

=> 4 lens system, (150mm; -50mm; 125mm or 150mm; -25mm or -50mm)

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The converging / diverging / converging system is used to allow a short working distance at reasonably "large" focal lengths. (Not possible when using a Galileian configuration directly).

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Lens 3 v1: 125mm, full 20mm+10mm=30mm extension  
working distance: 452mm...812mm (f=404mm...847mm) (full 25mm range)

light sheet width , f-25mm: f-50mm:  
(at focal point) ~120mm...180mm ~60mm...90mm

removing the 10mm extension ring: (only 20mm extension)  
working distance: 526mm...1242mm (f=410mm...1143mm) (full 25mm range)  
=> ideal to fill the gap between 812mm...1134mm

light sheet width , f-25mm: f-50mm:  
(at focal point) ~150mm...320mm ~80mm...160mm

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Lens 3 v2: 150mm, full 20mm+10mm=30mm extension  
working distance: 1134mm...3014mm...inf (f=1012mm...2943mm) (15mm range)


light sheet width , f-25mm: f-50mm:  
(at focal point) ~300mm...770mm...- ~150mm...380mm...-

removing an extension ring has no advantage in this setting

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smaller light sheet angle: f-100mm => not available :-(  
(could be achieved by adding another focussing lens)

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Note that in theory (and practically) the optics could be designed to work from f=400mm to infinity straightaway. As this setup is confined to use Edmund optics standard parts, the lenses cannot be placed at any desired position. Furthermore only lenses suited for the high power Nd-YAG laser can be used, which further limits the design possibilities.

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Tube Diameter: 48mm (T-Mount)  
Lens Diameter: 25mm  
Entire Tube Length: 137mm...162mm

Tolerances ISO 2768-m All dimensions in mm		Drawn by / Date: P. Coray 2004/10/05
Part No.: -	Page: <b>2/2</b>	No. of parts to manufacture: -
Material: -		
Part Name: <b>Bare Lightsheet</b> <b>Page 2: Specifications</b>		