

SM Series : Single mode Optical Fiber

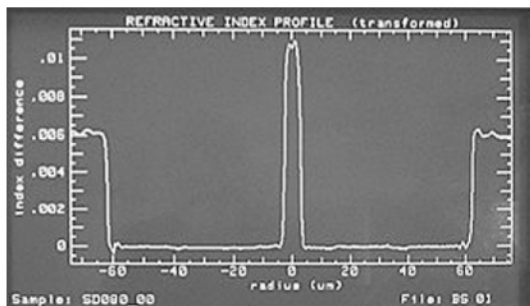
For Visible and Near IR Transmission, EDFA Pigtailing, Acoustic Sensors and De-polarised FOGs

- Seven standard wavelengths, 488 nm to 1550 nm
- Exceptional bend-insensitivity
- 80 μm for high reliability and reduced form-factor

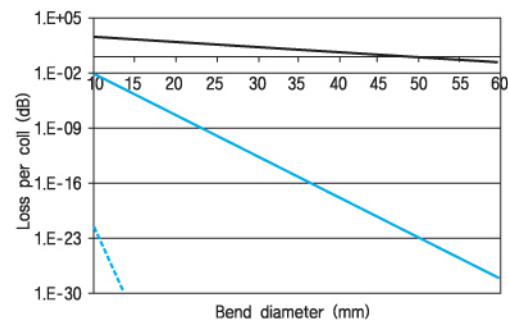
Specifications

Model	Design Wavelength ¹	Cut-off Wavelength	Numerical Aperture	Mode Field Diameter ²	Attenuation ³	Proof Test	Outside Diameter (Fiber)	Core Cladding Concentricity	Outside Diameter (Coating)	Coating Type
SM450 ⁴	488 nm 514 nm	350-450nm	0.10-0.14	3.3 μm 3.4 μm	<50 dB/km	1% or 2% (100 or 200kpsi)	125 \pm 1 μm	<1.0 μm	245 μm \pm 5%	Dual Acrylate
SM600	633 nm 680 nm	500-600nm	0.10-0.14	4.3 μm 4.6 μm	<15 dB/km	1% or 2% (100 or 200kpsi)	125 \pm 1 μm	<1.0 μm	245 μm \pm 5%	Dual Acrylate
SM750	780 nm	610-750nm	0.10-0.14	5.3 μm	<5 dB/km	1% or 2% (100 or 200kpsi)	125 \pm 1 μm	<1.0 μm	245 μm \pm 5%	Dual Acrylate
SM800 (5.6/125)	830 nm	660-800nm	0.10-0.14	5.6 μm	<5 dB/km	1% or 2% (100 or 200kpsi)	125 \pm 1 μm	<1.0 μm	245 μm \pm 5%	Dual Acrylate
SM800 (4.2/80)	830 nm	600-800nm	0.14-0.18	4.2 μm	<5 dB/km	1% or 2% (100 or 200kpsi)	80 \pm 1 μm	<0.75 μm	170 μm \pm 5%	Dual Acrylate
SM980 (5.8/125)	980 nm 1064 nm 1550 nm	870-970nm	0.13-0.15	5.8 μm 6.2 μm 10.4 μm	<3 dB/km	1% or 2% (100 or 200kpsi)	125 \pm 1 μm	<0.75 μm	245 μm \pm 5%	Dual Acrylate
SM980 (4.5/125)	980 nm 1550 nm	870-970nm	0.17-0.19	4.5 μm 7.5 μm	<3 dB/km	1% or 2% (100 or 200kpsi)	125 \pm 1 μm	<0.75 μm	245 μm \pm 5%	Dual Acrylate
SM980 (4.5/80)	980 nm 1550 nm	870-970nm	0.17-0.19	4.5 μm 7.5 μm	<3 dB/km	1% or 2% (100 or 200kpsi)	80 \pm 1 μm	<0.75 μm	170 μm \pm 5%	Dual Acrylate
SM1250 (9/80)	1310 nm 1550 nm	1150-1250nm	0.11-0.13	9.0 μm 10.5 μm	<2 dB/km	1% or 2% (100 or 200kpsi)	80 \pm 1 μm	<0.75 μm	170 μm \pm 5%	Dual Acrylate
SM1250 (5.4/80)	1310 nm 1550 nm	1150-1250nm	0.19-0.21	5.4 μm 6.4 μm	<2 dB/km	1% or 2% (100 or 200kpsi)	80 \pm 1 μm	<0.75 μm	170 μm \pm 5%	Dual Acrylate
SM1500 (5.3/80)	1550nm	1350-1500nm	0.23-0.25	5.3 μm	<2 dB/km	1% or 2% (100 or 200kpsi)	80 \pm 1 μm	<0.75 μm	170 μm \pm 5%	Dual Acrylate
SM1500 (6.4/80)	1550 nm	1350-1500nm	0.19-0.21	6.4 μm	<2 dB/km	1% or 2% (100 or 200kpsi)	80 \pm 1 μm	<0.75 μm	170 μm \pm 5%	Dual Acrylate
SM1500 (4.2/125)	1550 nm	1350-1500nm	0.29-0.31	4.2 μm	<3 dB/km	1% or 2% (100 or 200kpsi)	125 \pm 1 μm	<0.75 μm	245 μm \pm 5%	Dual Acrylate

