

Fiber data sheets

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Fiber data sheet

E9/125

Singlemode fiber
ITU-T G.652.D

Cladding diameter		125 ±0.7 μm
Coating diameter	uncoloured coloured	245 ±10 μm 250 ±15 μm
Core/cladding concentricity error		≤ 0.6 μm
Coating/cladding concentricity error		≤ 12.5 μm
Cladding non-circularity		≤ 1.0 %
Attenuation	1310 nm 1383 nm 1550 nm 1625 nm	typ 0.35 / max 0.40 dB/km typ 0.35 / max 0.40 dB/km typ 0.20 / max 0.25 dB/km typ 0.23 / max 0.30 dB/km
Cut-off wavelength λ _{cc}		≤ 1260 nm
Chromatic dispersion	1285 - 1330 nm 1550 nm 1625 nm	≤ 3.5 ps/nm × km ≤ 18.6 ps/nm × km ≤ 23.7 ps/nm × km
Zero dispersion wavelength λ ₀		1300 - 1324 nm
Zero dispersion slope S ₀ at λ ₀		≤ 0.092 ps/nm ² × km
Polarization moden dispersion (PMD)	for link value for individual value	≤ 0.2 ps/√km ≤ 0.2 ps/√km
Mode field diameter	1310 nm	8.6 - 9.2 ±0.4 μm
Effective group index of refraction	1310 nm 1550 nm 1625 nm	1.4674 1.4679 1.4680
Point Discontinuity	1310 nm 1550 nm	≤ 0.05 dB ≤ 0.05 dB
Macrobending loss	100 turns, 60 mm dia 1625 nm	≤ 0.10 dB

Fiber data sheet

E9/125

Singlemode fiber with higher bend performance
ITU-T G.657.A1

Cladding diameter		125 ±0.7 μm	
Coating diameter	uncoloured	245 ±10 μm	
	coloured	250 ±15 μm	
Core/cladding concentricity error		≤ 0.6 μm	
Coating/cladding concentricity error		≤ 12.5 μm	
Cladding non-circularity		≤ 1.0 %	
Attenuation	1310 nm	typ 0.35 / max 0.40 dB/km	
	1383 nm	typ 0.35 / max 0.40 dB/km	
	1550 nm	typ 0.20 / max 0.25 dB/km	
	1625 nm	typ 0.23 / max 0.30 dB/km	
Cut-off wavelength λ_{cc}		≤ 1260 nm	
Chromatic dispersion	1285 - 1330 nm	≤ 3.5 ps/nm × km	
	1550 nm	≤ 18.6 ps/nm × km	
	1625 nm	≤ 23.7 ps/nm × km	
Zero dispersion wavelength λ_0		1300 - 1324 nm	
Zero dispersion slope S_0 at λ_0		≤ 0.092 ps/nm ² × km	
Polarization moden dispersion (PMD)	for link value	≤ 0.2 ps/√km	
	for individual value	≤ 0.2 ps/√km	
Mode field diameter	1310 nm	8.6 - 9.2 ±0.4 μm	
Effective group index of refraction	1310 nm	1.4674	
	1550 nm	1.4679	
	1625 nm	1.4680	
Point Discontinuity	1310 nm	≤ 0.05 dB	
	1550 nm	≤ 0.05 dB	
Macrobending loss	1 turn, 20 mm dia	1550 nm	≤ 0.75 dB
	1 turn, 20 mm dia	1625 nm	≤ 1.50 dB
	10 turns, 30 mm dia	1550 nm	≤ 0.25 dB
	10 turns, 30 mm dia	1625 nm	≤ 1.00 dB

