FISBA Innovators in Photonics

Laser Optics

Due to advanced polishing & coating processes

High-performing optical solutions: build-to-print, build-to-spec or build-to-idea.

Your Benefits

- **Full service:** From engineering to volume production all from one source.
- **Advanced technologies:** In-house high-performance optics fabrication and coating capabilities for LIDT.
- **Customization:** Tailored opto-mechanical design.
- **Reliability:** Robust and dependable mechanics.
- **Options:** Fixed and variable beam expanders.

Variable Beam Expander

Technical Data

- Continuous adjustable magnification 0.75x – 4x
- Beam stability
- Large input beam diameter
- Red pilot laser applicable
- Low wavefront error
- No ghosting
- Laser module assembly
- Fiber coupling
- Color combining
- Active precision assembly
- Low noise and power controlled system architecture

Customized Laser Beam Shaping Optics

Applications

- Material Processing
- Laser Industry

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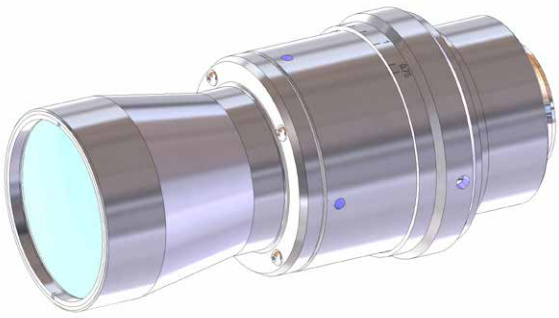
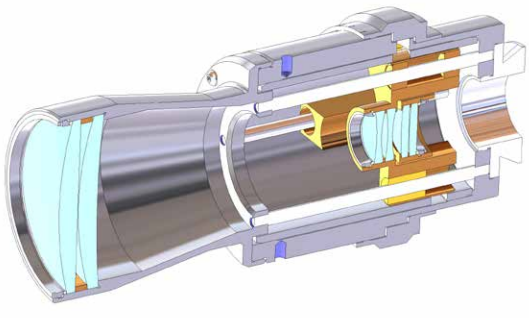
Variable Beam Expander
Example Technical Specifications

Parameters	Standard values
Design type	Galilean, no internal focus
Housing length	150 mm
Diameter	69 mm
Mounting flange	conical
Weight	0.605 kg
Clear input aperture	12 mm
Max. entrance beam diameter (1/e²)	6 mm
Magnification	0.75x – 4.0x
Pointing stability [mrad]	1‘
Total transmission*	98%
Design wavelength	1064 nm
Applicable wavelength range	1030 – 1090 nm
Wavelength range for pilot laser	approx. 633 nm
Damage threshold (LIDT)	10 J/cm²; 1064 nm; 5ns
Wavefront error (for clear input aperture)	0.08 λ RMS

* according to wavelength 1064 nm
Customized designs available upon request.





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