

POLOS[®] BEAM

Maskless lithography enables nanopatterning at will, without the need for slow and expensive photomasks. This convenience is especially useful for research and rapid prototyping use. The POLOS[®] Beam compliments the existing benefits by bringing it to the desktop without any compromise in performance.



SPECIFICATIONS

MODEL	POLOS BEAM Lite Mk2	POLOS BEAM Mk2	POLOS BEAM XL Mk2
Resolution	1.5 μm & 3 μm	0.8 μm	0.8 μm
Max substrate size	4" (100 x 100 mm)	4" (100 x 100 mm)	6" (150 x 150 mm)
Substrate thickness	0.1 mm to 8 mm	0.1 mm to 8 mm	0.1 mm to 8 mm
Max exposed area	106 mm x 106 mm	106 mm x 106 mm	155 mm x 155 mm
Write modes	Vector or Raster mode	Vector or Raster mode	Vector or Raster mode
Light-source	Laser Galvo / Laser Diode	Laser Galvo / Laser Diode	Laser Galvo / Laser Diode
Light-source wavelength	405 nm	405 nm	405 nm
Optional wavelength	375 nm (option)	375 nm (option)	375 nm (option)
Auto-Focus wavelength	+/- 100 um	+/- 100 um	+/- 100 um
Grayscale levels	Upon request	Upon request	Upon request
Alignment	Topside	Topside	Topside
XYZ stage	Non-vacuum chuck stage XY Motor : Stepper Z Motor: Stepper	Non-vacuum chuck stage XY Motor : Stepper Z Motor: Stepper	Non-vacuum chuck stage XY Motor : Stepper Z Motor: Stepper
XY alignment resolution	0.1 μm	0.1 μm	0.1 μm
XY stage repeatability (1σ)	0.1 μm	0.1 μm	0.1 μm
XY working range	130 mm x 130 mm	130 mm x 130 mm	155 mm x 155 mm
Z resolution	10 nm	10 nm	10 nm
Z working range	10 nm	10 nm	10 nm
Writing speed	2 mm/s or better	2 mm/s or better	2 mm/s or better
Maximum writefield	400 μm	400 μm	400 μm

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SPECIFICATIONS CONTINUED

MODEL	POLOS BEAM Lite Mk2	POLOS BEAM Mk2	POLOS BEAM XL Mk2
Writing area	106 mm x 106 mm	106 mm x 106 mm	150 mm x 150 mm
Photoresist	405 nm - Compatible with all h-line and broadband resists. 375 nm - Compatible with SU8 Note: 405 nm also compatible with SU8 but writing speed is decreased by 2x	405 nm - Compatible with all h-line and broadband resists. 375 nm - Compatible with SU8 Note: 405 nm also compatible with SU8 but writing speed is decreased by 2x	405 nm - Compatible with all h-line and broadband resists. 375 nm - Compatible with SU8 Note: 405 nm also compatible with SU8 but writing speed is decreased by 2x
Max layer thickness	10 um	10 um	10 um
File format	BMP, PNG, TIFF, GDS	BMP, PNG, TIFF, GDS	BMP, PNG, TIFF, GDS
Dimensions (W x D x H) in mm	330 x 310 x 340	330 x 310 x 340	370 x 360 x 340
Package dimension (W x D x H) in mm	420 x 520 x 420	420 x 520 x 420	510 x 510 x 510
Weight	20 kg	20 kg	30 kg
Package weight	25 kg	25 kg	35 kg
Laptop	Optional Min. requirement - Intel 13th Gen i7 - Nvidia RTX 3050 graphics - 16 GB RAM+ 512 GB SSD	Included	Included
Software	BEAM Xplorer software included	BEAM Xplorer software included	BEAM Xplorer software included
Facilities	Only electricity	Only electricity	Only electricity
Environmental condition	a) No specific environment condition is needed or clean room. b) Except the vibrations, temperature should be 35 degrees Celsius (plus minus 3 or 4 degree) and humidity should be less than 70%.	a) No specific environment condition is needed or clean room. b) Except the vibrations, temperature should be 35 degrees Celsius (plus minus 3 or 4 degree) and humidity should be less than 70%.	a) No specific environment condition is needed or clean room. b) Except the vibrations, temperature should be 35 degrees Celsius (plus minus 3 or 4 degree) and humidity should be less than 70%.
Warranty	1 year	1 year	1 year
Option price (high performance laptop)	Refer price in Odoo	Included	Included