POLOS® PM-100

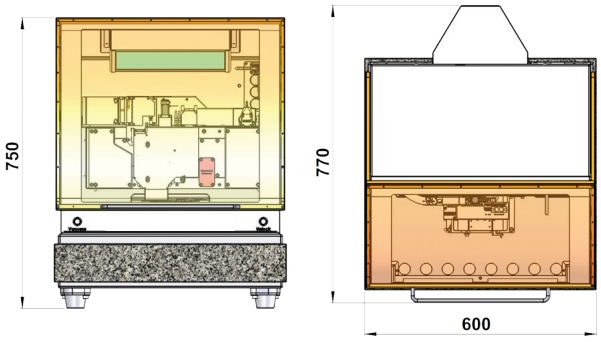
The POLOS® PM-100 is capable of writing structures up to 0.3 µm. It is a versatile UV laser writer with ultra-high precision components, specifically designed to give the user the highest degree of freedom to create micro-structures in photosensitive layers.

The POLOS® PM-100 system includes a 405 nm optical module capable of writing structures as small as 0.3 µm. This user-friendly tool supports up to 4095 levels of gray-scale or pure binary mode and allows for 3D optical structures, surface structures as well as mask projects. Real time laser controlled auto-focus and laser intensity control ensure high quality imaging during the entire exposure process. The control electronics are all mounted within the frame except for the control PC. This Microsoft Windows based desktop PC and all required software is included in the package.

CONFIGURATION	
Max. writeable size	4 x 4"
Stroke scan & step	Max. 115 mm
Repeatability	< 50 nm RMS
Encoder resolution	2.5 nm
Scan speed	Max. 200 mm/s
Straightness axis	< 1 µm over 100 mm
Wafer thickness	0 - 10 mm
Max. substrate size	Min. 5 x 5 mm, max. 125 x 125 mm
Exposable area	Max. 110 x 110 mm (speed dependent)
Dimensions (mm)	600 (w) x 750 (h) x 600 mm (d) (excluding optional air duct
Weight (kg)	260
Compressed air:	5 - 7 Bar, Air quality according ISO8573-1:2010 class 3 or better

KEY BENEFITS

- Writing resolution down to 0.3 µm (Highest resolution on the market with 405 nm laser)
- 375 nm laser source available for more demanding applications
- Minimal maintenance costs
- Compact optical module: use a spare optical unit for revolutionary machine downtime reduction
- User-friendly operation



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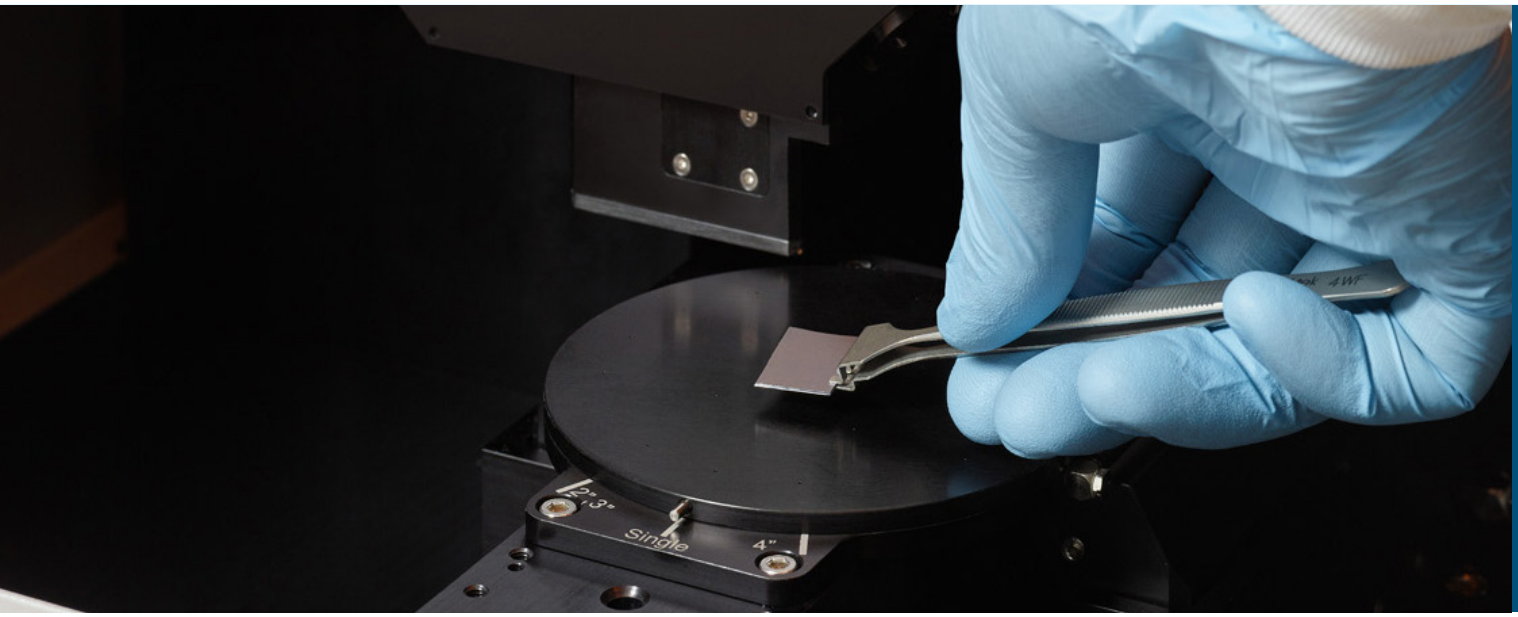

OPTICAL PROPERTIES	
Laser source	Standard 405 nm, GaN laser diode. 375 nm optional
Lifetime	>10.000 hours
Write modes	0.3 µm, optional 0.6 µm and 0.9 µm FWHM
NA	0.85
Working distance	0.6 mm
Intensity	Max. 3 mW in the spot. Software controllable
Grayscale control	4095 levels
Autofocus	800 Hz bandwidth, 650 nm red laser controlled +/- 0.3 mm height variation with auto height tracking Fast voice coil actuator for accurate real time Z correction
Focus offset	Adjustable by software control

052025-V1