1. The Design Wavelength is the wavelength (for wavelengths) at which the fiber is typically used. In practice, the fiber will transmit the TEM₀₀ mode at wavelengths of up to approximately 200 nm longer than the cut-off wavelength.
2. The Mode Field Diameter is a nominal, calculated value, estimated at the operating wavelength(s) using typical value of numerical aperture and cut-off wavelength.
3. Attenuation is a worst-case value, quoted for the shortest design wavelength.
4. At the design wavelengths of 488nm and 514nm, the launched power must be considered carefully as these fibres have germanosilicate cores, and as such are susceptible to color center generation.



Typical refractive index profile of SM980 (4.5/125)



Theoretical comparison of bend-induced loss between SM1500(6.4/80), SM1500(4.2/125) and standard, telecommunications-type fiber

FCS Series : Single Mode FiberCables with FC/APC

SM FiberCables are available for wavelengths from 488 nm to 1550 nm. Also, our connectorizes customer-supplied, 125 μ m clad fiber. FiberCables can be ordered with connector on one end and other end cleaved, or as a patchcord with both ends connectorized.

Specifications

Catalog Number	Descriptipn
FCS- λ -L-FC/APC	FiberCable, FC/APC connector one end
FCS- λ -L-FC/APC/APC	Patchcord, FC/APC both ends
FCS- λ -L-FC/PC/APC	Patchcord, FC/PC one end, FC/APC other end
FCS- λ -L-FC/PC/PC	Patchcord, FC/PC both ends

When ordering, specify λ wavelength in nm.

L: length, 1 meter or 2 meters or other. For example, for 2-meter length FCS-1550-2-FC/APC.

PS : Photosensitive Optical Fiber Intrinsically Photosensitive Fiber for Grating Fabrication

- Rapid formation of high reflectivity FBGs without hydrogenation
- PS1250/1500 has dual wavelength capability
- PS980 for EDFA pump-lockers

Specifications

	PS1250/1500	PS980
Design Wavelength ¹	1310nm, 1550nm	980nm
Cut-off Wavelength	1100nm - 1260nm	850nm - 950nm
Numerical Aperture	0.12 - 0.14	
Mode Field Diameter ²	8.1 μ m, 9.6 μ m	6 μ m
Polarization Mode Dispersion	<0.05 ps/m (typical)	
Outside Diameter (Fiber)	125 μ m \pm 1 μ m	
Outside Diameter (Coating)	245 μ m \pm 5%	
Proof Test	1.0% (100 kpsi) 2.0% (200 kpsi) to special order	

Typical Performance

- Using a 248nm excimer laser, pulsed at 20 Hz, high reflectivity gratings can be written in under two minutes

