



# OZ OPTICS LTD.

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## ALL FIBER POLARIZATION CONTROLLER

### FEATURES:

- No Intrinsic Losses
- No Intrinsic Backreflection
- Compact Size
- Wavelength Insensitive
- Easy to Use
- Low Cost

### APPLICATIONS

- Fiber Lasers
- Fiber Interferometers
- Connecting Polarization Sensitive Devices
- Coherent Telecommunication Systems
- Polarization Dependent Loss Measurements

### SPECIFICATIONS

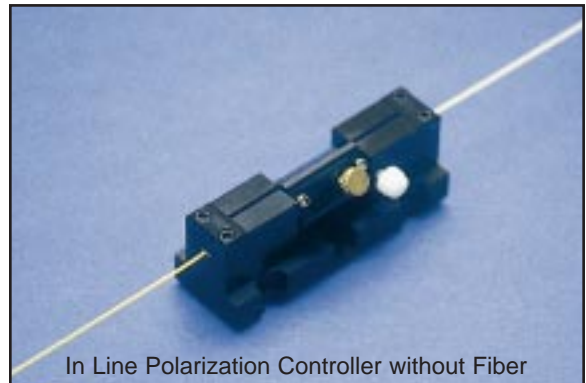
- **Output Extinction Ratios:** Over 35dB
- **Insertion Loss:** 0dB intrinsic  
0.5dB typical with connectors
- **Return Loss:** Infinite intrinsic  
>65dB for APC polish connectors  
>50dB for Ultra PC polish connectors  
>40dB for Super PC polish connectors  
25dB for standard flat connector
- **Fiber Size:** Any size singlemode
- **Wavelength Range:** 320 - 1650nm
- **Size:** 4 inches x 1 inch x 1.085 inches

### PRODUCT DESCRIPTION

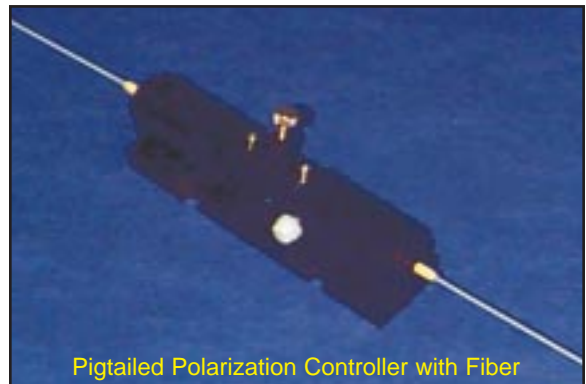
All Fiber polarization controllers allow one to convert any input polarization to any desired output polarization. The device combines the compact size and ease of use of standard bulk optics systems with low costs, low losses, and low backreflections.

The controller works by applying pressure with an adjustable clamp. The pressure on the fiber causes a birefringence within the fiber core, causing the fiber to act as a fractional wave plate. Varying the pressure varies the delay between the fast and slow polarization components. The clamp is rotatable, allowing one to change the direction in which the stress is applied. This allows any output polarization to be achieved. The process is simple and quick. Output polarizations exceeding 30dB can be routinely achieved in seconds.

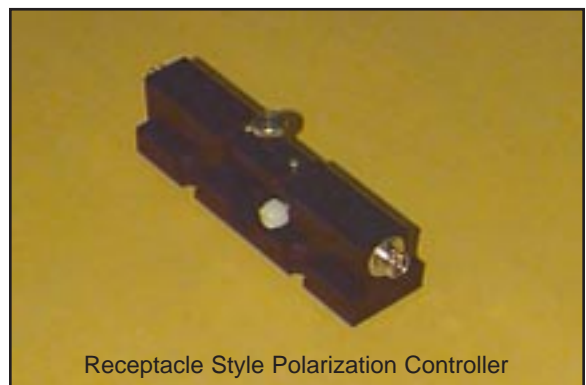
The fiber polarization controller works with singlemode fiber of any wavelength. The controller does not work with multimode or Polarization Maintaining (PM) fiber. For multimode and PM fiber OZ Optics still offers their standard series of polarization rotators and analyzers. The in-line polarization controller can be inserted onto a customer's own singlemode fiber. The user can use it with any



In Line Polarization Controller without Fiber



Pigtailed Polarization Controller with Fiber



Receptacle Style Polarization Controller

wavelength singlemode fiber. The in-line version is designed to work with only 250 micron and 400 micron jacketed fibers. A pigtailed version is also offered. This version is available with any size of cable or fiber, and with your choice of connectors. Finally, a connector receptacle style controller is available, using a short section of fiber terminated with female receptacles. For further information contact OZ Optics.

## ORDERING INFORMATION:

In Line Version, No fiber:

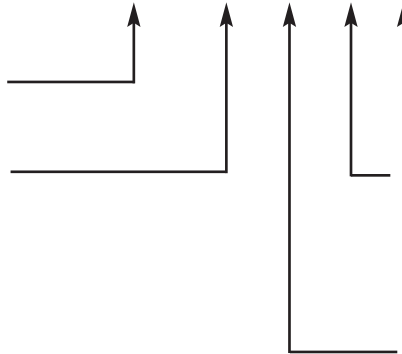
**FPC-100**

Pigtail Version:

**PFPC-11-W-S-a/b-XY-JD-L**

Wavelength: Specify in nanometers  
(Example: 1550 for 1550nm)

Fiber core/cladding sizes, in microns  
9/125 for 1300/1550nm SM fiber.  
See Table 1 of the Standard Tables for  
other standard fiber sizes



Fiber length, in meters, on each side of the device  
Example: To order 1 meter of fiber at the input and  
7 meters at the output, replace L with 1,7

Fiber jacket type: 1=900 micron OD hytel jacket  
3=3mm OD kevlar reinforced  
PVC cable

See Table 7 of the Standard Tables for other jacket  
sizes

Connector Code: 3S = Super NTT-FC/PC  
3U = Ultra FC NTT-FC/PC  
3A = Angled NTT-FC/PC  
8 = AT&T-ST  
SC = SC  
SCA = Angled SC

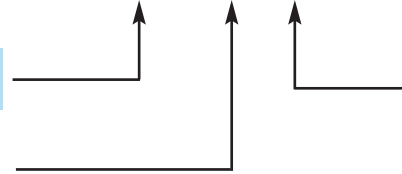
See Table 6 of the Standard Tables for other  
connectors

Receptacle Version:

**HFPC-11-W-S-a/b-XY**

Wavelength: Specify in nanometers  
(Example: 1550 for 1550nm)

Fiber core/cladding sizes, in microns  
9/125 for 1300/1550nm SM fiber.  
See Table 1 of the Standard Tables for  
other standard fiber sizes



Connector Code: 3S = Super NTT-FC/PC  
3U = Ultra FC NTT-FC/PC  
3A = Angled NTT-FC/PC  
8 = AT&T-ST  
SC = SC  
SCA = Angled SC

See Table 6 of the Standard Tables for other  
connectors

