

TECHSPEC® 355nm 2X - 8X Gemma® Variable Beam Expander



Stock #15-546 **1 In Stock**

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General

Beam Expander **Type:**

Continuous Variable Magnification **Style:**

Physical & Mechanical Properties

162.89 **Length (mm):**

508 **Weight (g):**

Housing Diameter (mm):

48

Pointing Accuracy (mrad):

< 1

Optical Properties

Entrance Aperture (mm):

10

Exit Aperture (mm):

35

Expansion Power:

2X- 8X

Substrate:

[Fused Silica](#) (Corning 7980)

Transmission (%):

> 97.5 @ DWL

Coating:

Laser V-Coat (355nm)

Design Wavelength DWL (nm):

355

Transmitted Wavefront, P-V:

< $\lambda/4$ for Input Beam 3mm (2X-6X)

< $\lambda/4$ for Input Beam 2.5mm (2X-8X)

Wavelength Range (nm):

355

Coating Specification:

Rabs < 0.25% @ 355nm

Damage Threshold, By Design:

7.5 J/cm² @ 20ns , 20 Hz @ 355 nm

Divergence Adjustment:

Non-Rotating Optics

Threading & Mounting

Mounting Threads:

Input: Male M30 x 1.0

Output: Female M42 x 0.5

Regulatory Compliance

Certificate of Conformance:

[View](#)

Country of Origin:

United States

Imported By:

Edmund Optics India Private Limited

Need different specs or modifications?

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](#).

Product Details

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

TECHSPEC® Gemma® Variable Beam Expanders are ideal for high power laser applications where magnification changes may be required, such as prototyping or R&D. TECHSPEC Variable Beam Expanders feature $\lambda/4$ 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 continuously adjust magnification and laser divergence without affecting overall housing length. TECHSPEC® Gemma® Variable Beam Expander allow for continuous magnification change over the full magnification range.

TECHSPEC® Gemma® 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.