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TECHSPEC® 355nm 1X - 3X Research-Grade Variable Beam Expander

Research-Grade Variable Beam Expanders

 +1

Stock **#87-560**   **2 In Stock**

- 1 +   C$2,107.$^{.00}$

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Volume Pricing	
Qty 1-4	**C$2,107.00** each
Qty 5-24	**C$1,855.00** each
Qty 25-99	**C$1,652.00** each
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Product Downloads

General

Type:	Beam Expander
Style:	Variable Magnification

Physical & Mechanical Properties

Length (mm):	
172.30	
Weight (g):	
577	
Housing Diameter (mm):	
58.2	

Optical Properties

Entrance Aperture (mm):	
10	
Exit Aperture (mm):	
30	
Expansion Power:	
1X - 3X	
Substrate: ⬜	
[Fused Silica](#) (Corning 7980)	
Transmission (%):	
>95 @ DWL	
Angle of Incidence (°):	
0 ±0.06	
Coating:	
Laser V-Coat (266nm, 355nm)	
Design Wavelength DWL (nm):	
355	
Transmitted Wavefront, P-V:	
<λ/4 @ 632nm for Input Beam ≤5mm (<0.45λ @ 355nm for Input Beam ≤5mm)	
Wavelength Range (nm):	
260 - 365	
Coating Specification:	
R_{abs} <0.25% @ 265 - 267nm R_{abs} <0.25% @ 354 - 356nm R_{avg} <1.0% @ 260 - 365nm	
Damage Threshold, By Design: ⬜	
1 J/cm^2 @ 10ns, 20Hz, 355nm	
Divergence Adjustment:	
Non-Rotating Optics	
Damage Threshold, Pulsed:	
1 J/cm^2 @ 355nm, 10ns, 20Hz	

Threading & Mounting

Mounting Threads:	
Input: Male C-Thread (1" x 32 TPI) Output: Male T-Thread (M42 x 0.75)	

Regulatory Compliance

|	
RoHS 2015:	
[Compliant](#)	
Certificate of Conformance:	
[View](#)	
Reach 247:	
[Compliant](#)	

Product Details

For optimal performance, center the laser beam to the entrance lens and ensure that the beam is parallel to the beam expander's optical axis.

- 1X – 3X and 2X – 8X Variable Magnification
- Non-Rotating Lenses Minimize Beam Wander
- Compact Galilean Designs with Fixed Housing Length
- [TECHSPEC® Draconis® Broadband Beam Expanders](#) Also Available

TECHSPEC® Research-Grade Variable Beam Expanders (RVBX) are ideal for high power laser applications where magnification changes may be required, such as prototyping or R&D. TECHSPEC Research-Grade Variable Beam Expanders feature λ/4 transmitted wavefront, Galilean designs, and high laser damage threshold AR coatings to ensure maximum transmittance while minimizing ghost reflections. Additionally, these beam expanders use internal translation and focusing mechanisms to variable adjust magnification and laser divergence without affecting overall housing length. This compact design removes the need to make system accommodations for changes in length and eases system integration.

TECHSPEC Research-Grade Variable Beam Expanders can be used to determine a system's required beam magnification in the prototyping phase of development. [TECHSPEC® Draconis® Broadband Beam Expanders](#) are available for production or OEM implementation. Please contact our [Sales Department](#) for custom magnification requirements.

Technical Information

1X - 3X Variable Beam Expander
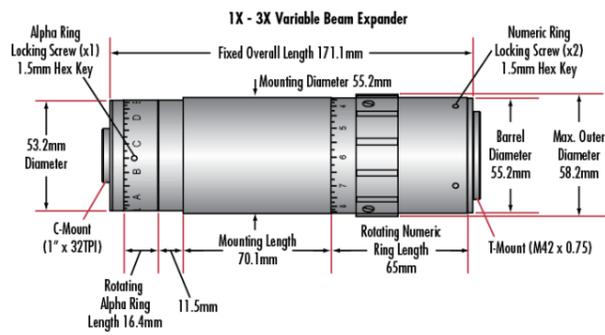
Design Wavelength	Stock No.	Fixed Overall Length A (mm)	Mounting Length E (mm)	Rotating Numeric Ring Length F (mm)	Rotating Alpha Ring Length G (mm)
355nm	#87-566	169.7	35.9	90.7	19.4
532nm	#87-567	169.3	31.5	70.4	43.7
Broadband VIS (633nm)	#87-569	169.3	31.5	70.4	43.7
Broadband NIR (785nm)	#87-570	169.3	31.5	70.4	43.7
1064nm	#87-568	169.3	31.5	70.4	43.7

2X - 8X Variable Beam Expander
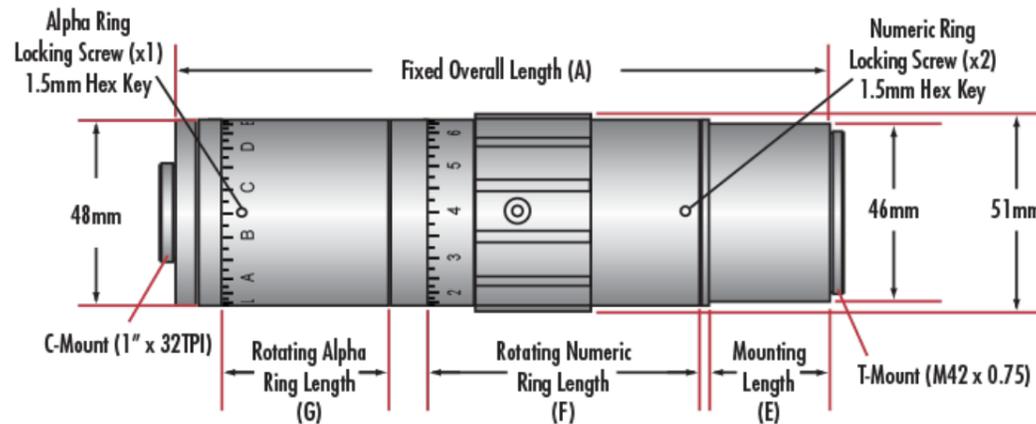
Custom

Edmund Optics offers comprehensive custom manufacturing services for optical and imaging components tailored to your specific application requirements. Whether in the prototyping phase or preparing for full-scale production, we provide flexible solutions to meet your needs. Our experienced engineers are here to assist—from concept to completion.

Our capabilities include:

- Custom dimensions, materials, coatings, and more
- High-precision surface quality and flatness
- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

Learn more about our **custom manufacturing capabilities** or submit an inquiry **here.**