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E9/125

Singlemode fiber with higher bend performance
ITU-T G.657.A2

Cladding diameter		125 ±0.7 μm	
Coating diameter	uncoloured	245 ±10 μm	
	coloured	250 ±15 μm	
Core/cladding concentricity error		≤ 0.6 μm	
Coating/cladding concentricity error		≤ 12.5 μm	
Cladding non-circularity		≤ 1.0 %	
Attenuation	1310 nm	typ 0.36 / max 0.40 dB/km	
	1383 nm	typ 0.36 / max 0.40 dB/km	
	1550 nm	typ 0.22 / max 0.25 dB/km	
	1625 nm	typ 0.25 / max 0.30 dB/km	
Cut-off wavelength λ_{cc}		≤ 1260 nm	
Chromatic dispersion	1285 - 1330 nm	≤ 3.5 ps/nm × km	
	1550 nm	≤ 18.6 ps/nm × km	
	1625 nm	≤ 23.7 ps/nm × km	
Zero dispersion wavelength λ_0		1300 - 1324 nm	
Zero dispersion slope S_0 at λ_0		≤ 0.092 ps/nm ² × km	
Polarization moden dispersion (PMD)	for link value	≤ 0.2 ps/√km	
	for individual value	≤ 0.2 ps/√km	
Mode field diameter	1310 nm	8.6 - 9.2 ±0.4 μm	
Effective group index of refraction	1310 nm	1.4674	
	1550 nm	1.4679	
	1625 nm	1.4680	
Point Discontinuity	1310 nm	≤ 0.05 dB	
	1550 nm	≤ 0.05 dB	
Macrobending loss	1 turn, 15 mm dia	1550 nm	≤ 0.50 dB
	1 turn, 15 mm dia	1625 nm	≤ 1.00 dB
	1 turn, 20 mm dia	1625 nm	≤ 0.20 dB
	10 turns, 30 mm dia	1625 nm	≤ 0.10 dB

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E9/125

Singlemode fiber with higher bend performance - 200µm
ITU-T G.657.A1

Cladding diameter		125 ±0.7 µm	
Coating diameter	uncoloured	180 - 210 µm	
	coloured	180 - 220 µm	
Core/cladding concentricity error		≤ 0.6 µm	
Coating/cladding concentricity error		≤ 12.5 µm	
Cladding non-circularity		≤ 1.0 %	
Attenuation	1310 nm	typ 0.35 / max 0.40 dB/km	
	1383 nm	typ 0.35 / max 0.40 dB/km	
	1550 nm	typ 0.20 / max 0.25 dB/km	
	1625 nm	typ 0.23 / max 0.30 dB/km	
Cut-off wavelength λ_{cc}		≤ 1260 nm	
Chromatic dispersion	1285 - 1330 nm	≤ 3.5 ps/nm × km	
	1550 nm	≤ 18.6 ps/nm × km	
	1625 nm	≤ 23.7 ps/nm × km	
Zero dispersion wavelength λ_0		1300 - 1324 nm	
Zero dispersion slope S_0 at λ_0		≤ 0.092 ps/nm ² × km	
Polarization moden dispersion (PMD)	for link value	≤ 0.2 ps/√km	
	for individual value	≤ 0.2 ps/√km	
Mode field diameter	1310 nm	8.6 - 9.2 ±0.4 µm	
Effective group index of refraction	1310 nm	1.4674	
	1550 nm	1.4679	
	1625 nm	1.4680	
Point Discontinuity	1310 nm	≤ 0.05 dB	
	1550 nm	≤ 0.05 dB	
Macrobending loss			
	1 turn, 20 mm dia	1550 nm	≤ 0.75 dB
	1 turn, 20 mm dia	1625 nm	≤ 1.50 dB
	10 turns, 30 mm dia	1550 nm	≤ 0.25 dB
	10 turns, 30 mm dia	1625 nm	≤ 1.00 dB

