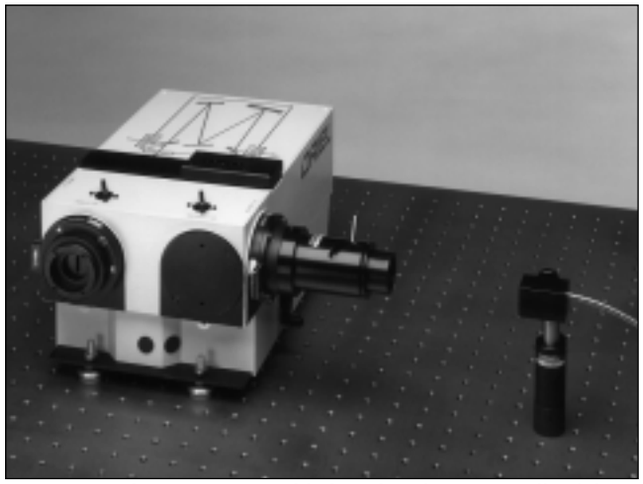
FOCUSING LENS ASSEMBLY



77330 Focusing Lens Assembly imaging the output slit of the 77200 Monochromator onto a fiber bundle.

- **Input or output imaging assembly for monochromators and spectrographs**
- **Easily interchangeable 1 inch diameter lenses**
- **Has 1.5 Inch Series flanges to couple directly to Oriel Instruments**

Our 77330 is a useful accessory for Oriel Monochromators and Spectrographs. It re-images a source onto the instrument's input slit, or images the monochromator output onto a detector, fiber or sample. It lacks X-Y image adjustment, so it is best used in arrangements where precision alignment is not required (e.g. large source and targets), or where the adjustments are already available (as in our lamp housings). For an X-Y-Z Lens Assembly see the previous page.

The 77330 accepts any 1 inch (25 mm) diameter lens, but does not include the lens. The clear aperture is 0.8 inches (20 mm).

NOT JUST FOR MONOCHROMATORS

The 77330 isn't just for monochromators or spectrographs. Because the lens is interchangeable and you have a total focus adjustment range of 2.9 inches (74 mm), you can use the 77330 as a collimating (see Fig. 1) or focusing assembly for a light source. Use it to focus an excitation source on the cell in the 78100 Sample Compartment.

2.9 INCH FOCUS ADJUST

The 77330 holds a single lens, housed inside a lens barrel with a focusing sleeve. A manual focusing lever moves the lens. Tapped holes in the lens barrel let you set the range of the lever adjust; this combination results in a total lens adjustment range of 2.9 inches (74 mm). See Fig. 2 for a diagram.

MOUNTING

The 77330 has a 1.5 Inch Series female and male flange so you can mount it directly to monochromators and other instruments. Beam paths are enclosed and optical axes are aligned.

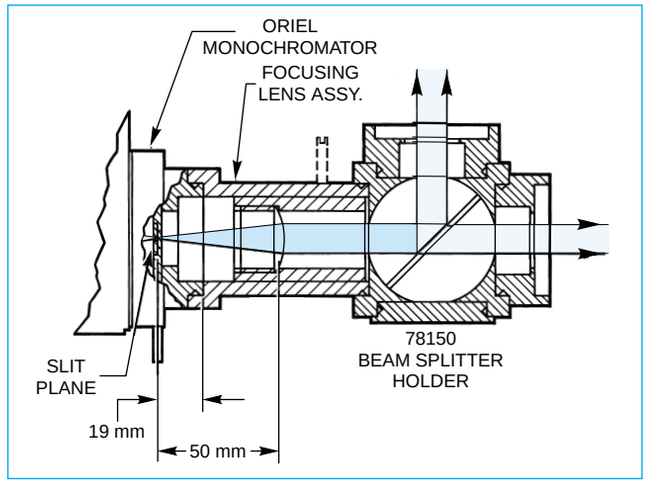


Fig. 1 77330 used to collimate the input to the 78150 Beam Splitter Holder, from a monochromator.

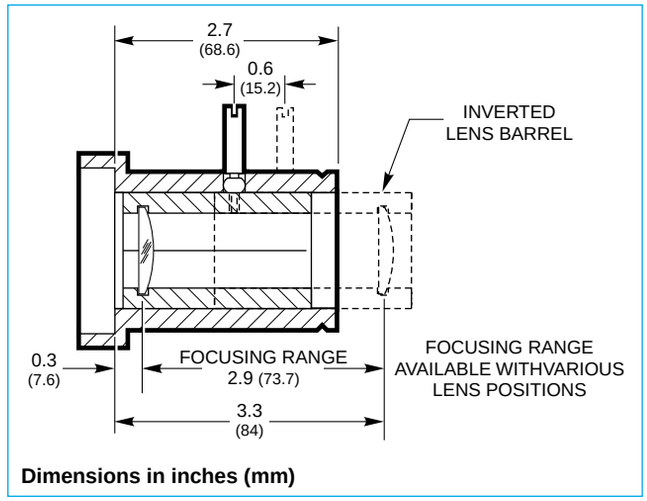


Fig. 2 Dimensional diagram of 77330 Focusing Lens Assembly.

