A broad spectrum of choices.

Our optical fibres reach further.
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We can offer you a full range of optical fibres that have been designed, developed, manufactured and tested specifically to meet even the most challenging of demands. It is this unique expertise that allows us to create completely customer specific solutions, customer specific solutions to cover even the most challenging of your needs.

OPTICAL FIBRE PRODUCT PORTFOLIO

Prysmian Group’s Optical Fibre division has over 35-year history of service to the telecoms industry. With innovative products for the full range of applications, spanning long-haul, metropolitan, access, FTTx, and premises applications.

Prysmian Group’s modeling and design expertise, together with our proprietary technologies and production processes secured for premium and innovative optical fibres, is reflected in complementary sets of optical fibre product lines covering single-mode, multi-modes and specialty fibres.

SINGLE-MODE FIBRES (SM)

The single-mode fiber portfolio is offered in a complete portfolio of three, mainstream optical fibre types:

- Standard market leading G.652 series.
- Innovative long distance non-zero dispersion shifted fibres (NZDSF) - G.655/G.656 series.
- Bend-insensitive optical fibres – G.657 series.

Our Single-mode fibres are also equipped with Prysmian’s revolutionary ColorLock-XS coating technology. Fibre coating comes with an integrated vibrant color in the outer primary coating layer, making the color embedded as a component of the coating.

The advantages are numerous:

- Increased reliability, durability, and superior aging performance.
- Lower maintenance and replacement costs.
- Improved fibre identification and colored fibre reliability.

1. Standard market leading G.652 series

This series is part of the most deployed fibre type worldwide and can be used in all cable constructions including loose tube, tight buffered, ribbon and central tube designs. The enhanced Single-Mode Fibre (ESMF) is compliant with ITU-T Recommendation G.652. Table D. The tight geometrical characteristic, attenuation and PMD specifications of this type enable superior performance in long haul, metropolitan, access and premises applications for telecommunications, CATV and utility networks. The fibre complies with or exceeds the ITU-T Recommendation G.652.D, the IEC International Standard 60793-2-50, to name but a few.

2. Long distance and metropolitan non-zero dispersion shifted fibres G.655/G.656 series

The fibres were developed for optimized dispersion characteristics in high-capacity, long-distance networks. Our b fibre is available in 2 versions, the regular TeraLight® and the TeraLight® Ultra. The benefit of the former is the minimization of the chromatic dispersion compensation while the latter is optimized for ultra-long transmission. This fibre enables cost-effective operations at 10 and 40 Gbps.
3. Bend-insensitive optical fibres G.657 series

G.657 series is the natural evolution of Standard G.652.D when there is a necessity to address fiber deployment under tight bends scenarios in Access Networks.

Bendbright technology allows for a drastic improvement of the macrobending resilience while maintaining a full back-ward-compatibility with ITU-T G.652.D industry standard.

Prysmian’s offering consists of:
- BendBright Elite ITU-T G.657.B3 fibres.

Each of these fibres has a bend sensitivity reduction of x10, x100, and x300 respectively as compared to ITU-T G.652.D standard.

BendBright® ITU-G.657.A2 has undeniably been the flagship product of Prysmian over the last decade, and has been at the foundation of customer-acclaimed industry achievements with respect to new innovative cabling deployment solutions but also new cables design exhibiting smaller footprint and/or very high fibre count when combined with FlexTube® technologies.

BendBright® ITU-T G.652.A2 fibre is also featuring a reduced coating diameter of 200µm to tackle duct congestion scenarios by allowing fibre denser/smaller footprint cable designs while being backward compliant with ITU-T G.652.D / G.657A industry standards and future-proof.

MULTIMODE FIBRES (MM)

Multimode fibres are intended for all applications where the distances covered are short, such as Local Area Networks (LAN) or all networks with a small reach like campus, buildings or offices. A multimode fibre also enables connections for backbone, riser and horizontal links. All these networks are characterised as having many points of access to the fibre and the short distances covered.

Prysmian Group’s bend-insensitive laser-optimised multimode fibre demonstrates superior macrobending properties together with high-bandwidth performance making them as the best-in-class Multimode fibres for nowadays optical networks. Our Multimode fibres offer improved system reliability by allowing tighter bends, more system margins, perfectly suited for today and tomorrow’s technical and new cabling requirements.

1. MaxCap-BB-OMx

This fibre type takes benefit from Prysmian’s BendBright technology leveraged by industry-acknowledged PCVD manufacturing platform.

The MaxCap-BB-OMx platform has been designed in robust quality classes namely OM2, OM2+, OM3 and OM4 fibre to address 10, 40 and 100 Gbps system applications. Prysmian Multimode Bend-insensitive multimode fibres are compliant and/or over-exceed applicable standards and are fully backward compatible with the existing base.

2. OM5

OM5 multimode fibre adds a new dimension to the fibre capacity by introducing the possibility to operate up to four OM4 channels using Wavelength Division Multiplexing techniques. Instead of offering a single OM4 channel at 850nm only (case for standard OM4 multimode fibres), OM5 multimode fibre enlarges the OM4 performance spectral over [850-950nm] range. This product is the latest demonstration of the industry leading position of Prysmian in Multimode fibre market.

Similar to MaxCap-BB-OMx, OM5 multimode fibre is equipped with the BendBright® technology to offer superior macro-bending performance.

As a single OM5 multimode fibre offers four times more capacity than standard OM4, it ultimately offers a reliable and cost-effective cabling solution by simplifying bitrate upgrade scenarios, while offering a future-proof transmission medium in 40, 100, 400, and above 400 Gbps transmission scenarios.

SPECIALTY FIBRES

Prysmian is also dedicated to bring its expertise and product innovation to the specialty fibre market segment, with a comprehensive product range offering solutions for Medical, Marine, Oil and Gas, and telecoms for active and passive components.

We’re combining state-of-the-art glass technology, with advanced coating and buffer technology in an industrialized manner, and paving the way towards unprecedented performances and new applications: High-Temperature coatings, Radiation hardened optical fibre, tight geometry optical fibres, and many more.