

# Sampling Accessories

## Collimating Lenses

### 74-Series Lens Fixtures

Our 74-Series Collimating Lens Fixtures are the common fiber optic-coupled lens fixtures used throughout our extensive line of sampling accessories. They feature an inner barrel threaded for SMA 905 Connectors.

### 74-UV Collimating Lens

(200-2000 nm) The 74-UV has an f/2 fused silica lens for 200-2000 nm. When focused for collimation, beam divergence is 2° or less, depending on fiber diameter. The 74-UV can be adjusted for UV-VIS or VIS-NIR setups.

### 74-90-UV Collimating Lens

(200-2000 nm) The 74-90-UV features a mirror located under its cap that reflects light from the collimating lens to 90°. The mirror is coated with a UV-enhanced aluminum substrate that is >80% reflective from 200-2000 nm.

### 74-VIS Collimating Lens

(350-2000 nm) The 74-VIS has a BK7 lens suitable for the VIS-NIR. These single-lens systems have the disadvantage of chromatic aberration, due to dispersion or variation in refractive index with wavelength.

### 74-ACR Collimating Lens

(350-2000 nm) The 74-ACR has two optical elements cemented together to form an achromatic doublet, optimized to correct for spherical and chromatic aberrations.

### 74-DA Collimating Lens

(200-2000 nm) The 74-DA Direct-attach Collimating Lens screws on to a spectrometer's SMA 905 Connector for increased light throughput. The lens collects collimated light in a straight path of open air and focuses it onto a spectrometer's slit.

### COL-UV-30 Collimating Lens

(200-2000 nm) This 74-series Collimating Lens is our largest-diameter lens – 30 mm – and couples to SMA 905 connectors for simple use.

### 84-Series Lens Fixtures

(200-2000 nm) The 84-Series Collimating Lens is designed for coupling larger free-space beams to optical fibers. The fiber is coupled to the assembly with an inner 17.85 mm threaded barrel. The barrel positions the fiber ~100 mm from the lens surface and is turned to achieve a fine focus.



| Item      | Diameter | Focal Length | Material                        | Range       | Operating Temp | Connector   |
|-----------|----------|--------------|---------------------------------|-------------|----------------|---|
| 74-UV     | 5 mm     | 10 mm        | f/2 fused silica Dynasil        | 200-2000 nm | 150 °C         | SMA 905, 6.35-mm ferrule, 3/8-24 external thread        |
| 74-90-UV  | 5 mm     | 10 mm        | f/2 fused silica Dynasil        | 200-2000 nm | 120 °C         | SMA 905, 6.35-mm ferrule, 3/8-24 external thread        |
| 74-VIS    | 5 mm     | 10 mm        | f/2 BK7 glass                   | 350-2000 nm | 150 °C         | SMA 905, 6.35-mm ferrule, 3/8-24 external thread        |
| 74-ACR    | 5 mm     | 10 mm        | f/2 BaF10 and FD10 fused silica | 350-2000 nm | 150 °C         | SMA 905, 6.35-mm ferrule, 3/8-24 external thread        |
| 74-DA     | 5 mm     | 10 mm        | f/2 fused silica Dynasil        | 200-2000 nm | 150 °C         | SMA 905, 1/4-36 internal thread, 3/8-24 external thread |
| COL-UV-30 | 30 mm    | 30 mm        | f/2 fused silica Suprasil       | 200-2000 nm | 200 °C         | SMA 905, 6.35-mm ferrule, 1/4-36 external thread        |
| 84-UV-25  | 25.4 mm  | 100 mm       | f/2 fused silica Dynasil        | 200-2000 nm | 70 °C          | SMA 905, 6.35-mm ferrule, 1/4-36 external thread        |