TECH NOTE

For most imaging applications, we recommend a 32 mm focal length lens, as shown in Fig. 3 on the following page. The distance from the flange to the slit plane on our monochromators and spectrographs is 0.74 inch (19 mm). With a 32 mm focal length lens, the F/# of the focused beam is F/4.

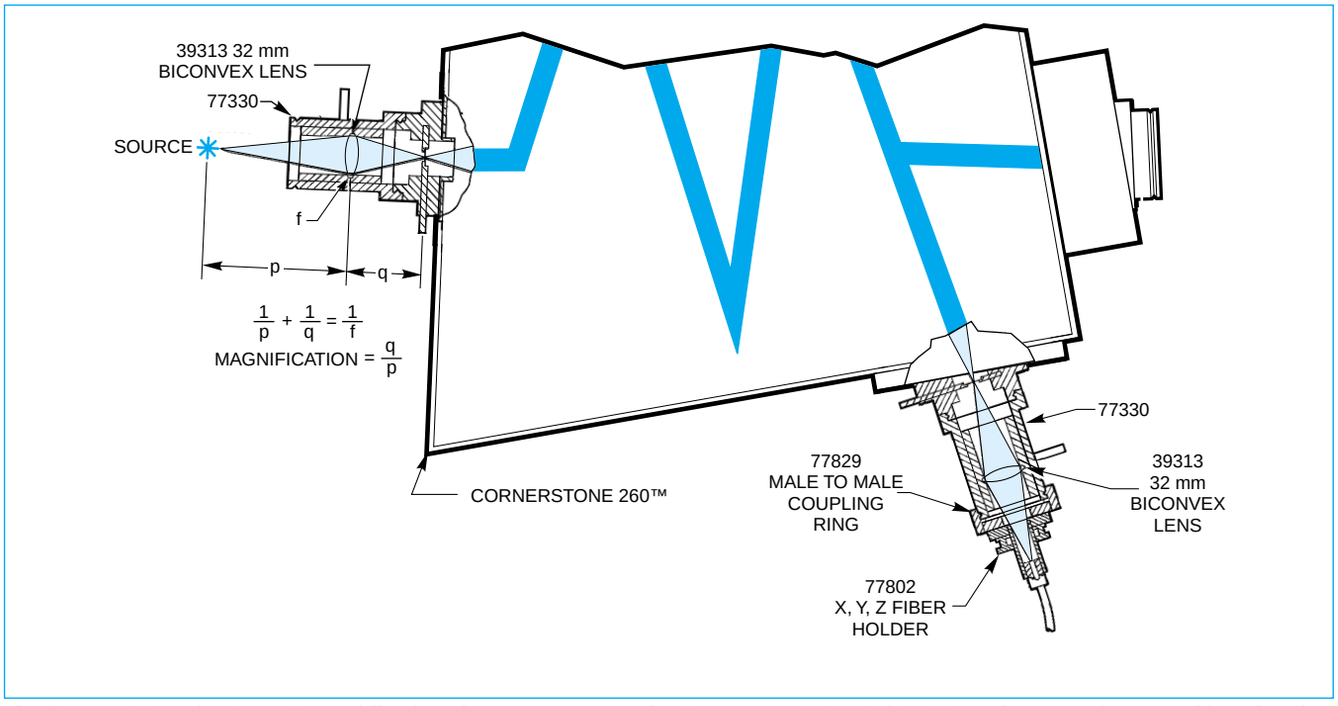
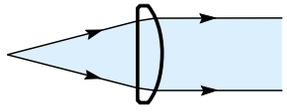
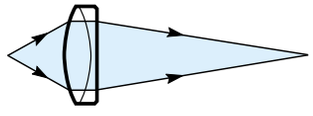
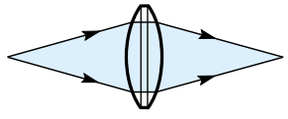


Fig. 3 77330 Focusing Lens Assemblies imaging a source onto the Cornerstone™ 260 1/4 m Monochromator input, and imaging the monochromator output onto a fiber bundle. On the second 77330 we've used the 77829 Male to Male Coupling ring because the 77802 X-Y-Z Fiber Holder also has a male flange.

POPULAR LENSES

Section IX of this catalog features our full range of lenses for the UV, VIS and IR. Below we list the most popular models. Make your selection based on the lens type, material and focal length. The 77330 holds 1.0 inch (25 mm) diameter lenses.

SPECIFICATIONS AND ORDERING INFORMATION

Lens Type		Lens Material	Usable Wavelength Range	Focal Length (mm)	Model No.	Price
Plano convex (For collimated beams or high magnification)		Fused Silica	190 nm to 2.5 µm	33 38 50 63 75	**41329** **41330** **41340** **41345** **41350**	
		Borosilicate Crown Glass	330 nm to 2.2 µm	33 38 50 63 75	**40329** **40330** **40340** **40345** **40350**	
Achromat (For best imaging)		BK 7/A crown glass and flint glass	400 nm to 2.0 µm	60 80 100	**42520** **42530** **42540**	
Bi-convex (For imaging with little change in magnification)		Fused Silica	190 nm to 2.5 µm	32 38 51 63 76	**39313** **39314** **39315** **39316** **39317**	
		Borosilicate Crown Glass	330 nm to 2.2 µm	33 39 51.7 63.6 76.6	**39213** **39214** **39215** **39216** **39217**	

77330 Focusing Lens Assembly
Order 1 lens separately from table above