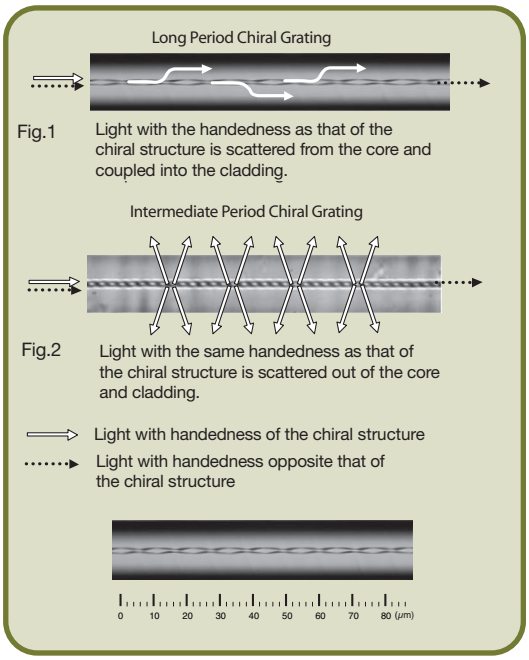
Passive Components
Collimation Packages
FiberBench
Optical Switches
Rackbox Systems
Connectors/ Termination Tools
Single Mode Fiber
Rare Earth Doped
Polarization Maintaining Fiber
Photonic Crystal Fiber
Multimode Fiber: Step & Graded Index
Plastic Optical Fiber

Infiber Linear Polarizers

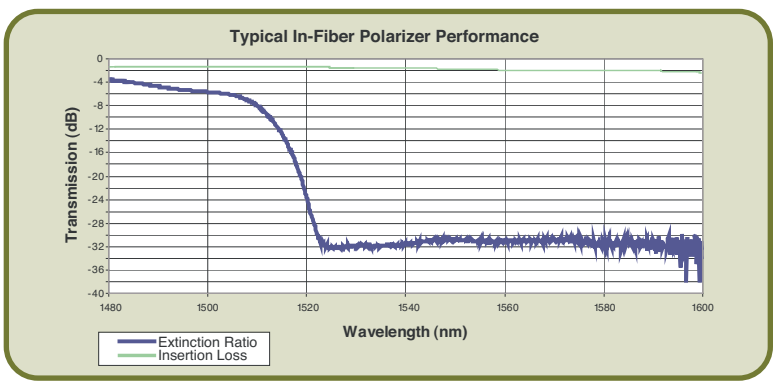
Thorlabs offers a unique infiber, linear polarizer manufactured by Chiral Photonics using their proprietary chiral technology. The all glass infiber polarizer provides a high extinction ratio over a broad spectral range. Unlike conventional single mode optical fibers that guide light using a concentric circular core and cladding, Chiral Photonics manufactures the chiral fibers by twisting rectangular core fibers, which creates a double-helical core. This double-helical structure causes light with the same handedness as the fiber to be scattered out of the core while light with opposite handedness continues within the core. The twist length determines the performance of the device. A chiral structure with a relatively loose twist and ~100µm period. scatters light into the cladding, where it is coupled into the cladding modes (Fig.1). These types of structures are beneficial to a multitude of sensor applications, such as pressure, temperature, and torque sensors. In gratings with a reduced twist period, the photons are scattered out of the core at larger angles, and the photons are no longer guided in the cladding (Fig. 2). These moderately twisted structures are the basis for polarizers that are advantageous for fiber optic gyroscopes and current meters. As the period of the twist is further reduced, say to ~1µm, the photons with the handedness of the chiral core are back-reflected within the fiber core. The wavelength and polarization of the reflected photons are controlled by the pitch and handedness of the twist. These tightly twisted chiral fibers are a promising replacement for fiber Bragg gratings (FBGs) as well as the basis for highly efficient fiber lasers.



Applications Features

- Polarization Measurement and Control
- Coherent Transmission
- Optical Sensors
- Test and Measurement Instrumentation
- Navigation Instrumentation
- R & D Optical System

Chiral Photonics



PROPERTIES	
Center Wavelength	980nm, 1310nm, 1550nm
Bandwidth	>50nm
Extinction Ratio (ER)	>30dB
Intrinsic ER	>50dB
Insertion Loss	<2dB
Polarizer Length	42 ± 2mm
Package Style	Flexible Stainless Steel Microtubing (28cm Long) Under 900µm Furcation Tubing
Pigtails	PM or SM, 1m
Operating Temperature	–50 to +50°C
Storage Temperature	–70 to +85°C

ITEM#	$	£	€	RMB	CONNECTORS	DESCRIPTION
IFP1550PM	$ 185.00	£ 116.60	€ 172,10	¥ 1,766.80	None	Infiber Polarizer, 1550nm, PM/PM Pigtails
IFP1550PM-FC	$ 315.00	£ 198.50	€ 293,00	¥ 3,008.30	FC/PC	Infiber Polarizer, 1550nm, PM/PM Pigtails, FC/PC
IFP1310PM	$ 185.00	£ 116.60	€ 172,10	¥ 1,766.80	None	Infiber Polarizer, 1310nm, PM/PM Pigtails
IFP1310PM-FC	$ 315.00	£ 198.50	€ 293,00	¥ 3,008.30	FC/PC	Infiber Polarizer, 1310nm, PM/PM Pigtails, FC/PC
IFP980PM	$ 191.00	£ 120.30	€ 177,60	¥ 1,824.10	None	Infiber Polarizer, 980nm, PM/PM Pigtails
IFP980PM-FC	$ 325.00	£ 204.80	€ 302,30	¥ 3,103.80	FC/PC	Infiber Polarizer, 980nm, PM/PM Pigtails, FC/PC
IFP1550SM	$ 175.00	£ 110.30	€ 162,80	¥ 1,671.30	None	Infiber Polarizer, 1550nm, SM/SM Pigtails
IFP1550SM-FC	$ 205.00	£ 129.20	€ 190,70	¥ 1,957.80	FC/PC	Infiber Polarizer, 1550nm, SM/SM Pigtails, FC/PC
IFP1310SM	$ 175.00	£ 110.30	€ 162,80	¥ 1,671.30	None	Infiber Polarizer, 1310nm, SM/SM Pigtails
IFP1310SM-FC	$ 205.00	£ 129.20	€ 190,70	¥ 1,957.80	FC/PC	Infiber Polarizer, 1310nm, SM/SM Pigtails, FC/PC
IFP980SM	$ 175.00	£ 110.30	€ 162,80	¥ 1,671.30	None	Infiber Polarizer, 980nm, SM/SM Pigtails
IFP980SM-FC	$ 205.00	£ 129.20	€ 190,70	¥ 1,957.80	FC/PC	Infiber Polarizer, 980nm, SM/SM Pigtails, FC/PC

*Slow axis aligned to key