

PhableR 100

*revolutionary photo-lithography system
for research and production*



LED light extraction layers
Patterned Sapphire Substrates (PSS)
Magnetic nanostructures
Antireflection patterns
Photovoltaics
Telecom gratings
Spectrometer gratings
Plasmonic patterns
Encoder rulers
Color filters
Biosensors

Resolution of a stepper

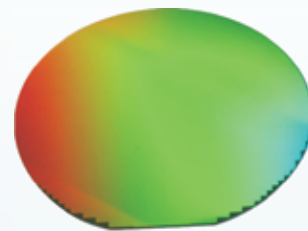
Simplicity of a mask aligner

Low-cost solution for photonic patterning

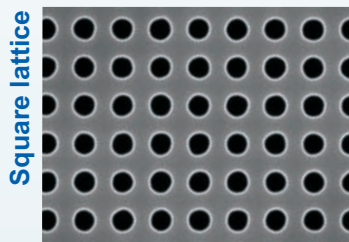
PhableR 100

WHAT IS THE PhableR 100 TOOL?

The PhableR 100 tool provides unprecedented ability to print high resolution periodic structures in a low-cost photolithography system. It is similar to a conventional mask-aligner where a photoresist coated wafer is put in proximity to a mask and exposed by a beam of UV light, but thanks to the break-through PHABLE exposure technology of Eulitha the resolution is no longer limited by diffraction. In the "PHABLE" mode, sub-micron linear gratings and 2D patterns such as hexagonal and square lattices are printed with high uniformity and quality. In the "mask aligner" mode, micron scale features can be printed easily.

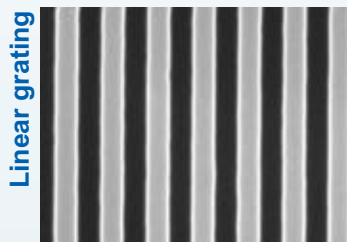


Uniformly patterned 4" wafer



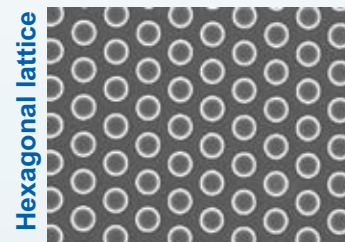
Square lattice

200nm half-pitch



Linear grating

150nm half-pitch



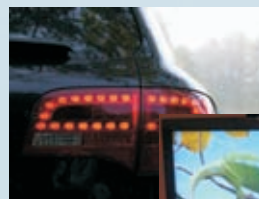
Hexagonal lattice

1.5µm half-pitch

BENEFITS

- High resolution below 300nm pitch
- Full-field exposure
- Non-contact: protects masks from damage and contamination
- Practically unlimited depth-of-focus
- Suitable for non-flat substrates (e.g. epi-wafers)
- High uniformity
- Overlay alignment capability
- Commercially available photoresists and materials
- Conventional mask (Cr-on-glass)
- Frequency multiplication

APPLICATIONS



LED



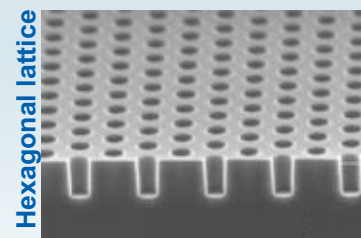
DISPLAY



SOLAR

SPECIFICATIONS

Resolution	< 150nm half-pitch (linear grating)
Wafer size	up to 100mm diameter
Mask format	5"
Illumination uniformity	< 3%
Pitch range	300nm - 3µm
Resist thickness	> 1µm
Operation	Manual load - automatic exposure
Control	Touch panel



Hexagonal lattice

260nm half-pitch

