About Us

With over 25 years experience of manufacturing optical fibres, Prysmian is able to offer an extensive product portfolio made to achieve the highest levels of quality and performance.

With a deep understanding of present and future market requirements, Prysmian's product range is targeted at the differing needs of the customer.

Prysmian is in the unique position of having access to all three major manufacturing processes; MCVD (Modified Chemical Vapour Deposition), OVD (Outside Vapour Deposition) and VAD (Vapour Axial Deposition).

This enables Prysmian to obtain an optimised range of products for different applications.

Enquiries

The optical characteristics of Single-Mode Fibre can be tailored to meet your precise specifications. Whatever your requirements, if you need more information or would like to place an order, please call Prysmian Telecom Cables and Systems on +39 02 6449 7568.

dega design group

2008

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PRYSMIAN CABLES & SYSTEMS

FIBRE

SM Light
Single Mode Fibre

The optical fibre that sets standards

- > **High Bandwidth**
- > **Compatibility**
- > **Low cost**
- > **Lowest, guaranteed PMD**

2008

www.prysmian.com

PRYSMIAN CABLES & SYSTEMS

FIBRE

SM Light
Single Mode Fibre

Prysmian Telecom Cables and Systems is a world leader in optical networking, offering a comprehensive range of vertically integrated products and services.

We create everything from in-house local area networks to international communication links spanning oceans and continents.

Benefits and Features

> High Bandwidth
Standard Single mode optical fibres are best suited for the 1310 nm wavelength range, but can also be used at 1550 nm. This has allowed your optical fibre to be used with a variety of sources, from LED's to lasers, offering a highly versatile fibre capable of carrying high bit rates on multiple channels.

> Compatibility
Single mode optical fibres are at the core of the majority of installations throughout the world. A vast database has been accumulated over time that shows this fibre to be a truly compatible product, both with other fibres and with optical systems employed globally.

> Low Cost
Long experience of manufacturing and continuing optimisation of the process allow Prysmian to propose a first class product. This offers the customer the opportunity to minimise the overall cost per bit transported in those networks where single mode fibre is the established solution.

> Lowest, Guaranteed PMD
SM Light still sets the PMD world standard for ITU-T G.652 fibres. Furthermore, Prysmian has devised a way to ensure any PMD reducing measures taken during the manufacturing process are effectively "locked into" every metre of fibre.

Mechanical specifications

Single mode optical fibre is proof tested at an elongation greater than or equal to 1%.
This fibre is characterised in terms of Weibull plot and n value (Stress Corrosion Susceptibility Factor), with typical values above 19 (Dynamic Test).

PRYSMIAN CABLES & SYSTEMS

"A first class product that makes PMD limitations a thing of the past".

Fibre Coating

SM Light is available with the latest generation coating: Neon™ Plus. This coating is based on the highly acclaimed Neon™ coating used by Prysmian worldwide for well over 10 years.

Key benefits include increased resistance to bending, an important feature for "tight" cable designs or smaller diameter cables. Furthermore, the fibre has improved performance against temperature variations and mechanical disturbances.

Manufacturing Process

Prysmian is in the unique position of having access to all three major manufacturing processes; MCVD (Modified Chemical Vapour Deposition), OVD (Outside Vapour Deposition) and VAD (Vapour Axial Deposition).

Prysmian single mode fibre is compliant with ITU-T Recommendation G.652 and IEC 60793-2-50 B1.1.

DIMENSIONAL SPECIFICATIONS

Glass geometry	Unit	
Cladding diameter	µm	125.0 ± 0.7
Cladding non circularity	%	≤ 0.7
Core/cladding concentricity error	µm	≤ 0.5

Coating geometry	Unit	
Outer coating diameter	µm	245 ± 5
Coating/cladding concentricity error	µm	≤ 12

OPTICAL SPECIFICATIONS

Attenuation coefficients	Unit	
@ 1310 nm	dB/km	≤ 0.34
@ 1383 nm	dB/km	≤ 1.0
@ 1550 nm	dB/km	≤ 0.20
@ 1625 nm	dB/km	≤ 0.23

Macrobending attenuation	Unit	
100 turns, 50 mm diameter at 1550 nm	dB	≤ 0.05
100 turns, 60 mm diameter at 1625 nm	dB	≤ 0.1

Dispersion coefficients	Unit	
In the range 1285 – 1330 nm	ps/(nm.km)	≤ 3.5
@ 1550 nm	ps/(nm.km)	≤ 18
@ 1625 nm	ps/(nm.km)	≤ 22
Zero dispersion wavelength (λ_0)	nm	1302 to 1322
Slope S_0 at λ_0	ps/(nm^2.km)	≤ 0.089
Polarisation mode dispersion (PMD)	ps/√km	≤ 0.1
PMD link design value*	ps/√km	≤ 0.06

* Link design value definition complies with IEC 61282-3.

Mode Field Diameter	Unit	
@ 1310 nm	µm	9.2 ± 0.4
@ 1550 nm	µm	10.4 ± 0.5

Cable cut-off wavelength (λ_{cc})	Unit	
	µm	≤ 1260

Note: Other fibre grades are available to match your need.

Any questions? Our team of experienced technical staff is ready to talk to you. See contact details.

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