



Ultra short pulse
motorized
beam expander

1x-4x

Specifications:

Wavelength	343; 355; 515; 532; 1030; 1064; 1070 nm
Magnification range	1x-4x
Divergence adjustment range	$\pm 1 \sim 5$ mrad
Pointing stability	$< 200 \mu\text{rad}$
Optical design	Gallileo
Diffraction limited performance	Yes
Number of lenses	4
Transmittance	$> 99\%$
LIDT	$> 3.7 \text{ J/cm}^2$ @ 1030 nm; 10ps; 10kHz $> 1 \text{ J/cm}^2$ @ 515 nm; 10ps; 10kHz $> 0.5 \text{ J/cm}^2$ @ 343 nm; 10ps; 10kHz
No internal Ghosts	Yes
No internal Ghosts in reversed use	No

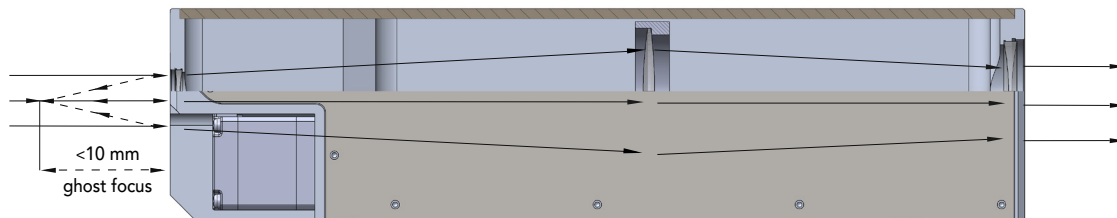
Max recommended input beam Ø

	343-355 nm	515-532 nm	1030-1070 nm
1x -	8 mm	8 mm	8 mm
2x -	6 mm	6 mm	6 mm
3x -	5 mm	5 mm	5 mm
4x -	4.5 mm	4.5 mm	4.5 mm

Notes

- Max beam diameter ($1/e^2$) meeting diffraction limited operation
- Divergence adjustment facilitates precise focal plane movement
- Ever-expanding beam optical principle - beam is not reduced inside the system
- Integrated controller
- IBS coated quartz lenses for maximum performance and longevity
- Beam remains collimated during expansion change

Retroreflections



Ghost focus - at <10mm from the input side

Motorization related specifications:

Zoom repeatability:

<0.3%

Divergence repeatability:

< $\pm 3 \mu\text{rad}$

Min. zoom Increment:

0.1%

Min. divergence Increment:

1 μrad

Speed:

1-6 sec. (min to max zoom)

Control interfaces:

USB, D-SUB (DE-9), WR-TBL

Communication protocol:

RS232 and ASCII strings

Weight:

<2 kg

Dimensions:

65 x 70 x 260 mm

Motorization related specifications:

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