

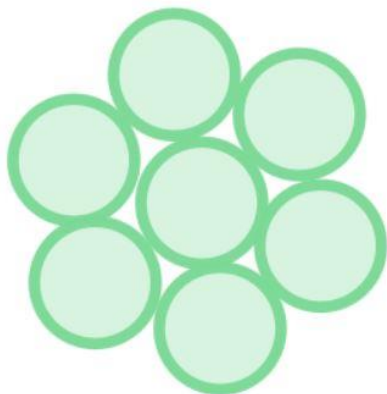
Fiber Bundles and Adapters

Several different fiber optic bundles are designed specifically for use with Pricneton Instruments monochromators and spectrographs. Standard bundles included 200 μm diameter fibers in either silica for UV-VIS, or anhydroguide for visible-near IR applications.

Fibers are arranged as a slit pattern (in 10 mm diameter ferrule) on the spectrograph end, with a round configuration (in SMA 905 connectors) on the sources end. Bundles include a single leg bundle containing 19 fibers, a bifurcated bundle with 7 fibers per leg, and a 4 leg bundle containing 3 fibers per leg.

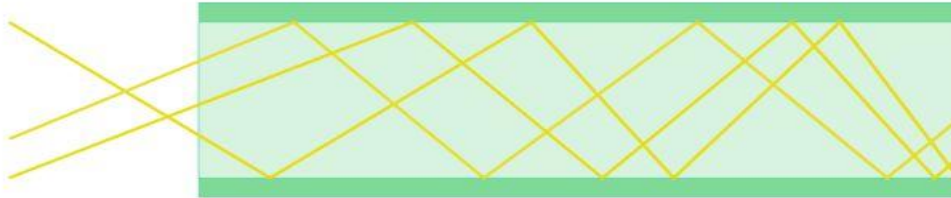
Key Features

Long Transfer Distance



Optical fibers are made of a transparent, flexible fiber used to transmit light between two ends of the fiber. This gives them the ability to transmit light over longer distances at higher bandwidths in comparison to electrical cables. Fiber bundles are useful as they allow for a large amount of light to be transmitted in a compact area

Waveguide Operation



Total internal reflection within the core of the optical fiber allows the fiber to act as a waveguide.

This core is surrounded by a transparent cladding which keeps the light in the core by having a lower index of refraction.

Family Models

Model	Description	Available for
LG-455-020-1	Single leg fiber optic bundle, 1 meter, 190 to 1100 nm. With 19 200 μm fibers, SMA connector at illumination end, 10 mm ferrule at slit end.	Princeton Instruments Spectra Pro, HRS and IsoPlane
LG-455-020-3	Single leg fiber optic bundle, 3 meters, 190 to 1100 nm. With 19 200 μm fibers, SMA connector at illumination end, 10 mm ferrule at slit end. Reference Drawing Number 8401-031-23.	Princeton Instruments Spectra Pro, HRS and IsoPlane
LG-456-020-1	Single leg fiber optic bundle, 1 meter, 400 to 2200 nm. With 19 200 μm fibers, SMA connector at illumination end, 10 mm ferrule at slit end.	Princeton Instruments Spectra Pro, HRS and IsoPlane
LG-456-020-3	Single leg fiber optic bundle, 3 meters, 400 to 2200 nm. With 19 200 μm fibers, SMA connector at illumination end, 10 mm ferrule at slit end.	Princeton Instruments Spectra Pro, HRS and IsoPlane
QFB-455-3	Four-leg fiber optic bundle, 1 meter long for	Princeton Instruments

	190 to 1100 nm, with three 200 μ m fibers per leg, SMA connector at illumination end, 10 mm ferrule at slit end.	Spectra Pro, HRS and IsoPlane
BFB-455-7	Two-leg fiber optic bundle, 1 meter, long for 190 to 1100nm, with seven 200 μ m fibers per leg, SMA connector at illumination end, 10 mm ferrule at slit end.	Princeton Instruments Spectra Pro, HRS and IsoPlane
CM-446-050	F-mount lens adapter, slit mount	Princeton Instruments Spectra Pro, HRS and IsoPlane
FC-446-010	Fixed position fiber adapter with 10 mm diameter ferrule	Princeton Instruments Spectra Pro, HRS and IsoPlane
FC-446-010-FC	Fixed position fiber adapter for FC connector	Princeton Instruments Spectra Pro, HRS and IsoPlane
FC-446-010-SMA	Fixed fiber adapter with SMA-905 connector	Princeton Instruments Spectra Pro, HRS and IsoPlane
FC-446-020	Adjustable fiber adapter with 10 mm diameter ferrule	Princeton Instruments Spectra Pro, HRS and IsoPlane
FC-446-020-FC	Adjustable fiber adapter for FC connector.	Princeton Instruments Spectra Pro, HRS and IsoPlane
FC-446-020-SMA	Adjustable fiber adapter with SMA-905 connector	Princeton Instruments Spectra Pro, HRS and IsoPlane
FC-446-021-U	Universal Fiber Coupler with X-Y micrometer control, 0.12 inches of travel, including interchangeable 10 mm diameter ferrule, SMA-905 and FC inserts. Includes slit baffle for use with Princeton Instruments spectrographs.	Princeton Instruments Spectra Pro, HRS and IsoPlane
FC-446-030	Imaging fiber adapter to refocus fiber optic input. For use with filter wheels or other devices placed between fiber end and slit. Accepts 10mm diameter ferrule, includes horizontal & vertical alignment capability.	Princeton Instruments Spectra Pro, HRS and IsoPlane