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E8/125

Non-Zero-Dispersion-Shifted Singlemodefiber (NZDF)
ITU-T G.655.D

Cladding diameter		125 ±0.7 µm	
Coating diameter	uncoloured	245 ±10 µm	
	coloured	250 ±15 µm	
Core/cladding concentricity error		≤ 0.6 µm	
Coating/cladding concentricity error		≤ 12.5 µm	
Cladding non-circularity		≤ 1.0 %	
Attenuation	1550 nm	typ 0.21 / max 0.25 dB/km	
	1625 nm	typ 0.23 / max 0.30 dB/km	
Cut-off wavelength λ_{cc}		≤ 1450 nm	
Chromatic dispersion	1530 nm	1.2 - 5.6 ps/nm × km	
	1565 nm	3.4 - 7.2 ps/nm × km	
	1625 nm	5.8 - 11.2 ps/nm × km	
Polarization moden dispersion (PMD)	for link value	≤ 0.2 ps/√km	
	for individual value	≤ 0.2 ps/√km	
Mode field diameter	1550 nm	9.6 ±0.4 µm	
Effective group index of refraction	1550 nm	1.4680	
Point Discontinuity	1550 nm	≤ 0.05 dB	
	1625 nm	≤ 0.05 dB	
Macrobending loss	100 turn, 60 mm dia	1625 nm	≤ 0.10 dB

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G62.5/125 OM1

Multimodefiber
IEC 60793-2-10 A1-OM1

Mode field diameter		62.5 ±3 μm
Cladding diameter		125 ±2 μm
Coating diameter		245 ±10 μm
Core/cladding concentricity error		≤ 3.0 μm
Coating/cladding concentricity error		≤ 12.5 μm
Core non-circularity		≤ 6.0 %
Cladding non-circularity		≤ 2.0 %
Attenuation	850 nm 1300 nm	≤ 3.2 dB/km ≤ 1.2 dB/km
Bandwidth (OFL)	850 nm 1300 nm	200 MHz*km 500 MHz*km
Numerical aperture		0.275 ±0.015
Zero dispersion wavelength λ ₀		1320 - 1365 nm
Zero dispersion slope S ₀ at λ ₀		≤ 0.11 ps/nm ² × km
Effective group index of refraction	850 nm 1300 nm	1.496 1.491
Link length at 1 Gb/s	850 nm 1300 nm	≤ 275 ≤ 550
Macrobending loss	100 turns, 75 mm dia 850 nm und 1300 nm	≤ 0.50 dB

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G50/125 OM2

Multimodefiber
IEC 60793-2-10 A1-OM2

Mode field diameter		50 ±2.5 μm	
Cladding diameter		125 ±1 μm	
Coating diameter		245 ±10 μm	
Core/cladding concentricity error		≤ 2.0 μm	
Coating/cladding concentricity error		≤ 12.5 μm	
Core non-circularity		≤ 6.0 %	
Cladding non-circularity		≤ 1.0 %	
Attenuation	850 nm 1300 nm	≤ 2.7 dB/km ≤ 1.0 dB/km	
Bandwidth (OFL)	850 nm 1300 nm	500 MHz*km 500 MHz*km	
Numerical aperture		0.200 ±0.015	
Zero dispersion wavelength λ ₀		1295 - 1340 nm	
Zero dispersion slope S ₀ at λ ₀		≤ 0.105 ps/nm ² × km	
Effective group index of refraction	850 nm 1300 nm	1.482 1.477	
Macrobending loss	2 turns, 30 mm dia 2 turns, 30 mm dia 2 turns, 15 mm dia 2 turns, 15 mm dia	850 nm 1300 nm 850 nm 1300 nm	≤ 0.10 dB ≤ 0.30 dB ≤ 0.20 dB ≤ 0.50 dB

