

# Dilase 250

Table-top direct laser lithography system

*The Dilase 250 is a practical, table-top high resolution laser lithography system, especially well-suited for fast prototyping, photomask fabrication and microfabrication.*

The specific optical treatment chain developed by Kloe gets a **very large depth of focus**. Thanks to this and to its automatic control with an absolute reference, Dilase 250 does **not need for an auto-focus system**.



## Technological breakthroughs

### High aspect ratio: 1x20

The **high depth of focus** resulting from the specific optical treatment line designed by Kloe, allows to write into thick films as easily than into thin films with the same edge verticality and **very low roughness**.

### One-pass laser processing

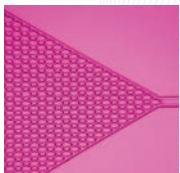
No roughness induced by vertical stitching, **no need to adjust the focusing point**.

### Writing modes: vector, scanning or a combination of both

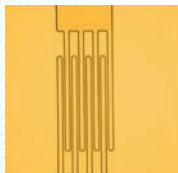
Vectorial writing mode ensures a **perfect rendering of edges** without stitching nor roughness.

The combination of both modes by fast filling in scanning mode and the finalizing contours in vector mode provides perfectly square pattern edges with **no roughness**.

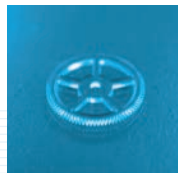
## Related applications



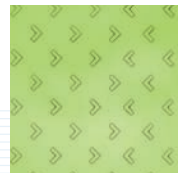
Microfluidics



Microelectronics



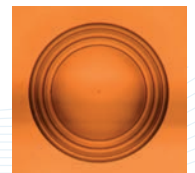
Micromechanics



Surface functionalization



Photonics



Greyscale, microlens and gratings

# Dilase 250

Table-top direct laser lithography system

## Performances

Linear writing speed	> 100mm.s <sup>-1</sup>
Address grid	100nm
Repeatability	100nm
Multilevel alignment accuracy	<1μm
Absolute positioning precision	3μm / 100mm
Orthogonality	<1mRad
Operating temperature	22°C +/- 2°C
Aspect ratio	1x20

## Laser source

Wavelength	375nm or 405nm
Beam size available	1
Laser beam width	To choose from 1μm to 50μm
Laser diode lifetime	Over 10 000 hours

## Working & Writing surfaces

Accepted sample size	From 3 x 3mm <sup>2</sup> to 4" Up to 5" for square substrates
Maximum working surface	100 x 100mm <sup>2</sup>
Accepted substrate thickness	From 250μm to 5mm
Compatible photoresist	SU8, Shipley, AZ Resists, K-CL resist (developed by Kloe)

## Other features

- Compact footprint: 550(L) x 740(W) x 710(H)mm
- Weight: 120kg / 265lbs
- Writing modes: vectorial, scanning or a combination of both
- Power supply: 100V/240V - 50Hz/60Hz
- Accepted files format: LWI (KloeDesign format), DXF and GDSII
- Integrated design software: KloeDesign, DFL Creator, DilaseSoft
- Video realignment system
- Motorized focal length
- Automated focusing setting

