

VOLCANO® 300UV Laser Optics

Systems > Laser-Lift-Off

Laser Optics for a Laser Line up to 300mm Length using Pulsed Solid State UV Lasers

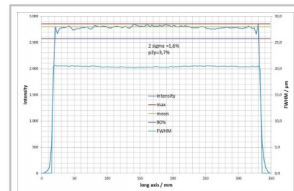
The VOLCANO® 300UV Laser Optics is built into a solid granite structure. Two laser beams can be combined to obtain high energy density. The beams are processed by independent telescopes and combined by a specially designed homogenizer. The combined laser beams are homogenized into a 300mm long line beam with a typical width of 20 - 30 μ m. The FALCON 300UV projection lens assures a uniform line width and the large depth of focus which trouble-free production requires.

Scope of Application

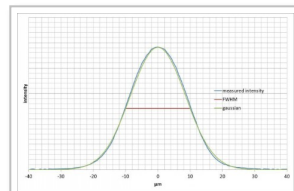
Laser-Lift-Off processes are in use in the electronics industry for the production of flexible OLED displays for TV products, smartphones, smartwatches and tablet computers. The OLED display is manufactured on a flexible polymer foil on a glass substrate. The final polymer foil with the OLED display is lifted off the glass using the UV laser line.



VOLCANO 300UV laser optics with two TruMicro 8320 or a single TruMicro 8340.



300mm long axis beam profile



20 μ m FWHM Gaussian small axis

Technical Data VOLCANO® 300UV - 8320

Wavelength:	343 nm
Line length:	300mm (top-hat-profile)
Line width:	20µm FWHM (Gaussian profile)
Homogeneity:	p2p ≤ 6% best focus
DoF:	≥ 140µm for p2p ≤ 10%
Energy density:	≥ 230mJ/cm ² @ 20µm FWHM
Pulse duration:	15-20ns FWHM, can be extended by
Repetition rate:	10kHz
Laser:	TruMicro 3820 (Trumpf Lasertechnik
Diagnostics:	laser power meter, substrate power



Technical Data VOLCANO® 300UV - 8340

Wavelength:	343 nm
Line length:	300mm (top-hat-profile)
Line width:	30µm FWHM (Gaussian profile)
Homogeneity:	p2p ≤ 6% best focus
DoF:	≥ 300µm for p2p ≤ 10%
Energy density:	310mJ/cm ² @ 30µm FWHM
Pulse duration:	15-20ns FWHM, can be extended by
Repetition rate:	10kHz
Laser:	TruMicro 3840 (Trumpf Lasertechnik
Diagnostics:	laser power meter, substrate power

Other line sizes and other configurations on request.

