

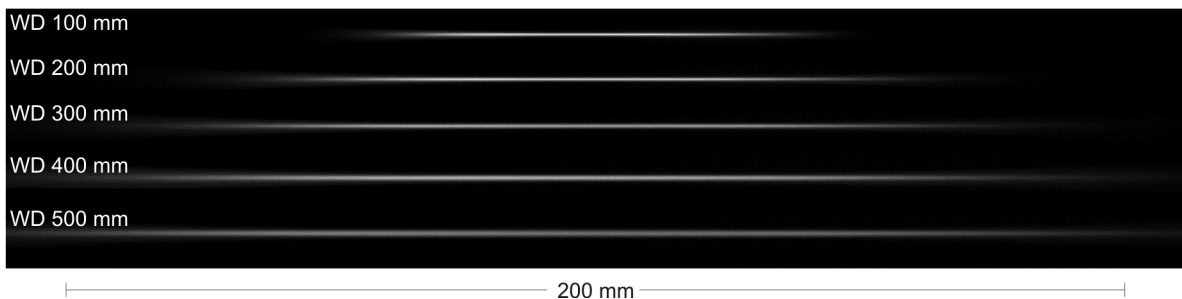
# Fiber coupled light sheet optics for CAVILUX HF



## Specification for CAVILUX HF Light Sheet Optics

<b>Dimensions</b>	(HxWxL): 30 x 54 x 85 mm (frame), fiber length ~ 0.5 m + connection fiber 1.5 m
<b>Weight:</b>	approx. 100 g
<b>Working distance:</b>	adjustable from approx. 100 to 5000 mm
<b>Line thickness:</b>	(FWHM): 0.1 to 0.5 mm for working distances from 100 to 500 mm
<b>Line width:</b>	(FWHM): 75 to 190 mm with working distance from 120 to 500 mm.

### Line profiles



**Figure 1. Measured images of laser lines at five different working distances (WD).**

WD, mm	Line thickness, FWHM-value, mm	Depth range, mm
100	< 0,15	10
200	< 0,2	20
300	< 0,3	40
400	< 0,4	70
500	< 0,5	100

**Table 1. Example measurement of max line thickness and corresponding depth range at different working distances.**

## Beam profiles

### Thickness

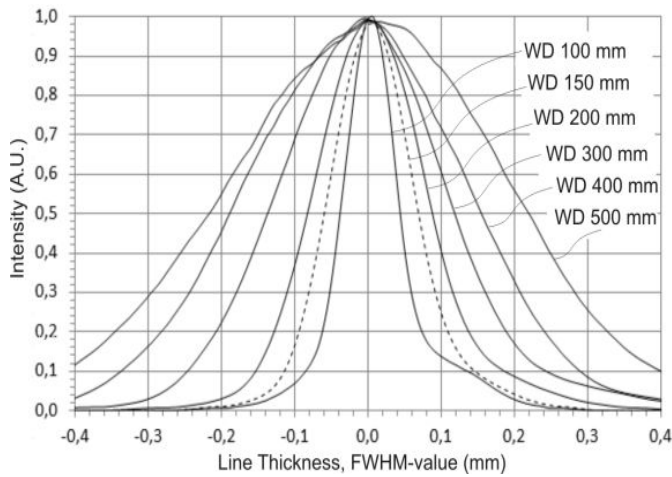


Fig 2a. Measured line thickness profiles at different working distances. Light was focused at each working distance. Light sheet aperture was 7 mm.

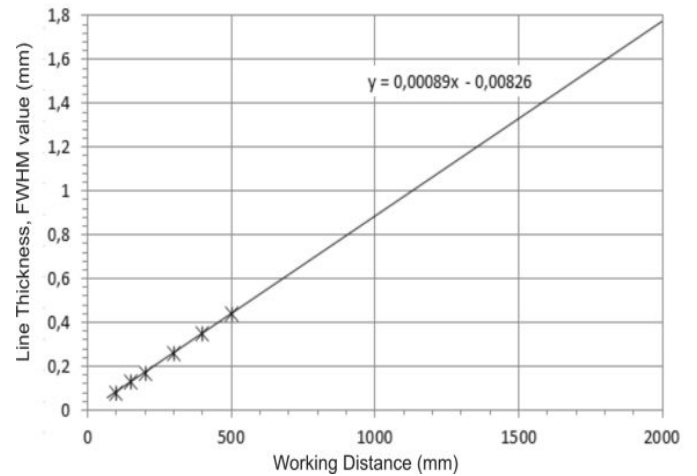


Fig 2b. Measured line thickness FWHM-values and estimate for longer working distance. Light sheet aperture 7 mm.

