-test and proven tool for
waveguide fabrication



PhableX™

- Photolithography system for high volume printing of periodic patterns
- Non-contact: protects masks and substrates from damage and contamination
- Cassette-to-cassette automatic wafer processing
- Highly uniform and reproducible printing
- 1D and 2D periodic pattern printing
- Suitable for non-flat substrates
- Suitable for thin glass substrates
- Resolution: <65nm half pitch
- Light source: DUV Excimer Laser
- Automatic overlay alignment capability
- Application support: Photoresists, Masks
- Expertise support for AR/VR production processes
- Low maintenance and production costs

Lithography for AR/VR Waveguides

Unique technology for printing gratings on waveguides with photolithography



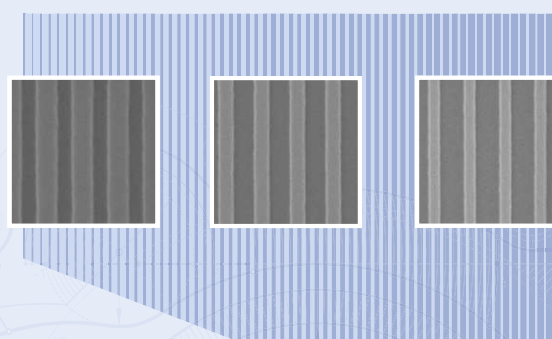
NON-CONTACT

- Unlimited mask lifetime
- No damage risk to substrates
- Supports non-flat substrate processes

GREAT PHOTOLITHOGRAPHY PERFORMANCE

- No residual layer
- No demolding
- No soft-mask
- Standard photoresists and masks
- Reproducible printing

- High-throughput – suitable for volume manufacturing
- Common AR/VR features: 1D and 2D gratings
- Resolution: <math><65\text{nm}</math> half-pitch
- Variable fill-factor for diffraction efficiency optimization
- Possibility to print on curved surfaces
- Grating pitch accuracy <math><1\text{\AA}</math>
- Low line-edge roughness (LER)
- Precise angular alignment, front-side and back-side



Fill-factor continuously varying across grating