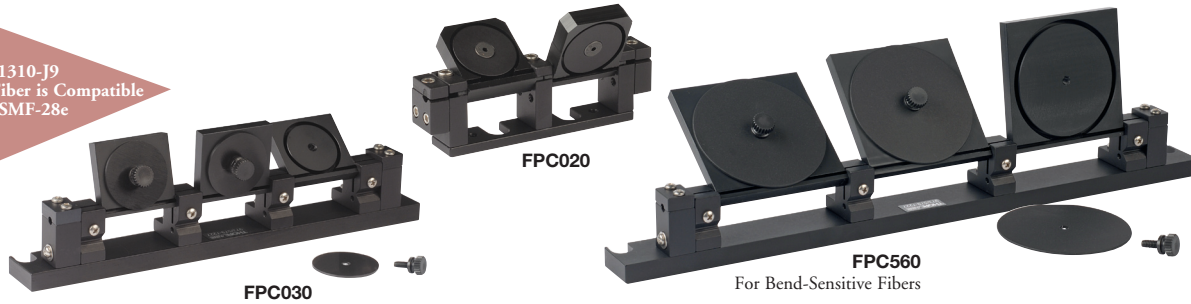


## Fiber Polarization Controllers

CCC1310-J9 SM Fiber is Compatible with SMF-28e



If your application includes single mode fiber and requires linearly polarized light, the FPC Series of Polarization Controllers can be easily implemented to convert elliptically polarized light in a single mode fiber into another state of polarization, including linearly polarized light. This polarization conversion is achieved by loading the paddles with a prescribed number of fiber loops and adjusting their positions to control the output polarization state.

These polarization controllers utilize stress-induced birefringence to create three independent fractional wave plates to alter the polarization of the transmitted light in the single mode fiber by looping the fiber into three independent spools. The miniature FPC020 Polarization Controller achieves the same results with just

two paddles. Please check our website for detailed operating theory.

The amount of birefringence induced in the fiber is a function of the fiber cladding diameter, the spool diameter (fixed), the number of fiber loops per spool, and the wavelength of the light. The fast axis of the fiber, which is in the plane of the spool, is adjusted with respect to the transmitted polarization vector by manually rotating the paddles. The FPC031, FPC032, FPC561, and FPC562 fiber polarization controllers come preloaded with fiber.

NOTE: The FPC030 and FPC020 Controllers work well with most of our single mode fibers. For fibers with higher bend loss (e.g., SMF-28e+), we recommend FPC560, which has larger paddles.

ITEM #	LOOP DIAMETER	PADDLE ROTATION	FOOTPRINT	OPERATING WAVELENGTH	CONNECTORS	BEND LOSS
FPC020	0.71" (18 mm)	±286°	3.06" x 0.5" (77.7 mm x 12.7 mm)	N/A	N/A	N/A
FPC030	1.06" (27 mm)	±117.5°	8.5" x 1.0" (216 mm x 25 mm)	N/A	N/A	N/A
FPC031	1.06" (27 mm)	±117.5°	8.5" x 1.0" (216 mm x 25 mm)	1260 - 1625 nm	FC/PC	≤0.1 dB
FPC032	1.06" (27 mm)	±117.5°	8.5" x 1.0" (216 mm x 25 mm)	1260 - 1625 nm	FC/APC	≤0.1 dB
FPC560	2.2" (56 mm)	±117.5°	12.5" x 1.0" (317.5 mm x 25 mm)	N/A	N/A	N/A
FPC561	2.2" (56 mm)	±117.5°	12.5" x 1.0" (317.5 mm x 25 mm)	1260 - 1620 nm	FC/PC	≤0.1 dB
FPC562	2.2" (56 mm)	±117.5°	12.5" x 1.0" (317.5 mm x 25 mm)	1260 - 1620 nm	FC/APC	≤0.1 dB

ITEM #	\$	£	€	RMB	DESCRIPTION
FPC020	\$ 184.00	£ 132.48	€ 160.08	¥ 1,466.48	Miniature 2-Paddle Fiber Polarization Controller
FPC030	\$ 190.00	£ 136.80	€ 165.30	¥ 1,514.30	3-Paddle Fiber Polarization Controller w/ Small Paddles, No Fiber
FPC031	\$ 232.40	£ 167.33	€ 202.19	¥ 1,852.23	3-Paddle Fiber Polarization Controller w/ Small Paddles, FC/PC Connectors, CCC1310-J9 Fiber
FPC032	\$ 252.40	£ 181.73	€ 219.59	¥ 2,011.63	3-Paddle Fiber Polarization Controller w/ Small Paddles, FC/APC Connectors, CCC1310-J9 Fiber
FPC560	\$ 211.20	£ 152.06	€ 183.74	¥ 1,683.26	3-Paddle Fiber Polarization Controller w/ Large Paddles, No Fiber
FPC561	\$ 253.60	£ 182.59	€ 220.63	¥ 2,021.19	3-Paddle Fiber Polarization Controller w/ Large Paddles, FC/PC Connectors, SMF-28e+ Fiber
FPC562	\$ 273.60	£ 196.99	€ 238.03	¥ 2,180.59	3-Paddle Fiber Polarization Controller w/ Large Paddles, FC/APC Connectors, SMF-28e+ Fiber

## Inline Fiber Polarization Controller

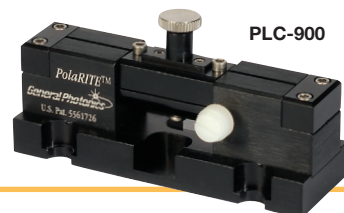
The PLC-900 polarization controller is ideal for applications that require a stable, compact, manual controller. It is designed to be used with Ø900 µm jacketed single mode fiber. Simply place the fiber in a channel and hold in place with end-clamps. An adjustable knob allows the fiber to be squeezed and rotated, providing the ability to convert an arbitrary input state of polarization into any other state of polarization; any point on the Poincare sphere may be set. A separate knob is used to lock the controller into position.

### Features

- Insensitive to Wavelength Variations
- Compact
- For Ø900 µm Tight-Buffered Fiber

### Specifications

- Insertion Loss: <0.05 dB
- Return Loss: >65 dB
- Extinction Ratio: >40 dB



ITEM #	\$	£	€	RMB	DESCRIPTION
PLC-900	\$ 510.00	£ 367.20	€ 443.70	¥ 4,064.70	Inline Fiber Polarization Controller for Ø900 µm Tight-Buffered Fiber