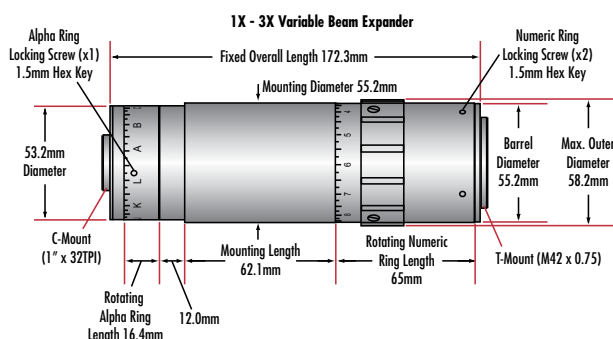
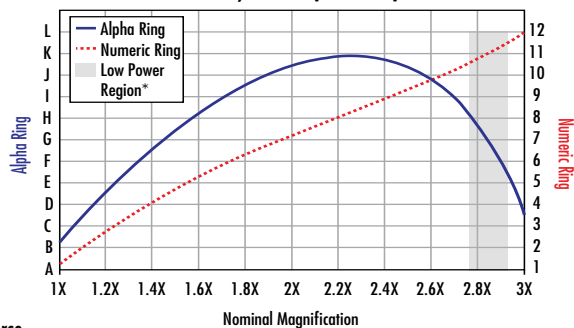


**1X-3X, 785nm, #87-564**


**Variable Beam Expander Magnification Settings**  
**1X-3X, 785nm (#87-564)**



\*See reverse

Beam expander magnification and collimation is set by adjusting both the Alpha and Numeric rings using the magnification settings chart as a guideline. Nominal magnification is indicated along the x-axis, and the settings of the Alpha and Numeric rings are indicated along the y-axes. The **blue curve** follows the rotation of the Alpha ring and the **red curve** follows the rotation of the Numeric ring. **Note:** These are nominal settings. Some adjustment for your individual application may be necessary for optimal performance.

To set the beam expander to a specific magnification:

1. Find the desired nominal magnification along the x-axis and trace a vertical line up through the blue and red curves.
2. The intersection of that vertical line with the **blue curve** corresponds to a letter on the left y-axis. Rotate the alpha ring to that location. Hash marks are provided between each letter on the ring to help dial in the required magnification.
3. The intersection of that vertical line with the **red curve** corresponds to a number on the right y-axis. Rotate the numeric ring to that location. Hash marks are provided between each number on the ring to help dial in the required magnification.

**For Example -** To set a magnification of 2.6X, turn the alpha ring to J and the numeric ring to 10.

**1X-3X, 785nm, #87-564****Low Power Region**

The 1X-3X Variable Beam Expanders, at certain settings, have a back reflection off an internal optical surface resulting in reduction of the laser damage threshold.

This Low Power Region, is indicated on the beam expander as a small white rectangle on the numeric ring. Anytime the numeric ring is aligned to a number in that zone, regardless of the alpha ring setting, the laser damage threshold is no longer guaranteed. This region is also indicated on the magnification settings chart by the grey bar (See reverse).

**Low Power Region:**  
Laser Damage Threshold  
not Guaranteed