

VOLCANO® LB 750UV Laser Optics

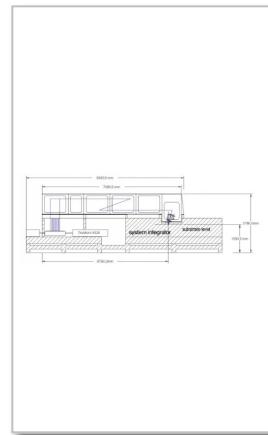
Systems > Laser-Lift-Off

Laser Optics for a Laser Line of 300 - 1000mm Length using Pulsed Solid State UV Lasers

VOLCANO® Line Beam systems can be designed with different line lengths up to 750mm and 1000mm. The use of solid state lasers emitting UV light at 343nm reduces the operating costs and increases the uptime of production tools remarkably, compared to systems using excimer lasers.

The LB systems are based on a rigid aluminum housing structure and the FALCON XXL projection lens gives a working distance of >200mm. A stable and solid system structure is needed to support the line beam optics. Line Beam Optics include a MBC (Manual Beam Control) camera system which allows to control and adjust position and angle of all laser emitted beams. The FALCON XXL design contains a window which seals the optics from the process chamber and protects against contaminations from the process.

The energy density of >500mJ/cm² is obtained by using 6 TruMicro 8320 (20mJ specification) with 750mm x 20µm FWHM line beam. The Line Beam optics give a DoF ≥300µm for a 20µm FWHM small axis and a uniformity of p2p ≤10%.



VOLCANO 750UV-6
Laser Optics for 6x
TruMicro 8320 UV
Solidstate Laser



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TruMicro 8320 UV
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Technical Data: VOLCANO® LB 750UV-4-8320 or LB 750UV-

Wavelength:	343 nm
Line length:	750mm (top-hat-profile)
Line width:	20-30µm FWHM (Gaussian profile)
Homogeneity:	p2p ≤ 6% best focus
Energy density:	> = 370mJ/cm ² @ 20µm FWHM; > = 25
Pulse duration:	15-20ns, can be extended by delay trigg
Repetition rate:	10kHz
Laser:	4x TruMicro 8320 or 2x TruMicro 8340 (1
Diagnostics:	laser power meter, substrate power met

Technical Data: VOLCANO® LB 750UV-6-8320 or LB 750UV-

Wavelength:	343 nm
Line length:	750mm (top-hat-profile)
Line width:	20-30µm FWHM (Gaussian profile)
Homogeneity:	p2p ≤ 6% best focus
Energy density:	>=560mJ/cm ² @ 20µm FWHM; >= 370
Pulse duration:	15-20ns, can be extended by delay trigg
Repetition rate:	10kHz
Laser:	6x TruMicro 8320 or 3x TruMicro 8340 (1
Diagnostics:	laser power meter, substrate power met

Other line sizes and other configurations on request.

VOLCANO® Laser Optics includes an integrated attenuator module to adjust the energy density at the substrate level. Power meter heads and a CCD camera based beam profile measurement tool are available.