

TECHSPEC® 4X, NIR Vega® Broadband Beam Expander



TECHSPEC® Vega™ Broadband Beam Expanders

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1

+

S\$554⁰⁰

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General	
Beam Expander	Type:
Fixed Magnification	Style:
Physical & Mechanical Properties	
92.60	Length (mm):
160	Weight (g):

39.95	Housing Diameter (mm):
Optical Properties	
7.5	Entrance Aperture (mm):
26	Exit Aperture (mm):
4X	Expansion Power:
Fused Silica	Substrate: ☐
>95.0 (nominal)	Transmission (%):
0	Angle of Incidence (°):
Laser NIR (1030-1550nm)	Coating:
Broadband	Design Wavelength DWL (nm):
$\lambda/10$ for 4.0mm input beam (nominal, λ = DWL)	Transmitted Wavefront, P-V:
1030 - 1550	Wavelength Range (nm):
Ravg $\leq$ 0.7% @ 1030 - 1550nm @0° AOI	Coating Specification:
2 J/cm ² @ 1064nm, 20ns, 20Hz	Damage Threshold, By Design: ☐
Rotating Optics	Divergence Adjustment:
2 J/cm2 @ 1064nm, 20ns, 20Hz	Damage Threshold, Pulsed:

Threading & Mounting	
Mounting Threads: Input: Male M80 x1 Output: Female M34 x0.5	

Regulatory Compliance	
Compliant	RoHS 2015:
View	Certificate of Conformance:
Compliant	Reach 250:

Product Details

- AR Coated for Broadband Tunable Laser Sources
- Fixed Magnifications Available from 1.5X to 20X
- Divergence Adjustable through Rotating Optical Design

TECHSPEC® Vega® Broadband Beam Expanders are designed for demanding tunable laser sources. These compact beam expanders are optimized at a wide range of wavelengths, with designs achieving $\lambda/10$ transmitted wavefront error and no internally focusing ghost images for compatibility with high power lasers. TECHSPEC Vega Broadband Beam Expanders are easily integrated into prototype and advanced applications while maintaining quality across the adjustment range. They are ideal for medical laser applications employing Thulium and Holmium sources.

Note: The length of these beam expanders will change upon divergence adjustment, typically by 1 to 2mm from the specified length.

TECHSPEC Vega® Laser Line Beam Expanders are also available. For more cost sensitive applications, Edmund Optics also offers TECHSPEC Scorpii® Nd:YAG Beam Expanders. For HeNe laser applications, TECHSPEC Arcturus® HeNe Beam Expanders are available. For higher precision applications where sliding optics are necessary, please see our TECHSPEC Draconis® Nd:YAG Laser Line Beam Expanders or TECHSPEC Draconis® Broadband Beam Expanders. For broadband or ultrafast applications, TECHSPEC Canopus® Reflective Beam Expanders are available.

To learn more about the difference between the 2µm and 2µm low OH⁻ content beam expanders, along with the different types of fused silica, review our [UV vs. IR Grade Fused Silica application note](#).



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](#).