### Width

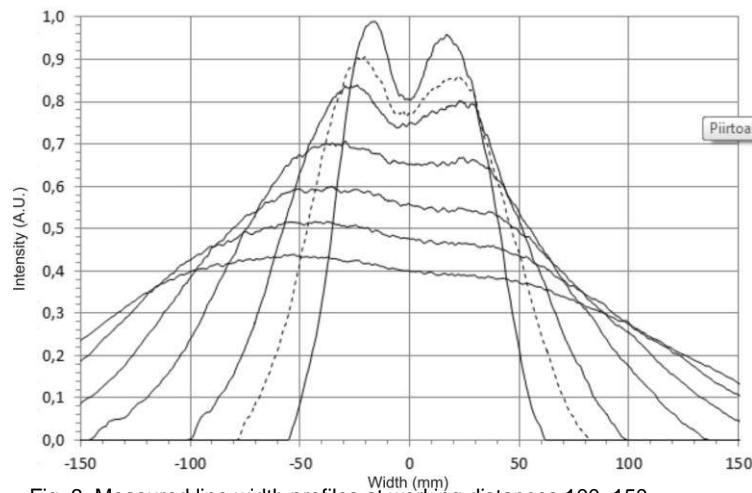


Fig. 3. Measured line width profiles at working distances 100, 150 (dotted), 200, 400, 500 and 600 mm.

### Depth of sharp focus

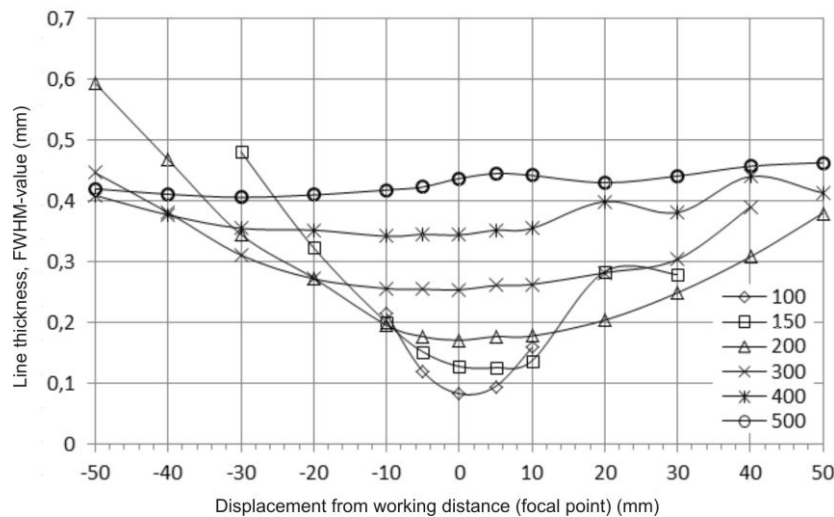
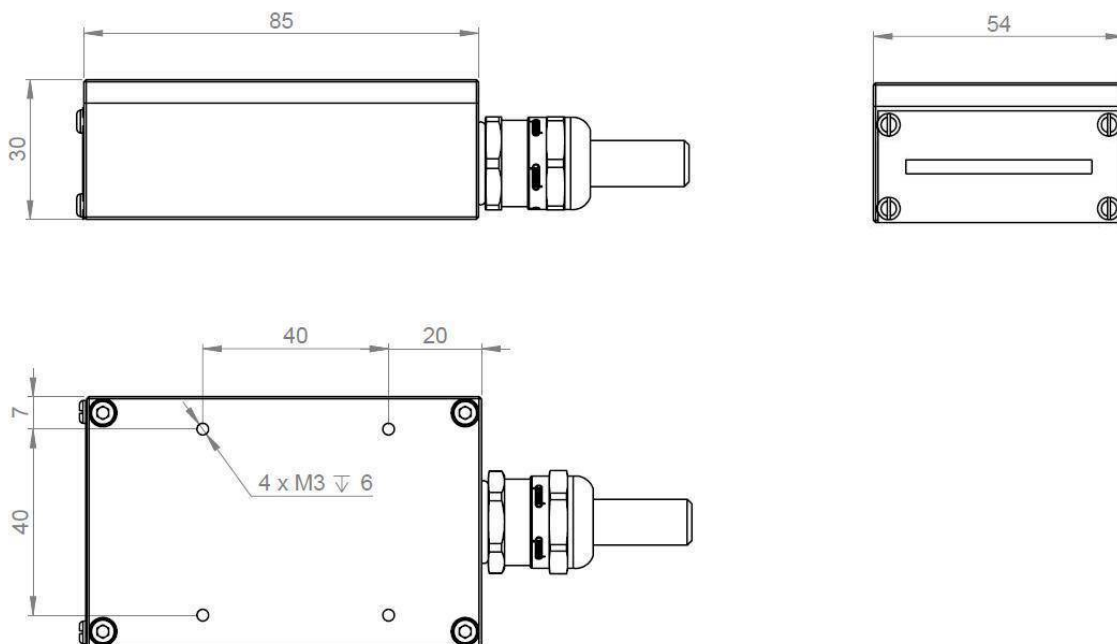


Fig 4. Measured line thickness FWHM-values near each working distance of 100, 150, 200, 300, 400 and 500 mm.

**Dimensions (in mm)**


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