

# CS-8G-MD

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Enhanced Low Macrobending, Low Water Peak, Dispersion-Unshifted Single-mode Fiber

## Product Classification

<b>Portfolio</b>	CommScope®
<b>Product Type</b>	Optical fiber

## General Specifications

<b>Cladding Diameter</b>	125 µm
<b>Cladding Diameter Tolerance</b>	±0.7 µm
<b>Cladding Non-Circularity, maximum</b>	0.5 %
<b>Coating Diameter (Uncolored)</b>	242 µm
<b>Coating Diameter Tolerance (Colored)</b>	±7 µm
<b>Coating Diameter Tolerance (Uncolored)</b>	±7 µm
<b>Coating/Cladding Concentricity Error, maximum</b>	12 µm
<b>Core/Clad Offset, maximum</b>	0.5 µm
<b>Proof Test</b>	689.476 N/mm <sup>2</sup>   100000 psi

## Dimensions

<b>Fiber Curl, minimum</b>	4 m   13.123 ft
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## Mechanical Specifications

<b>Macrobending, 15 mm Ø mandrel, 1 turn</b>	0.50 dB @ 1,550 nm   1.00 dB @ 1,625 nm
<b>Macrobending, 20 mm Ø mandrel, 1 turn</b>	0.10 dB @ 1,550 nm   0.20 dB @ 1,625 nm
<b>Macrobending, 30 mm Ø mandrel, 10 turns</b>	0.03 dB @ 1,550 nm   0.10 dB @ 1,625 nm
<b>Coating Strip Force, maximum</b>	8.9 N   2.001 lbf
<b>Coating Strip Force, minimum</b>	1.3 N   0.292 lbf
<b>Dynamic Fatigue Parameter, minimum</b>	20

## Optical Specifications

<b>Cabled Cutoff Wavelength, maximum</b>	1260 nm
<b>Point Defects, maximum</b>	0.1 dB
<b>Zero Dispersion Slope, maximum</b>	0.092 ps/[km-nm-nm]
<b>Zero Dispersion Wavelength, maximum</b>	1324 nm

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**Zero Dispersion Wavelength, minimum**

1300 nm

## Optical Specifications, Wavelength Specific

**Attenuation, maximum**

0.50 dB/km @ 1,310 nm | 0.50 dB/km @ 1,385 nm | 0.50 dB/km @ 1,550 nm

**Backscatter Coefficient**

-79.1 dB @ 1,310 nm | -81.4 dB @ 1,550 nm | -82.2 dB @ 1,625 nm

**Index of Refraction**

1.467 @ 1,310 nm | 1.467 @ 1,550 nm | 1.468 @ 1,625 nm

**Mode Field Diameter**

8.9  $\mu\text{m}$  @ 1,310 nm | 9.9  $\mu\text{m}$  @ 1,550 nm

**Mode Field Diameter Tolerance**

$\pm 0.4 \mu\text{m}$  @ 1310 nm |  $\pm 0.5 \mu\text{m}$  @ 1550 nm

**Polarization Mode Dispersion Link Design Value, maximum**

0.1 ps/sqrt(km)

**Standards Compliance**

ITU-T G.657.A2 | ITU-T G.657.B2

## Environmental Specifications

**Heat Aging, maximum**

0.05 dB/km @ 85 °C

**Temperature Dependence, maximum**

0.05 dB/km

**Temperature Humidity Cycling, maximum**

0.05 dB/km

**Water Immersion, maximum**

0.05 dB/km @ 23 °C

## \* Footnotes

**Temperature Dependence, maximum**

Temperature dependence is conducted at -60 °C to +85 °C (-76 °F to +185 °F)

**Temperature Humidity Cycling, maximum**

Temperature humidity cycling is conducted at -10 °C to +85 °C (+14 °F to +185 °F) up to 95% relative humidity