

# Beam Expander 1x-8x Motorized

## Automated Configuration Setting with Smart BEX

- Motorized magnification and focus change
- Focus compensation in closed loop mode
- Temperature measurement
- Easy integration due to broad coverage of digital interfaces

### Specification

Please take the technical specifications of the optical values from our Beam Expander 1x-8x<sup>7)</sup> on the following page.

	1030-1080 nm <sup>1)</sup>	515-540 nm	355 nm <sup>8)</sup>
Order Number:	611842	627445	613266

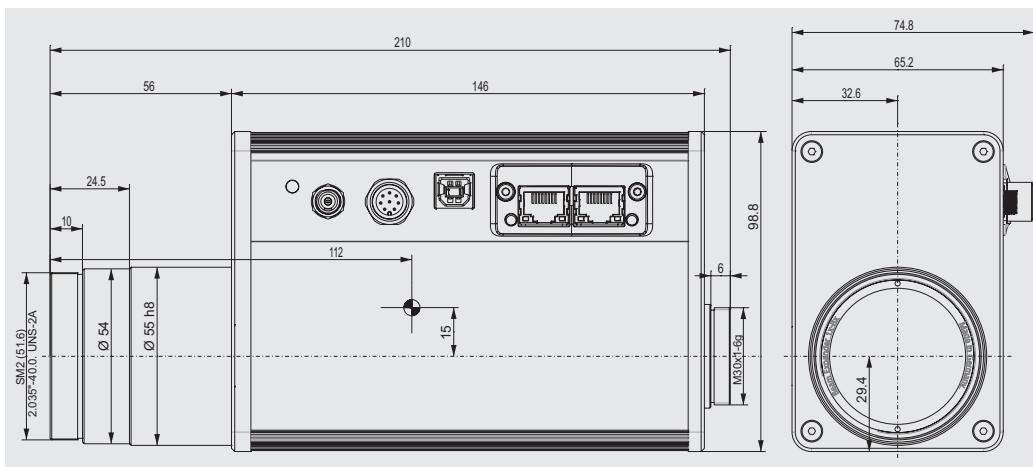
<b>Mechanical</b>	Increments for step-less adjustment of magnification:	< 0.01
	Time for configuration change:	< 3 s (from 1x to 8x <sup>7)</sup> )
	Weight:	< 1.2 kg
	Outer dimensions:	210 x 74.8 x 98.2 mm
<b>Optical</b>	Lens material:	Fused silica
	Max. residual divergence of collimated beam:	< 1 mrad (input side) at 6 mm beam diameter at input side <sup>2)</sup>
	GDD <sup>3)</sup> :	339 fs <sup>2</sup> [1030-1080 nm]   1580 fs <sup>2</sup> [515-540 nm]   2810 fs <sup>2</sup> [355 nm]
	LIDT coating pulsed; CW <sup>4)</sup> :	5.0 J/cm <sup>2</sup> * (τ/[ns]) <sup>^</sup> 0.30; 5.0 MW/cm <sup>2</sup> [1030-1080 nm] 2.5 J/cm <sup>2</sup> * (τ/[ns]) <sup>^</sup> 0.30; 2.5 MW/cm <sup>2</sup> [515-540 nm] 1.0 J/cm <sup>2</sup> * (τ/[ns]) <sup>^</sup> 0.40; 1.0 MW/cm <sup>2</sup> [355 nm] <sup>8)</sup>
	LIDT system pulsed; CW <sup>4)</sup> :	0.35 J/cm <sup>2</sup> * (τ/[ns]) <sup>^</sup> 0.30; 0.35 MW/cm <sup>2</sup> [1030-1080 nm] 0.20 J/cm <sup>2</sup> * (τ/[ns]) <sup>^</sup> 0.30; 0.20 MW/cm <sup>2</sup> [515-540 nm] 0.10 J/cm <sup>2</sup> * (τ/[ns]) <sup>^</sup> 0.40; 0.10 MW/cm <sup>2</sup> [355 nm] <sup>8)</sup>
	Transmittance:	≥ 97 %
	Beam pointing stability <sup>5)</sup> :	≤ 0.3 mrad
	<b>Electrical</b>	Supply voltage <sup>6)</sup> :
Standard control interface: [Optional]:		USB, digital interface (5V TTL, high-level 3.7...7 V, configurable) [EtherCAT, EtherNet, ProfiNet, RS485, RS232]
Software interface:		C, C++, C#, Labview, Excel
Software protocols:		Text protocol, binary protocol
<b>Ambient conditions</b>	Operation temperature (measured inside the device):	5°C - 40°C (non-condensing conditions)
	Storage temperature:	0°C - 70°C (non-condensing conditions)

<sup>1)</sup> Other IR wavelengths (e.g. 980 nm) upon request. | <sup>2)</sup> Compensable residual divergence at input side depends on beam diameter |

<sup>3)</sup> Group delay dispersion | <sup>4)</sup> See technical note | <sup>5)</sup> At minimal adjustment error | <sup>6)</sup> Power supply unit for 0-264 V single phase and 50/60 Hz is included |

<sup>7)</sup> Magnification value can vary by ± 5 % from that specified actual | <sup>8)</sup> For UV lasers, the LIDT values are valid for pulse durations > 10 ps. For shorter pulses please be advised to test.

Additional options like mounting brackets, adjusting possibilities, adaptable fiber coupling add-on, adaptable beam deflection units e.g. upon request.



Registered Design in  
DE 40 2016 001 282.4  
Registered in EU  
Registered pending in  
CN, HK, IN, TW, IR (JP,  
KR, SG, US)  
Granted Patent  
DE 10 2015 009 124  
Patent pending CN-,  
CZ-, KR-, US-Appl.