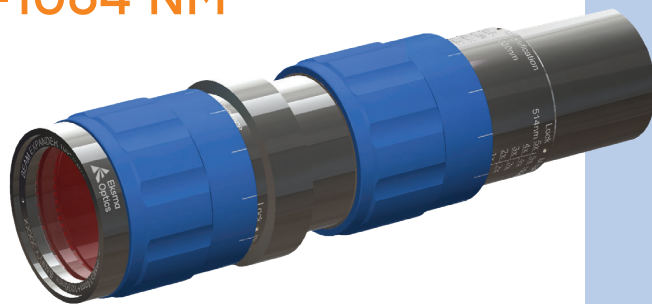


ZOOM BEAM EXPANDERS

DESIGNED FOR 515-532 + 1030-1064 NM

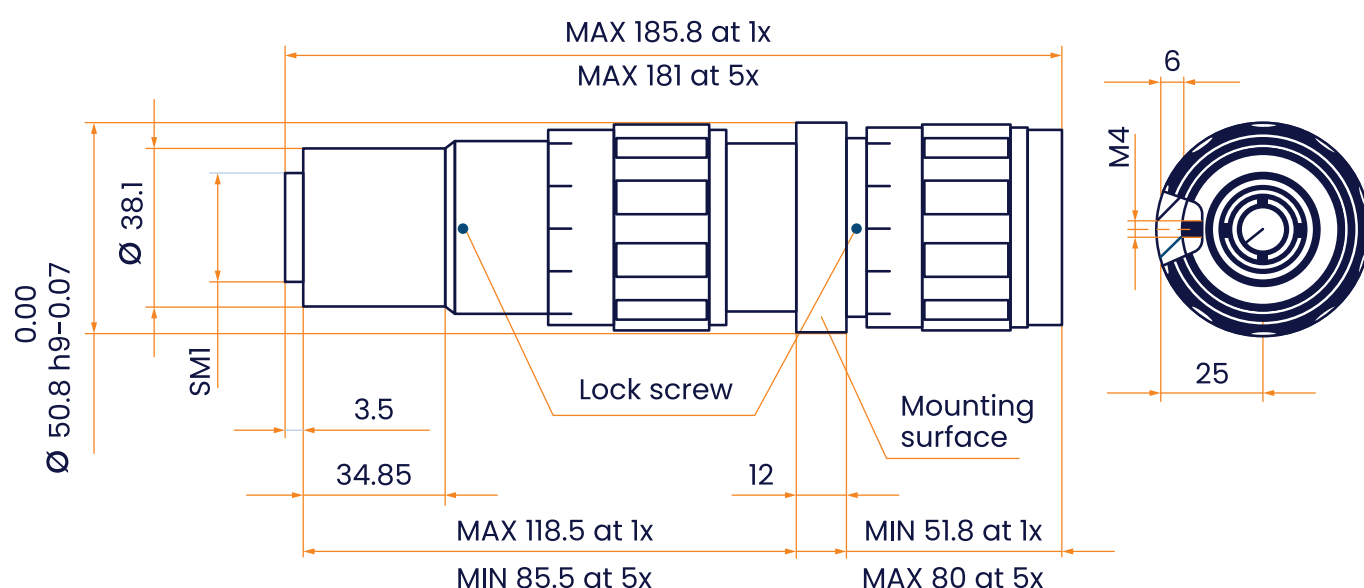
MAGNIFICATION 1X-5X

SLIDING LENS DESIGN



- Designed for high power laser applications:
IBS-coated UVFS thin lenses:
LDT > 80 J/cm² at 10 ns, 100 Hz, 1064 nm and > 0.5 J/cm² at 200 fs, 1 kHz, 1030 nm
High total transmission: > 98.5%
Low GDD: relative pulse broadening < 21% at 1030 nm
- Dual band AR-coated for: 1030/1064 nm + 515/532 nm
- Diffraction limited design for continuous magnification from 1X to 5X
- Divergence adjustment: non-rotating optics, sliding lens design

Code	Design wavelength	Expansion	Input Aperture	Max Input Beam	Output Aperture	Price
166-1X5X-1H2H	515-532 + 1030-1064 nm	1X-5X	11.0 mm	11.0 mm	36.0 mm	1800 €



Technical drawing of 166-1X5X-1H2H

SPECIFICATIONS:

Parameter	Value				
Magnification	1x-5x				
Wavelength (nm)	515-532 + 1030-1064				
Diffraction-limited input beam diameter @ 515-532 nm (by design) (mm)	1x	2x	3x	4x	5x
	9	11	10	9	7
Diffraction-limited input beam diameter @ 1030-1064 nm (by design) (mm)	1x	2x	3x	4x	5x
	10	11	11	9	7
Output beam diameter (mm)	9 (1x) – 35 (5x)				
Input clear aperture diameter (mm)	11				
Output clear aperture diameter (mm)	36				
Total lens thickness (mm)	8.75				
GVD (fs²)	515		1030		
	601		166		
Input impulse duration (fs)	26		26		
Output impulse duration (fs)	69.2		31.5		
Relative pulse broadening (%)	266		21		
Wavefront distortion @ 633nm	λ/4				
AR coating, single surface	AR<0.2% @ 505-535+1000-1070nm + AR<5% @ 633nm, AOI 0-8 deg. AR<0.5% @ 505-535+1000-1070nm + AR<5% @ 633nm, AOI 9-20 deg.				
Typical transmission	>98.5%				
Beam pointing stability	<0.5 mrad				
Coating LIDT	>0.5 J/cm² @ 1030 nm, 200 fs, 1 kHz >80 J/cm² @ 1064 nm, 10 ns, 100 Hz				
Reverse usage	No				
Mounting					
Input thread	SM1 external				
Mounting options	SM1 external, Ø38.1 mm, Ø50.8 mm, M4				

SPECIFICATIONS:

- Divergence adjustable design
- No back reflection focusing outside
- Can not be used as beam reducer

MOUNTING SUGGESTIONS:

Mounting on 5-axis platform



Mounting in 5-axis kinematic holder



Mounting on M6 thread

