

# ClearLite™ Photonic Fibers selection chart

Family of Photonic Fibers and Fiber Names**	Operating Wavelength (nm)	MFD at Oper. Wavelength	Numerical Aperture	Clad/Coating Diameter (µm)	Coating Type	Order by Part Number
<b>980</b>						
980-11	980	6.9	0.11	125/245	Dual Acrylate	CF04247-05
980-14	980	5.9	0.14	125/245	Dual Acrylate	F9232
980-16	980 / 1550	5.0 / 7.5	0.16	125/245	Dual Acrylate	BF05635-02
980-20	980 / 1550	4.0 / 6.5	0.20	125/245	Dual Acrylate	F10984
<b>1310 &amp; 1550</b>						
1310-16	1310 / 1550	6.7 / 7.5	0.16	125/245	Dual Acrylate	F9001
1310-21	1310 / 1550	5.1 / 5.8	0.21	125/200	Single Acrylate	BF06160
1550-12	1550	10.3	0.12	125/245	Dual Acrylate	F10819-01
1550-17	1550	7.5	0.17	125/245	Dual Acrylate	BF06158
<b>Micro</b>						
Micro 820-16	820	4.1	0.16	80/135	Single Acrylate	CF04246-03
Micro 980-17	980 / 1550	4.7 / 7.5	0.17	80/165	Dual Acrylate	BF06681-02
Micro 980-20	980 / 1550	4.0 / 6.5	0.20	80/165	Dual Acrylate	COMING SOON
Micro 1310-11	1310 / 1550	9.3 / 10.5	0.11	80/165	Dual Acrylate	BF06257-01
Micro 1310-16S	1310 / 1550	6.7 / 7.5	0.16	80/135	Single Acrylate	CF04246-31
Micro 1310-16D	1310 / 1550	6.7 / 7.5	0.16	80/165	Dual Acrylate	F9002
Micro 1550-17-GyroSil™	1550	7.5	0.17	80/130	Single Acrylate	BF06159
<b>Specialty Coated</b>						
Carbon/Poly 1310-11	1310 / 1550	9.3 / 10.5	0.11	125/155	Carbon/Poly.	BF04447
Poly 1310-11	1310 / 1550	9.3 / 10.5	0.11	125/155	Polyimide	BF04446
Carbon/Acrylate 1310-16	1310 / 1550	6.7 / 7.5	0.16	125/245	Carbon/Dual Acry.	BF06631
Poly 1310-21	1310 / 1550	5.1 / 5.8	0.21	125/155	Polyimide	BF06160-02
Poly 1550-17	1550	7.5	0.17	125/155	Polyimide	BF06158-02
<b>Short Wavelength</b>						
630-11	630	4.3	0.11	125/245	Dual Acrylate	CF04247-02
780-11	780	5.4	0.11	125/245	Dual Acrylate	CF04247-03
820-16	820	4.1	0.16	125/245	Dual Acrylate	CF04246-04

	Operating Wavelength (nm)	MFD at Oper. Wavelength	Crosstalk at 100 m (≤)	Beat Length at Oper. WL (mm)	Clad/Coating Diameter (µm)	Coating Type	Order by Part Number
<b>Polarization-Maintaining</b>							
TruePhase™ 980-Micro	980	6.0	- 25 dB	≤ 2.8	80 / 165	Dual Acrylate	F11317
TruePhase 980-245	980	6.6	- 30 dB	≤ 2.8	125 / 245	Dual Acrylate	F9920-01
TruePhase 980-400	980	6.6	- 30 dB	≤ 2.8	125 / 400	Dual Acrylate	F9920
TruePhase 1310-245	1310	9.3	- 30 dB	≤ 3.8	125 / 245	Dual Acrylate	F9922-01
TruePhase 1310-400	1310	9.3	- 30 dB	≤ 3.8	125 / 400	Dual Acrylate	F9922
TruePhase 1310-Sensor	1310	5.5	- 30 dB	≤ 3.0	125 / 245	Dual Acrylate	F11358
TruePhase 14XX-245	14XX	9.8	- 30 dB	≤ 4.2	125 / 245	Dual Acrylate	BF06832-01
TruePhase 14XX-400	14XX	9.8	- 30 dB	≤ 4.2	125 / 400	Dual Acrylate	BF06832
TruePhase 1550-245	1550	10.5	- 30 dB	≤ 4.5	125 / 245	Dual Acrylate	BF06734-01
TruePhase 1550-400	1550	10.5	- 30 dB	≤ 4.5	125 / 400	Dual Acrylate	BF06734

\*\* Most individual ClearLite Photonic Fibers are easily named and remembered by their operating wavelength-numerical aperture. Codes for other features (such as "P" for Polyimide or "D" for Dual Acrylate) are included where necessary to further distinguish the fibers.



Leading Optical Innovations

# Introduction to the Product Line

## ClearLite™ Photonic Fibers

Extensive singlemode options for:

- your wavelength
- your environment
- your application

### What is ClearLite?

OFS ClearLite Photonic Fibers are singlemode specialty optical fibers that perform specialized functions in photonic devices and components. Some of the basic parameters that can be varied in an optical fiber are the transmission wavelength, the numerical aperture (NA), the Mode Field Diameter (MFD), the diameter of the fiber, the type and thickness of the coatings, and internal stresses for maintaining polarization. OFS's vertical integration includes preform manufacture, fiber draw, and fiber coatings and allows us to combine the variables in ways that result in unique fibers which each guide light in a different way.

ClearLite Photonic Fibers are grouped as follows to allow the designer to choose from among the basic parameters. Most individual ClearLite Photonic Fibers are easily named and remembered by their standard wavelength-numerical aperture. Codes for other features (such as "P" for Polyimide or "D" for Dual Acrylate) are included where necessary to distinguish the fibers.

**980 Photonic Fibers** - OFS offers the largest variety of fibers operating at 980 nm in the industry. The 980 fibers are further differentiated by their NAs.

**1310 & 1550 Photonic Fibers** - These fibers operate in the typical transmission wavelengths and offer a choice of NAs from 0.12 to 0.21.

**Micro Photonic Fibers** - Offered for use in miniature components and sensors, reduced diameter fibers are drawn down to a cladding size of 80  $\mu\text{m}$  versus the standard 125  $\mu\text{m}$ . The operating wavelengths are 820 nm through 1550 nm, with NAs of 0.11 through 0.20.

**Specialty Coated Photonic Fibers** - OFS has expertise in the area of fiber coatings for exceptional environments. While most optical fibers are coated with single or dual layer acrylate, specialty coatings are called for in certain environments. These include polyimide for extreme temperature performance of -65 to +300° C, and carbon for hermetic performance in high humidity environments.

**Short Wavelength Photonic Fibers** - Designed for transmission of light at 630 nm, 780 nm or 820 nm, these fibers are used as laser pigtails, sensors, and couplers at the specified wavelengths.

**Polarization Maintaining Photonic Fibers** - Designed to guide polarized light. PM fiber has built-in stresses that create two distinct axes of transmission in the fiber, each guiding light at a different speed (slow and fast). When polarized light is launched into one axis it is guided with very little cross coupling to the other axis. This preserves the polarized state of the light for polarization-sensitive components. PM operating wavelengths are 980, 1310, 14XX, and 1550 nm.