



# 9 $\mu$ m G657A1 BENDING INSENSITIVE FIBER

DESCRIPTION	VALUE	UNIT
● <b>Optical characteristics</b>		
	1310 nm	<0.35 [dB / km]
	1383 nm (After H <sub>2</sub> aging)	<0.35 [dB / km]
Attenuation	1490 nm (After H <sub>2</sub> aging)	<0.25 [dB / km]
	1550 nm	<0.21 [dB / km]
	1625 nm	<0.23 [dB / km]
Attenuation vs. Wavelength	1285 - 1330 nm	<0.03 [dB / km]
Max. A difference	1550 - 1575 nm	<0.02 [dB / km]
Zero dispersion wavelength		1312 $\pm$ 10 [nm]
Zero dispersion slope		<0.090 [ps / (nm <sup>2</sup> · km)]
PMD Maximum Individual Fibre		<0.2 [ps / $\sqrt{\text{km}}$ ]
Link Design Value (M=20, Q=0.01%)		<0.1 [ps / $\sqrt{\text{km}}$ ]
Typical value		0.086 [ps / $\sqrt{\text{km}}$ ]
Cable cutoff wavelength		<1260 [nm]
Mode field diameter (MFD)	1310 nm	9.0 $\pm$ 0.4 [ $\mu$ m]
	1550 nm	10.1 $\pm$ 0.5 [ $\mu$ m]
Effective group index of refraction (Netr)	1310 nm	1.466
	1550 nm	1.467
Point discontinuities	1310 nm, 1550 nm	<0.05 [dB]
● <b>Geometrical characteristics</b>		
Cladding diameter		124.8 $\pm$ 0.7 [ $\mu$ m]
Cladding non-circularity		<0.7 [%]
Coating diameter		245 $\pm$ 5 [ $\mu$ m]
Coating / cladding concentricity error		<12.0 [ $\mu$ m]
Coating non-circularity		<6.0 [%]
Core / cladding concentricity error		<0.5 [ $\mu$ m]
Curl (radius)		>4 [m]
Delivery length		2.1 to 50.4 [km/reel]



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DESCRIPTION	VALUE		UNIT
● Environmental characteristics	1310 nm, 1550 nm & 1625 nm		
Temperature dependence			
Induced attenuation at	-60°C to +85°C	<0.05	[dB / km]
Temperature-humidity cycling			
Induced attenuation at	-10°C to +85°C, 98% R.H.	<0.05	[dB / km]
Damp heat dependence			
Induced attenuation at	85°C, 85% R.H., 30 days	<0.05	[dB / km]
Watersoak dependence			
Induced attenuation at	23°C for 30 days	<0.05	[dB / km]
Dry heat aging at	85°C	<0.05	[dB / km]
● Mechanical Specification			
Proof test	off line	>9.0	[N]
		>1.0	[%]
		>100	[kpsi]
Macro-bend induced attenuation			
100 turns around a mandrel of 50 mm diameter	1550 nm & 1625 nm	<0.05	[dB]
10 turns around a mandrel of 30 mm diameter	1550 nm	<0.1	[dB]
10 turns around a mandrel of 30 mm diameter	1625 nm	<0.3	[dB]
1 turns around a mandrel of 20 mm diameter	1550 nm	<0.1	[dB]
1 turns around a mandrel of 20 mm diameter	1625 nm	<0.5	[dB]
Coating strip force	typical average force	1.7	[N]
	peak force	>1.3 <8.9	[N]
Dynamic stress corrosion susceptibility parameter (nd, Typical)			>20