

NEW

Motorized Zoom Beam Expanders

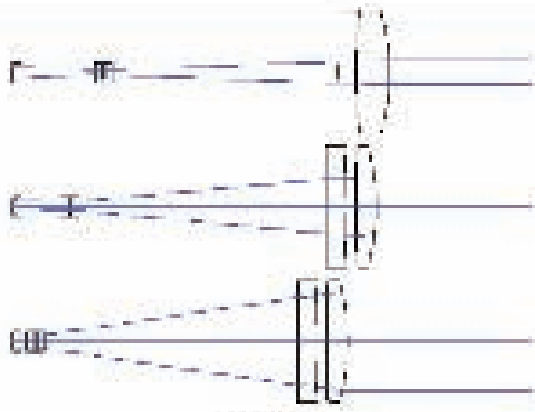


New & Improved

Now available: the new 1x to 4x expansion model with improved 0.15 mRad beam wander.



3D Layout of 30 MM Zoom Beam Expander



Model Number	Wavelength Ranges
56C-30-2-8X @ λ	VIS-NIR 425-675, 600-900,
New 56C-30-1-4X @ λ	800-120, 1100-1600 nm
61C-30-2-8X @ λ	UV 248-425 nm
New 61C-30-1-4X @ λ	
53C-30-1-5X @ λ	IR (CO ₂) 9.3 or 10.6 μ m
53C-30-2-10 @ λ	

Specify wavelength when ordering
High damage and double 'V' coatings available

Custom Design Solutions

We specialize in optimizing lens systems for our customers. Please contact us for special requirements. We pride ourselves on being the optical engineering arm for our customers.

Design

At Special Optics, we employ a proprietary 5 lens-element design with 3 lens groups to reduce the internal focus. We use fused silica lenses on the two input groups. As a result, our zoom beam expanders tolerate a very high damage threshold. Other beam expanders contain 4 lenses consisting of 3 lens groups, the first being positive followed by a negative group, then a positive group for collimation. This design causes a focus into the second lens group, consequently increasing the possibility of damage to the system.

Design highlights:

- Diffraction-limited design
- 5 element design reduces internal focus
- Mechanical design minimizes beam wander
- Continuous zoom and focus adjustments

Features

- Default expansion settings pre-programmed
- User defined custom expansion settings
- User-controlled focus adjustment
- Windows compatible
- RS232 Serial Interface
- Compact design
- GUI (.DLL) can be addressed from C++ or other languages

Specifications

Expansion Range: 2X-8X or 1X-4X

Input Aperture: 10 mm maximum

Output Aperture: 30 mm

New Beam Wander: 0.15 mRad

Wavefront Distortion: <1/4 wave at 633 nm

Field of View: +/- 0.5 degrees

Transmittance: >95%

Damage Threshold (UV & VIS-NIR Models): 100 MW/cm²

Expansion Change Time: <10 seconds