

## Compact motorized beam expanders MEX



Motorized laser beam expanders MEX series are used to increase the laser beam diameter and adjust divergence. Standard or custom-made beam expanders feature a unique mechanical closed loop sliding-lens design ensuring high pointing stability and minimal

dimensions. These variable magnification (zoom) beam expanders and reducers are designed for required wavelength and each type of our beam expanders have motorized divergence adjustability.

### Main features

- Highest beam pointing stability (< 0,1 mrad)
- All-in-one design with integrated controller
- Two lens simultaneous movement assuring no misfocus
- Absolute encoder (both lenses)
- Adjustment time <1s (all magnifications)
- Fused silica optical elements
- No homing after switching on/off
- Diffraction limited performance for all magnifications

### Application examples

- Precise laser micromachining
- Life sciences
- Research

### Standard specifications

MOTORIZED BEAM EXPANDERS SPECIFICATIONS	
Adjustment	Motorized
Divergence	Adjustable
Clear input aperture	11,5 mm
Lens material	UVFS
Transmission	>97%
Controller	Integrated
Control interface	USB or RS232
Housing material	Black anodized aluminum
LIDT	3 J/cm <sup>2</sup> (10 ns @ 355nm) 5 J/cm <sup>2</sup> (10 ns @ 532 nm) 10 J/cm <sup>2</sup> (10 ns @ 1064 nm)

\*Custom design available

### Standard products

ITEM MODEL	EXPANSION	CLEAR INPUT APERTURE	CLEAR OUTPUT APERTURE	RECOMMENDED MAX. INPUT BEAM SIZE, 1/E <sup>2</sup>	DIMENSIONS (H X W X L)	WAVELENGTH	POINTING STABILITY	SKU	PRICE
MEX13	1,0x - 3,0x continuous	11,5 mm	23 mm	ø7 mm - 1x ø6 mm - 3x	45 x 45 x 140 mm	343-355 nm	< 0,2 mrad	6857	2800 €
						343-355 nm	< 0,5 mrad	6838	2600 €
						515-532 nm	< 0,2 mrad	6856	2600 €
						515-532 nm	< 0,5 mrad	6833	2400 €
						1030-1064 nm	< 0,5 mrad	6825	2400 €
						1030-1064 nm	< 0,2 mrad	6855	2600 €
						343-355 + 515-532 nm	< 0,2 mrad	6928	2900 €
						343-355 + 515-532 nm	< 0,5 mrad	6131	2700 €
						515-532 + 1030-1064 nm	< 0,5 mrad	6836	2600 €
						515-532 + 1030-1064 nm	< 0,2 mrad	6927	2800 €
MEX18	1,0x - 8,0x continuous	11,5 mm	38 mm	ø7 mm - 1x ø5 mm - 5x ø3 mm - 8x	45 x 45 x 237 mm	343-355 nm	< 0,5 mrad	6121	2800 €
						350-800 nm	< 0,5 mrad	9235	3400 €
						515-532 nm	< 0,5 mrad	6842	2600 €
						1030-1064 nm	< 0,5 mrad	6841	2600 €
						343-355 + 515-532 nm	< 0,5 mrad	6844	2900 €
						515-532 + 1030-1064 nm	< 0,5 mrad	6843	2800 €

### Mounting options for motorized beam expanders MEX

MOUNTING OPTION	FOR BEAM HEIGHT OF	SKU	PRICE
Manual 4 axis translation stage MSTAGE	27 mm (±2 mm travel)	12571	580 €