

Draka BendBright^{XS} OFC data com cables

General

BendBright^{XS} fibre technology features extremely low micro bend sensitivity and minimal macro bend and kink losses at very small radii.

MMS integrates BendBright^{XS} in its fibre optic cable portfolio. These types of cables are used in a wide range of applications, such as access networks in densely populated urban areas, FTTH networks, office installations, data centres and 5G networks.

There is a high demand for cables with increased density as optical networks reach their limits in terms of space.

Micro- and macro-bending

In these constraint conditions, *micro-bending* occurs when the surface of the fibre is under pressure which leads to tiny bends of the fibre on a μm scale. If fibres are physically bent, we can surpass the critical angle and therefore light leaks out of the fibre. This effect is called *macro-bending* referring to bends on a mm scale. Both micro- and macro-bending cause power losses and therefore an overall degradation of the network performance.

To meet the high-performance requirements and to overpass the constraints of installation conditions, BU MMS has developed Draka BendBright^{XS} technology.

Draka BendBright^{XS} fibre

BendBright^{XS} fibres score with its low macro bending loss at very small radii in the millimetre range ($<7.5\text{mm}$).

This makes it possible to store excess fibre lengths in splice housings and patch panels in smaller radii, which in turn results in more compact installations.

Other benefits include greater tolerance to installation errors in fibre management systems and splice protectors, as well as smooth and effective cable routing, even when the cable is under stress. With BendBright^{XS} technology, operators benefit from lower maintenance costs.

MMS has designed the BendBright^{XS} fibre to be fully compatible with already installed single mode fibre. Fusion splicing can be performed with standard splicing equipment. Cleaving or polishing of the end faces is unchanged from standard single-mode fibres.

BendBright^{XS} fully meets or exceeds ITU-T recommendations G.657.A1, G.657.A2, G.657.B2 (2009) and G.652.D (2009), as well as IEC International Standards 60793-2-50 Type B.1.3 and B.6.A&B Optical Fibre Specification.

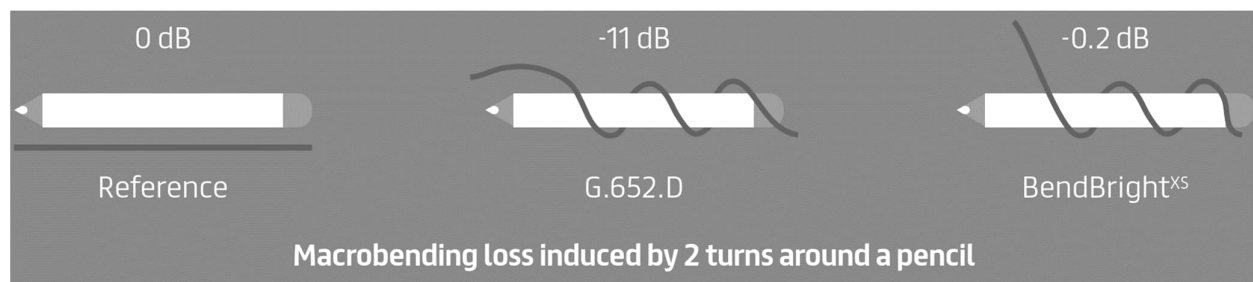


Fig.1: Pencil testing: a bend-insensitive BendBright^{XS} G.657-A2 fibre patch cord loses only 0.2dB when twisted twice around a pencil, whereas a “regular” fibre loses more than 11 db.

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Plasma CVD

The bend-friendly glass fibres offer full backward compatibility and the highest quality and purity thanks to Draka's patented Plasma activated CVD (Chemical Vapour Deposition) manufacturing process which ensures the highest dimensional precision resulting in highest purity of fibres. This is supported by Draka's ColorLock™ coating process optimising fibre performance, durability, and reliability, even in the harshest environments.

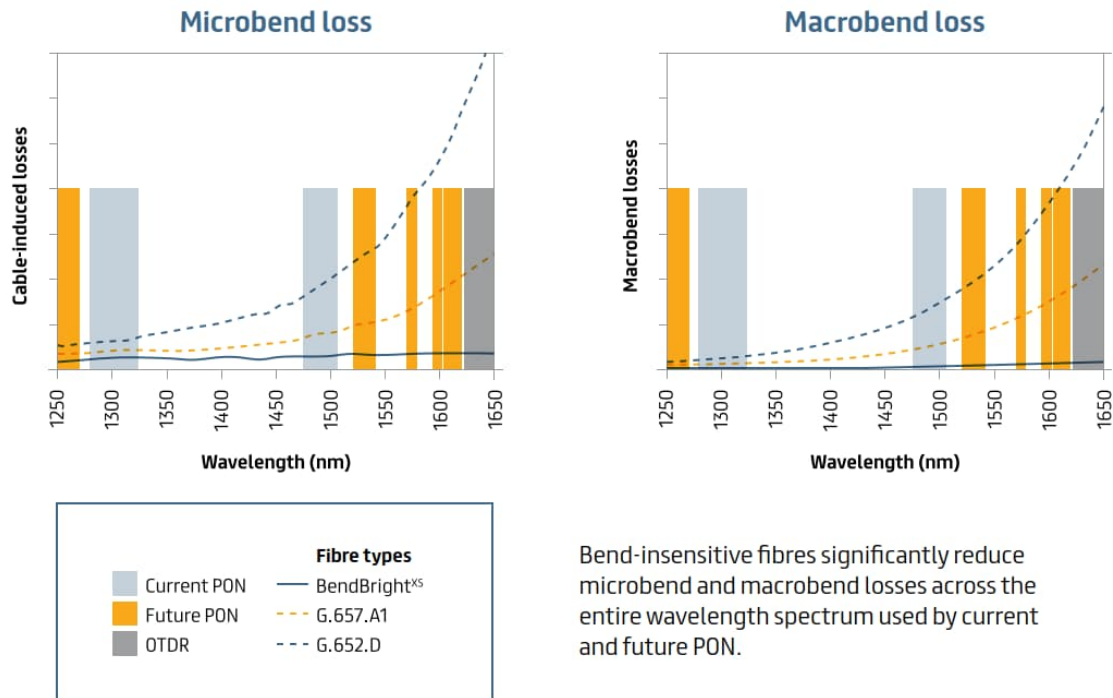


Fig.2: Comparison of wavelength dependent micro- and macro-bend loss for BendBright^{XS} and “regular” fibres

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