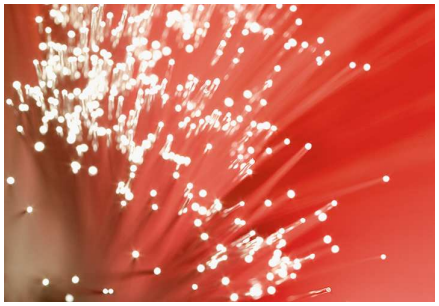
# GOF SM Fiber, 9/125 µm (G.652.D) / C03e-060102





This enhanced Singlemode fiber provides improved performance across the entire 1260 nm to 1625 nm wavelength spectrum due to its low attenuation in 1383 nm the water-peak region. The fiber design is matched cladding.

## Standards and norm

| | |
|---|---|
| This fiber fulfils the requirements of: | • IEC 60793-2-50 Category B.1.3<br>• EN 60793-2-50: Class B1.3<br>• ITU Recommendation G.652.D<br>The older ITU designations A, B and C are also fulfilled. |
| When cabled, the fibers fulfil the requirements for use in a number of cabling systems, among them is: | • EN 50 173-1: 2011, cat. OS1 + OS2<br>• ISO/IEC 24702: 2006, cat. OS1 + OS2<br>• ISO/IEC 11801: 2002, cat. OS1 + OS2<br>• IEEE 802.3 - 2002 incl. 802.3 Section Four |
| Testing methods are in accordance with the following standards: | • IEC 60793-1-XX: 2002<br>• EN 60793-1-XX: 2002 |

## Material

| Criteria | Value |
|---|---|
| Core | The core is germanium doped |
| Coating | The fiber coating is dual layer UV curable acrylate. |

## Optical properties

| Property | Unit | Value | |
|---|---|---|---|
| Attenuation (of cable with fibers) | [dB/km] | In the range 1310 - 1625 nm:<br>At 1550 nm: | ≤ 0.39<br>≤ 0.25 |
| In homogeneity of OTDR trace for any two 1000 metre fiber lengths | [dB/km] | Max.: | 0.1 |
| Group index of refraction | – | At 1310 / 1550 / 1625 nm: | 1.467 |

## Dimensional and mechanical properties

| Property | Unit | Value | Standard |
|---|---|---|---|
| Cladding diameter | [µm] | 125.0 ± 0.7 | IEC/EN 60793-1-20 |
| Cladding non-circularity | [%] | ≤ 0.7 | IEC/EN 60793-1-20 |
| Core (MFD) non-circularity | [%] | ≤ 6 | IEC/EN 60793-1-20 |
| Core (MDF) -cladding concentricity error | [µm] | ≤ 0.5 | IEC/EN 60793-1-20 |
| Primary coating diameter - uncoloured | [µm] | 242 ± 7 | IEC/EN 60793-1-21 |
| Primary coating diameter - coloured | [µm] | 250 ± 15 | IEC/EN 60793-1-21 |
| Primary coating non-circularity | [%] | ≤ 5 | IEC/EN 60793-1-21 |
| Primary coating-cladding concentricity error | [µm] | ≤ 12.0 | IEC/EN 60793-1-21 |
| Proof stress level | [GPa] | ≥ 0.7 (≈ 1 %) | IEC/EN 60793-1-30 |

| Property | Unit | Value | Standard |
|---|---|---|---|
| Strip force (peak) | [N] | 1.0 ≤ $F_{peak.strip}$ ≤ 8.9 | IEC/EN 60793-1-32 |
| Chromatic dispersion coefficient: | | | IEC/EN 60793-1-42 |
| In the interval 1285 nm – 1330 nm | [ps/km × nm] | ≤ \|3\| | |
| At 1550 nm | [ps/km × nm] | ≤ 18.0 | |
| At 1625nm | [ps/km × nm] | ≤ 22.0 | |
| Zero dispersion wavelength, $\lambda_0$ | [nm] | 1312 ± 10 | |
| Zero dispersion slope | [ps/($nm^2$ × km)] | ≤ 0.090 | |
| Cut-off wavelength $\lambda_c$ | [nm] | High limit: 1330 | IEC/EN 60793-1-44 |
| | [nm] | Low limit: 1150 | |
| Cut-off wavelength $\lambda_{cc}$ | [nm] | ≤ 1260 | |
| Mode field diameter at 1310 nm | [µm] | 9.2 ± 0.4 | IEC/EN 60793-1-45 |
| Mode field diameter at 1550 nm | [µm] | 10.3 ± 0.5 | |
| Macrobending loss at 1550 nm, 100 turns on a ø 60 mm mandrel | [dB] | ≤ 0.05 | IEC/EN 60793-1-47 |
| Polarisation mode dispersion (PMD) coefficient, cabled | [ps/√km] | ≤ 0.5 | IEC/EN 60793-1-48 |
| $PMD_Q$ Link Design Value | [ps/√km] | ≤ 0.2 | IEC/EN 60794-3 |


Reichle & De-Massari AG
Binzstrasse 32
CHE – 8620 Wetzikon
Telephone HQ: +41 (0)44 933 81 11
Telefax HQ: +41 (0)44 930 49 41