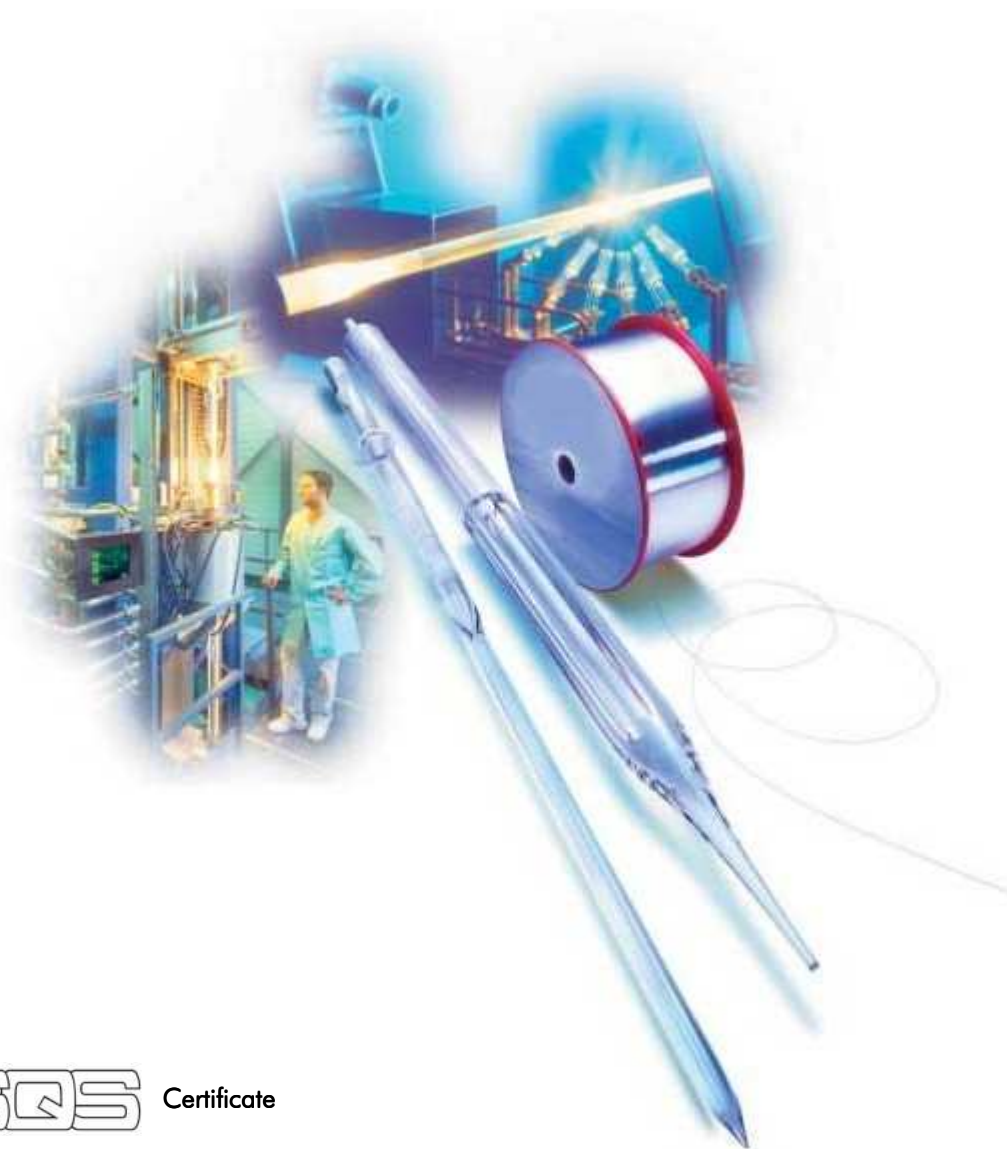


PRODUCT INFORMATION

SILITEC FIBERS microstructured fibers LMA32 is designed to provide endless single-mode regim in the range 1 micron to 2 microns wavelength, and is optimized for transmission around 1 micron.



SQS Certificate

ISO 9001 : 2000 / ISO 14001 : 2004

Silitec Fibers Microstructurec Fibers "SILICRYSTAL" LMA32

ADVANTAGES

- Pure silica fiber with high threshold power.
- Endlessly single-mode from 1000 nm to 2000 nm.
- Large Mode field diameter of 32 μm , independent of wavelength.
- Optimized for transmission at 1064 nm.

APPLICATIONS

- Single-mode high power delivery.
- Multi-wavelength transmission.
- Free of doping, therefore suitable for radiative environment.

