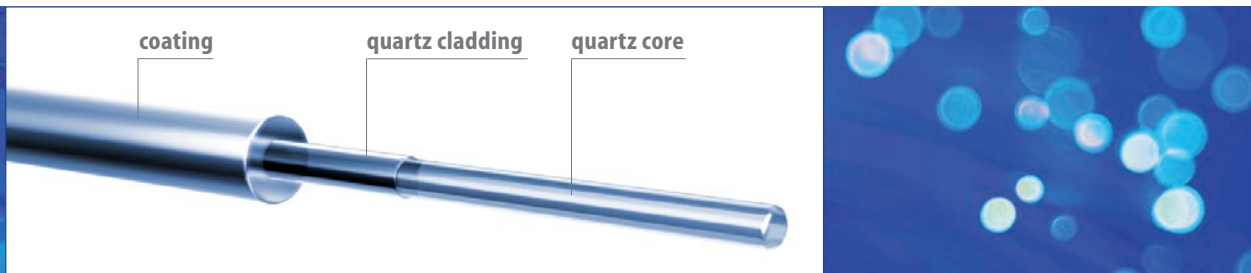


## Singlemode fibers



Coating: Dual acrylate for  $-30\text{ }^{\circ}\text{C}$  to  $+70\text{ }^{\circ}\text{C}$

### Construction

Core	Quartz
Cladding	Quartz
Coating	Dual acrylate, temperature range $-30\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$ (short term $-40\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$ ) <i>other parameter on request:</i> <i>high temperature, temperature range <math>-40\text{ }^{\circ}\text{C}</math> to <math>+130\text{ }^{\circ}\text{C}</math>,</i> <i>silicon, temperature range <math>-40\text{ }^{\circ}\text{C}</math> bis <math>+180\text{ }^{\circ}\text{C}</math>,</i> <i>polyimide, temperature range <math>-190\text{ }^{\circ}\text{C}</math> to <math>+385\text{ }^{\circ}\text{C}</math>,</i> <i>Coating diameter with 400 and 900 <math>\mu\text{m}</math>,</i> <i>buffer,</i> <i>other cut-off wavelengths</i>

### Numerical aperture

0.06 .. 0.35

### Properties

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The monomode fibers (also called single-mode fibers) are used for standard laser wavelength between 400 and 1550 nm. The small core diameter allows a propagation of only one mode in the fibers. This mode is directed parallel to the optical axis. Therefore nearly no mode dispersion appears. The monomode fibers are mainly applied in sensor applications and data transfer such as LAN. Higher bandwidth with more than 1 GHz·km are reached and exceed the values of the multimode fibers. The fibers have a 125 or 80 micron cladding.

A low attenuation sensitivity due to bending can be achieved at a large numerical aperture. The 125  $\mu\text{m}$  cladding diameter is compatible to low cost telecommunication connectors.

