Precisometer

Beam Expander

A beam expander is any optical system designed to increase the diameter of a laser beam. In most cases, the term is taken to mean a telescope designed to take a small-diameter collimated beam input beam and produce a larger diameter collimated output beam, thus reducing the divergence of the beam. The beam expander consists of a negative input lens and a positive objective. The expansion factor is the ratio of the focal length of the two lenses. The variable rate laser beam expander is mainly composed of multiple sets of ultraviolet fused

Features	Applications
Low power loss Good output collima	Precision laser machining: capable

Specifications Part No.	Expansion ratio	Dimensions (mm)	
For model III & F	For model FN		
BE-2x	2X	Ø25*50.5	
BE-3x	3X	Ø42*84.8	Ø42*87.8
BE-4x	4x		
BE-5x	5X		
BE-8x	8x	Ø56*147.8	Ø56*150.8
BE-10x	10X		
BE-15x	15x	Ø56*192.8	Ø56*195.8

BES-01	BES-02
Dimensions: 75 (L) Ø50 (W) Ø101 (H	Dimensions: 75 (L) Ø50 (W) Ø119 (H

Part No.	Expansion ratio	Dimensions (mm)
BEW-2x	2X	Ø29*51
BEW-3x	3X	Ø42*87.8
BEW-5x	5X	Ø45*123.8
BEW-10x	10X	Ø84*209

Working wavelength	355nm/532nm/1064 nm	Rate of adjustment	2X-10X
element material	Uv fused quartz	Transmittance	Ø96%
Surface finish	40/20	Incident light aperture	9.3 mm
Weight	Ø0.25 kg	Outgoing light aperture	33.0 mm
Locking method	M3 rubber head screw	Diffraction limit: The maximum dia	2.2-6.0 mm @355nm Ø 3.0-8.0 mm @53
Length of mechanical parts (2X)	155.1 mm @355nm Ø 156.2 mm @532nm	Mechanical part length (10X)	150.5 mm @355nm Ø 150.1 mm @532nm
Membrane layer damage threshold	2.5 J/cm²;1.0MW/cm² @355nm Ø 5.0 J	System damage threshold	0.25 J/cm²;0.1MW/cm² @355nm Ø 0.5