

## FIBER-OPTIC COUPLING ACCESSORIES

### BC-1 Series Fiber-Optic Input Coupler

The BC-1 Input Coupler is a convenient way to launch a free-space CW or pulsed laser beam into an optical fiber. It includes focusing and alignment optics, a 1"-diameter mounting disk, and an FC-style fiber-optic connector. A well-collimated laser beam enters the aperture in the center of the mounting disk and is focused into a fiber-optic patch cord that is attached to the FC connector. Built-in optics provide two slightly off-axis back reflections to facilitate alignment using a standard two-axis angular optical mount.

Two different versions of the BC-1 Fiber-Optic Input Coupler are available. The "F" version is for use with single-mode fiber (nominally 9  $\mu\text{m}$  core diameter) and is typically used with CW lasers. The "D" version is a more convenient way to launch pulsed lasers into fiber because it is adjusted for larger diameter multi-mode fiber (nominally 60  $\mu\text{m}$ ).

### LC-1 Series Fiber-Optic Input Coupler

The LC-1 Input Coupler is a convenient way to launch a free-space CW laser beam into an optical fiber. It includes focusing and alignment optics, a 1"-diameter mounting disk, and a 9  $\mu\text{m}$  core-diameter fiber that is terminated with an FC/UPC or FC/APC connector.

A well-collimated laser beam enters the aperture in the center of the mounting disk and is focused into the fiber. Built-in optics provide two slightly off-axis back reflections to facilitate alignment using a standard two-axis angular optical mount.



#### SPECIFICATIONS

<b>WAVELENGTH RANGE</b>	VIS 375 - 1100 nm NIR 520 - 1700 nm
<b>APERTURE</b>	2.5 mm
<b>MOUNTING DISK DIAMETER</b>	1" (25.4 mm)
<b>FIBER-OPTIC CONNECTOR</b>	1" (25.4 mm)
<b>COUPLING EFFICIENCY</b> <sup>1, 2, 3</sup>	F-version 5 - 35% (single-mode fiber) ~ 50% (multi-mode fiber) D-version ~ 50% (multi-mode fiber)
<b>MAXIMUM INPUT ENERGY</b> <sup>3</sup>	F-version 5 $\mu\text{J}$ D-version 200 $\mu\text{J}$

(1) With TEM<sub>00</sub> collimated beam.

(2) Wavelength dependent.

(3) Characteristic performance, but non-warranted.



#### SPECIFICATIONS

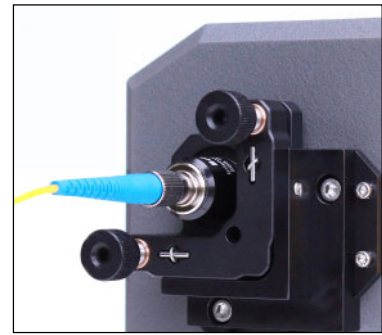
<b>WAVELENGTH RANGE</b>	VIS 400 - 1100 nm NIR 520 - 1700 nm UV 350 - 1100 nm
<b>APERTURE</b>	2.5 mm
<b>MOUNTING DISK DIAMETER</b>	1" (25.4 mm)
<b>OPTICAL FIBER</b>	3 meters (2 meters for UV) 9 $\mu\text{m}$ core diameter terminated with FC/UPC or FC/APC connector
<b>COUPLING EFFICIENCY</b> <sup>1, 2, 3</sup>	5 - 35%

(1) With TEM<sub>00</sub> collimated beam.

(2) Wavelength dependent.

(3) Characteristic performance, but non-warranted.

## FA Series IR Fiber-Optic Adapter



The FA Series IR Adapter enables fiber-optic input with the IR and MIR versions of the 671 Laser Wavelength Meter and the 771 Laser Spectrum Analyzer. It mounts directly onto the front panel of these instruments. It includes a connector that can accept an FC/PC optical fiber with a core diameter as large as 50  $\mu\text{m}$ . It also includes a 2-axis angular adjustment for alignment purposes.

The FA Series IR Adapter must be ordered with the desired 671/771 system. It is attached and aligned at the factory. Due to various factors, including the difficulty in achieving optimum alignment, wavelength measurement accuracy is reduced to  $\pm 3$  parts per million.

SPECIFICATIONS	
WAVELENGTH RANGE	IR1 1-7 $\mu\text{m}$ IR2 7-12 $\mu\text{m}$
FIBER-OPTIC CONNECTOR	FC/PC
FIBER CORE DIAMETER <sup>1</sup>	$\leq 50 \mu\text{m}$
THROUGHPUT <sup>2, 3</sup>	IR1 > 40% IR2 > 80%
WAVELENGTH ACCURACY <sup>1</sup>	$\pm 3$ parts per million

(1) Larger core diameter fiber may be used, but performance has not been characterized.

(2) Assumes fiber NA of 0.1.

(3) Characteristic performance, but non-warranted.

## Fiber-Optic Patch Cables

Single-mode and multi-mode fiber-optic patch cables are available for a variety of applications.

- SMF-320/430-PC** - single-mode fiber over 320-430 nm, FC/PC termination, 2 m length
- SMF-320/430-APC** - single-mode fiber over 320-430 nm, FC/APC termination, 1 m length
- SMF-405/532-PC** - single-mode fiber over 405-532 nm, FC/PC termination, 2 m length
- SMF-405/532-APC** - single-mode fiber over 405-532 nm, FC/APC termination, 2 m length
- SMF-488/633-PC** - single-mode fiber over 488-633 nm, FC/PC termination, 2 m length
- SMF-488/633-APC** - single-mode fiber over 488-633 nm, FC/APC termination, 2 m length
- SMF-633/780-PC** - single-mode fiber over 633-780 nm, FC/PC termination, 2 m length
- SMF-633/780-APC** - single-mode fiber over 633-780 nm, FC/APC termination, 2 m length
- SMF-780/970-PC** - single-mode fiber over 780-970 nm, FC/PC termination, 2 m length
- SMF-780/970-APC** - single-mode fiber over 780-970 nm, FC/APC termination, 2 m length
- SMF-830/980-PC** - single-mode fiber over 830-980 nm, FC/PC termination, 2 m length
- SMF-830/980-APC** - single-mode fiber over 830-980 nm, FC/APC termination, 2 m length
- SMF-980/1550-PC** - single-mode fiber over 980-1550 nm, FC/PC termination, 2 m length
- SMF-980/1550-APC** - single-mode fiber over 980-1550 nm, FC/APC termination, 2 m length
- SMF-1260/1625-PC** - single-mode fiber over 1260-1625 nm, FC/PC termination, 2 m length
- SMF-1260/1625-APC** - single-mode fiber over 1260-1625 nm, FC/APC termination, 2 m length
- SMF-1700/2300-PC** - single-mode fiber over 1700-2300 nm, FC/PC termination, 2 m length
- SMF-2300/4100-PC** - single-mode fiber over 2300-4100 nm, FC/PC termination, 2 m length
- MMF-62.5-UPC** - multi-mode graded index fiber, 62.5  $\mu\text{m}$  diameter, FC/PC termination, 2 m length
- MMF-62.5-APC** - multi-mode graded index fiber, 62.5  $\mu\text{m}$  diameter, FC/APC termination, 2 m length