## Properties

Order no.	Wave-length range [nm]	Cut-off Wavelength [nm]	Modefield diameter [μm]	NA	Cladding (±2 %) [μm]	Coating (±5 %) [μm]	Bend. radius short term [mm]	Bend. radius long term [mm]	Max. Attenuation [dB/km]	Proof test level [N/mm <sup>2</sup> ]	Product description
84820001G	400 – 525	350 ± 50	3.2 ± 0.5	0.12	125	245	12	25	35 at 460 nm	700	F-Y0 Y0 SM400/125
84820002E	450 – 515	400 ± 50	3.3 ± 0.5 at 488 nm	0.10 – 0.14	125	245	12	25	12 at 630 nm	700	F-Y0 Y0 SM450/125
84820003G	450 – 580	430 ± 20	3.5 ± 0.5 at 515 nm	0.13	125	245	6	13	12 at 630 nm	1400	F-Y0 Y0 SM450/125-3.5
84820004E	600 – 700	550 ± 50	4.4 ± 0.5 at 630 nm	0.10 – 0.14	125	245	12	25	15 at 630 nm	700	F-Y0 Y0 SM600/125
84820005G	600 – 760	570 ± 30	4.0 ± 0.5 at 630 nm	0.13	125	245	6	13	12 at 630 nm	1400	F-Y0 Y0 SM600/125
84820006G	760 – 980	730 ± 30	5.0 ± 0.5 at 850 nm	0.13	125	245	6	13	3.5 at 850 nm	1400	F-Y0 Y0 SM760/125
84820007E	800 – 920	730 ± 70	5.6 ± 0.5 at 830 nm	0.10 – 0.14	125	245	12	25	5 at 830 nm	700	F-Y0 Y0 SM800/125
84820008E	800 – 840	700 ± 100	4.2 ± 0.5 at 830 nm	0.14 – 0.18	80	165	10	20	5 at 830 nm	700	F-Y0 Y0 SM800/80
84820009G	960 – 1600	900 ± 50	2.6 ± 0.3 at 1100 nm 3.3 ± 0.3 at 1310 nm 4.1 ± 0.3 at 1550 nm	0.35	125	245	12	25	20 at 1550 nm	700	F-Y0 Y0 SM960/125
84820010E	970 – 1210	920 ± 50	5.8 ± 0.5 at 980 nm	0.14	125	245	12	25	3 at 980 nm	700	F-Y0 Y0 SM970/125
84820011G	980 – 1600	920 ± 30	4.2 ± 0.5 at 980 nm 6.8 ± 0.5 at 1550 nm	0.20	125	245	6	13	3.5 at 980 nm	1400	F-Y0 Y0 SM980/125
84820012G	980 – 1600	920 ± 30	4.2 ± 0.5 at 980 nm 6.8 ± 0.5 at 1550 nm	0.20	80	165	4	9	3.5 at 980 nm	1400	F-Y0 Y0 SM980/80
84820013G	980 – 1600	920 ± 30	5.9 ± 0.5 at 980 nm 6.2 ± 0.5 at 1064 nm 9.5 ± 0.5 at 1550 nm	0.14	125	245	6	13	2.1 at 980 nm 1.5 at 1064 nm	1400	F-Y0 Y0 SM980/125
84820014G	1100 – 1600	1000 ± 50	3.3 ± 0.3 at 1100 nm 4.0 ± 0.3 at 1310 nm 4.8 ± 0.3 at 1550 nm	0.28	125	245	12	25	20 at 1550 nm	700	F-Y0 Y0 SM1100/125
84820015G	1100 – 1600	1000 ± 50	2.6 ± 0.3 at 1100 nm 3.3 ± 0.3 at 1310 nm 4.0 ± 0.3 at 1550 nm	0.35	125	245	12	25	20 at 1550 nm	700	F-Y0 Y0 SM1100/125
84820016E	1250 – 1610	1200±50	9 ± 0.5 at 1310 nm 10.5 ± 0.5 at 1550 nm	0.11 – 0.13	80	170	10	20	2 at 1310 nm	700	F-Y0 Y0 SM1250/80
84820017E	1250 – 1610	1200±50	5.4 ± 0.5 at 1310 nm 6.4 ± 0.5 at 1550 nm	0.19 – 0.21	80	170	10	20	2 at 1310 nm	700	F-Y0 Y0 SM1250/80
84820018G	1310 – 1620	1250±50	9.3 ± 0.5 at 1310 nm	0.11	80	165	4	9	0.75 at 1310 nm 0.5 at 1550 nm	1400	F-Y0 Y0 SM1310/80
84820019G	1310 – 1620	1250±50	6.7 ± 0.5 at 1310 nm	0.16	80	165	4	9	0.75 at 1310 nm 0.5 at 1550 nm	1400	F-Y0 Y0 SM1310/80
84820020G	1460 – 1620	1400±50	9.5 ± 0.5 at 1550 nm	0.13	125	245	6	13	0.5 at 1550 nm	1400	F-Y0 Y0 SM1460/125
84820021G	1460 – 1620	1400±50	9.5 ± 0.5 at 1550 nm	0.13	80	165	4	9	0.5 at 1550 nm	1400	F-Y0 Y0 SM1460/80
84820022E	1460 – 1620	1430±70	4.2 ± 0.5 at 1550 nm	0.29 – 0.31	125	245	12	25	3 at 1550 nm	700	F-Y0 Y0 SM1460/80