The AF-L Series of Fiber Optic Adapters will optically match the Numerical Aperture of a SP fiber (NA = 0.22) to the f/# of a SP Monochromator or spectrograph while mechanically joining the two.

As an input adapter, the AF-L Series focuses the light from the fiber onto the entrance slit. The magnified fiber image fills more of the slit. All of the light entering the slit strikes the grating. The efficiency of this coupling is 4 to 20 times better than a direct non-matched coupling.

As an output adapter, the AF-L Series focuses the light from the exit slit onto the fiber. The demagnified slit image concentrates light onto the fiber’s face and takes advantage of the fiber’s “faster” collection angle. The efficiency of this coupling is 2 to 4 times better than direct non-matched coupling.

These dramatic increases in efficiency support applications where low light levels make direct fiber coupling impractical.

Fluorescence analysis, spectral analysis of LEDs and laser diodes, and detector characterization all benefit from this efficiency. Fibers used as detection probes with the AF-L Series can take full advantage of their inherent wide acceptance angle for increased light collection. Fibers used as illumination probes with the AF-L Series can deliver up to 4 times more intensity than with direct coupling. In addition, the fiber will illuminate over its full Numerical Aperture.

The AF-L Series **allow three axes of precise fiber translation**. Precision of better than 0.001” in linear movement is typical.

Because UV lenses are standard, the AF-L Series provides better than 90% transmission from 200nm to 1900nm.
Specifications:

Adjustment:
- X and Y Axes: 80-pitch adjustment screws, 0.0002" linear movement for 5° of adjustment screw rotation; 10mm range
- Z-Axis: 0.0005" linear movement for 5° of collar rotation; 5mm range

Wavelength Range:
- 200-1900nm @ > 90% transmission

Warranty:
- One year

Ordering Information: Please indicate product number plus description when ordering.

- f/# matching Fiber Optic Adapter for CMSeries monochromators/spectrographs:
  - AFCM-L-SM with SMA end plate
  - AFCM-L-FC with FC/PC end plate
  - AFCM-L-ST with ST end plate
  - AFCM-L-CS with 10mm ferrule end plate

- f/# matching Fiber Optic Adapter for DK240/DK242 monochromators/spectrographs:
  - AFDK240-L-SM with SMA end plate
  - AFDK240-L-FC with FC/PC end plate
  - AFDK240-L-ST with ST end plate
  - AFDK240-L-CS with 10mm ferrule end plate

- f/# matching Fiber Optic Adapter for DK480 monochromators/spectrographs:
  - AFDK480-L-SM with SMA end plate
  - AFDK480-L-FC with FC/PC end plate
  - AFDK480-L-ST with ST end plate
  - AFDK480-L-CS with 10mm ferrule end plate

Dimensions in inches