

## CHAPTERS

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## SECTIONS

Beam Expanders

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Lenses

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EO Modulators

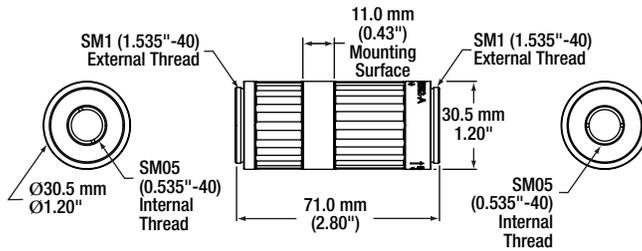
Reference Cells

## Variable Beam Reducer/Expander: 0.5X to 2X Range

NEW  
products

## Features

- Galilean Variable Beam Adjuster, 0.5X to 2X Expansion
- Achromatic Design Minimizes the Divergence of Multiwavelength Beams
- 400 to 700 nm or 650 to 1050 nm Antireflection-Coated Lenses
- Air-Spaced Optical Design with Large Input Aperture
- Sliding Lenses to Reduce Beam Walk
  - Can Increase and Decrease Beam Size without Realigning the Setup
- Can be used to Match Beam Sizes when Illuminating an Object with Two Separate Beams
- Functions as a Zero Magnification Collimation Device
- Cage System and Lens Tube Compatible



Thorlabs' 0.5X to 2X variable beam expander allows the user to easily adjust the beam diameter without needing to adjust the alignment of the optical setup. In addition, the input lens can be translated in order to adjust the divergence/convergence of the output beam. As seen in the drawing, both the input and output ends of the beam expander have SM05 (0.535"-40) and SM1 (1.035"-40) threading which makes it easy to integrate into our entire line of optomechanical components. The 11.0 mm wide mounting ring between the focus and magnification adjustment rings has a diameter of  $\text{\O}1.20''$ , which is identical to Thorlabs' SM1 lens tubes.

## Specifications

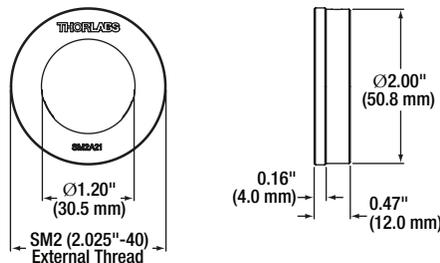
- Scratch-Dig: 20-10
- Wavefront Error:  $< \lambda/4$  with Beam Diameter  $1/e^2 < 6$  mm
- AR Coating:  $R < 0.5\%$  Over Coating Range
- Input Clear Aperture:  $> 9$  mm
- Magnification Range: 0.5X - 2X
- Input/Output Mounting Threads: Internal SM05 and External SM01

As a result our SM1RC (see page XXX) or SM1TC (see page XXX) can be used to post mount the beam expander. Alternatively the SM2A21 adapter presented below can be used to convert the mounting ring outer diameter to 2".

ITEM #	MAX INPUT $1/e^2$ BEAM DIAMETER	INPUT APERTURE	AR COATING	\$	£	€	RMB
BE052-A	$\text{\O}6.0$ mm (0.5X) $\text{\O}3.0$ mm (2X)	$\text{\O}10.0$ mm	400 - 700 nm	\$ 790.00	£ 568.80	€ 687,30	¥ 6,296.30
BE052-B	$\text{\O}6.0$ mm (0.5X) $\text{\O}3.0$ mm (2X)	$\text{\O}10.0$ mm	650 - 1050 nm	\$ 790.00	£ 568.80	€ 687,30	¥ 6,296.30

## Beam Expander 2" Mounting Adapter

This adapter fits in  $\text{\O}2''$  threaded mounts and holders and has an SM2 external thread. The adapter was designed for the BE052 series of beam expanders featured above.

NEW  
product

ITEM #	\$	£	€	RMB	DESCRIPTION
SM2A21	\$ 39.00	£ 28.08	€ 33,93	¥ 310.83	$\text{\O}1.20''$ to External SM2 (2.035"-40) Adapter