OPTICAL SPECIFICATIONS

ATTENUATION

Parameters	Wavelength	Typical	Max	Comment	Reference
Attenuations (dB/km)	1064 nm	20	30		Cut-Back

DISPERSION

Parameters	Wavelength	Typical	Max	Comment	Reference
Chromatic (ps/nmkm)	1064 nm			Corresponds to pure silica	
Zero disp wavelength (nm)					
Zero disp slope (ps/(nm ² xkm))					

OTHER

Parameters	Wavelength	Typical	Comment	Reference
Numerical Aperture	1064 nm	0.07 \pm 0.01	Measured in 1% power level of a far-field scan	

OPTO-GEOMETRICAL SPECIFICATIONS

Parameters	Wavelength	Typical	Max	Comment	Reference
Mode Field Diameter (μm)	1064	32			
Mode Field Diameter tolerance (μm)		1.5	2		
CutOff Wavelength (nm)		1000 nm			

GEOMETRICAL SPECIFICATIONS

Parameters	Units	Typical	Max	Comment	Reference
Glass					
Cladding diameter	microns	240		Pure synthetic silica (SiO ₂)	
Cladding diameter tolerance	microns	2	5		
Cladding non-circularity	%	1	2		
Core-Clad concentricity error	microns	0.5	1		
Coating					
Coating diameter	microns	280	285	2 layers urethane acrylate Desolite®	
Coating diameter tolerance	microns	2	5		
Coating non-circularity	%	5	7		

Silitec Fibers Microstructurec Fibers "SILICRYSTAL" LMA32

POWER TRANSMISSION

Theoretical bulk damage threshold; 20 mJ for pulse of 100 ns
For longer pulses the damage threshold increases with the square root of the pulse length increase;
1 μs pulses : 60 mJ.
100 μs pulses : 600 mJ.

STORAGE CONDITIONS

Fiber spools have to be stored in **upright position** supported vertically by the two outside flanges.
The storage environment of the fiber on shipping spools should be -40°C + 55°C at < 98% relative humidity.
To maintain optimum wind quality, over long periods of time, a storage temperature of 20°C to 35°C is recommended.

TEST CERTIFICATION

Label

A label attached to each shipping spool contains the following information:

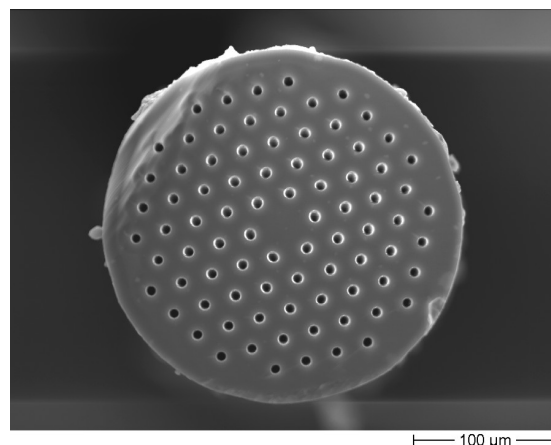
- " - Fiber I.D. and bare code
- " - Fiber length
- " - Attenuations.

Test certification

A file is sent by e-mail or included in the box (data sheet / floppy disc) with the following informations:

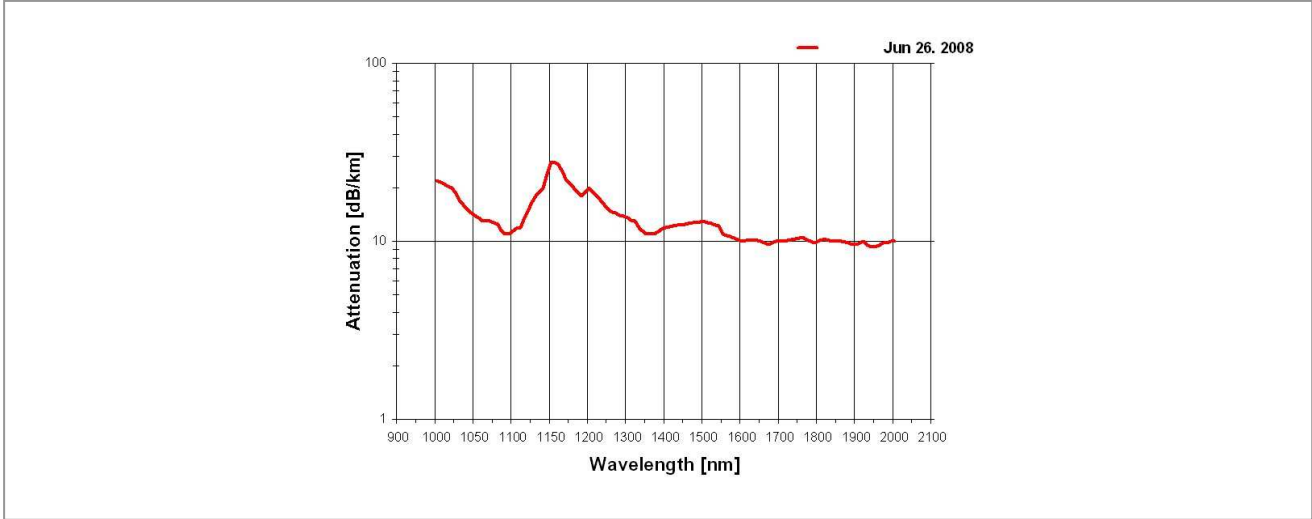
- " - Fiber I.D.
- " - Fiber length
- " - Attenuations
- " - Geometrical parameters such as diameters, cladding and coating
- " - Mode field diameters
- " - Cut-Off wavelength

FIBER CROSS-SECTION



Silitec Fibers Microstructurec Fibers "SILICRYSTAL" LMA32

TYPICAL MEASURED SPECTRAL ATTENUATION



BENDING TEST