Fiber data sheet

G50/125 OM3

Multimodefiber
IEC 60793-2-10 A1-OM3

Mode field diameter		50 ±2.5 μm	
Cladding diameter		125 ±1 μm	
Coating diameter		245 ±10 μm	
Core/cladding concentricity error		≤ 2.0 μm	
Coating/cladding concentricity error		≤ 12.5 μm	
Core non-circularity		≤ 6.0 %	
Cladding non-circularity		≤ 1.0 %	
Attenuation	850 nm	≤ 2.7 dB/km	
	1300 nm	≤ 1.0 dB/km	
Bandwidth (OFL)	850 nm	1500 MHz*km	
	1300 nm	500 MHz*km	
Bandwidth (EMB)	850 nm	2000 MHz*km	
Numerical aperture		0.200 ±0.015	
Zero dispersion wavelength λ ₀		1295 - 1340 nm	
Zero dispersion slope S ₀ at λ ₀		≤ 0.105 ps/nm ² × km	
Effective group index of refraction	850 nm	1.482	
	1300 nm	1.477	
Macrobending loss			
	2 turns, 30 mm dia	850 nm	≤ 0.10 dB
	2 turns, 30 mm dia	1300 nm	≤ 0.30 dB
	2 turns, 15 mm dia	850 nm	≤ 0.20 dB
	2 turns, 15 mm dia	1300 nm	≤ 0.50 dB

Fiber data sheet

G50/125 OM4

Multimodefiber
IEC 60793-2-10 A1-OM4

Mode field diameter		50 ±2.5 μm	
Cladding diameter		125 ±1 μm	
Coating diameter		245 ±10 μm	
Core/cladding concentricity error		≤ 2.0 μm	
Coating/cladding concentricity error		≤ 12.5 μm	
Core non-circularity		≤ 6.0 %	
Cladding non-circularity		≤ 1.0 %	
Attenuation	850 nm	≤ 2.7 dB/km	
	1300 nm	≤ 1.0 dB/km	
Bandwidth (OFL)	850 nm	3500 MHz*km	
	1300 nm	500 MHz*km	
Bandwidth (EMB)	850 nm	4700 MHz*km	
Numerical aperture		0.200 ±0.015	
Zero dispersion wavelength λ ₀		1295 - 1340 nm	
Zero dispersion slope S ₀ at λ ₀		≤ 0.105 ps/nm ² × km	
Effective group index of refraction	850 nm	1.482	
	1300 nm	1.477	
Macrobending loss			
	2 turns, 30 mm dia	850 nm	≤ 0.10 dB
	2 turns, 30 mm dia	1300 nm	≤ 0.30 dB
	2 turns, 15 mm dia	850 nm	≤ 0.20 dB
	2 turns, 15 mm dia	1300 nm	≤ 0.50 dB

Fiber data sheet

G50/125 OM5

Multimodefiber
IEC 60793-2-10 A1-OM5

Mode field diameter		50 ±2.5 μm	
Cladding diameter		125 ±1 μm	
Coating diameter		245 ±10 μm	
Core/cladding concentricity error		≤ 2.0 μm	
Coating/cladding concentricity error		≤ 12.5 μm	
Core non-circularity		≤ 6.0 %	
Cladding non-circularity		≤ 1.0 %	
Attenuation	850 nm 1300 nm	≤ 2.7 dB/km ≤ 1.0 dB/km	
Bandwidth (OFL)	850 nm 953 nm 1300 nm	3500 MHz*km 1850 MHz*km 500 MHz*km	
Bandwidth (EMB)	850 nm 953 nm	4700 MHz*km 2470 MHz*km	
Numerical aperture		0.200 ±0.015	
Zero dispersion wavelength λ ₀		1297 - 1328 nm	
Zero dispersion slope S ₀ at λ ₀		≤ 4 (-103) / (840 (1-(λ ₀ /840) ⁴)) ps/nm ² × km	
Effective group index of refraction	850 nm 1300 nm	1.482 1.477	
Macrobending loss	2 turns, 30 mm dia 2 turns, 30 mm dia 2 turns, 30 mm dia 2 turns, 15 mm dia 2 turns, 15 mm dia 2 turns, 15 mm dia	850 nm 953 nm 1300 nm 850 nm 953 nm 1300 nm	≤ 0.10 dB ≤ 0.10 dB ≤ 0.30 dB ≤ 0.20 dB ≤ 0.20 dB ≤ 0.50 dB