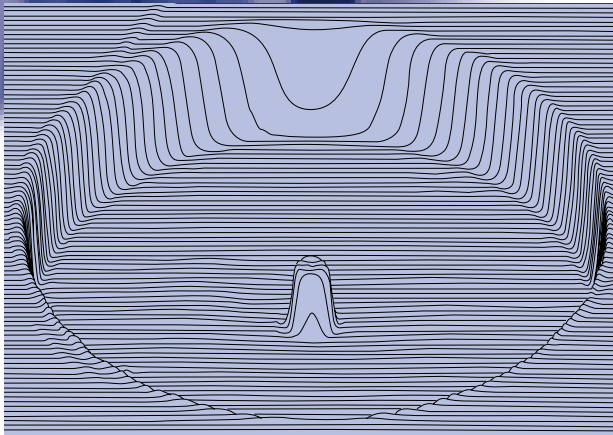




Single Mode Optical Fibre. Type: Matched Cladding / MCVD

Product code: 278
Dual Layer Primary Coating (DLPC8)
Issue date: 11/01
Supersedes: -



Fibre.

This single mode optical fibre, product code 278, is a 1310 nm optimized (non-dispersion shifted) fibre, also suitable for use at 1550 nm.

This optical fibre is especially suitable for high bit-rate, long distance transmission links and analog CATV networks.

The fibre complies with or exceeds the ITU Recommendation G.652B or the IEC 60793-2-50 type B 1.1 Optical Fibre Specification.

Coating.

The single mode fibre is coated with a dual layer UV curable acrylate, type DLPC8. Designed for more stringent tight-buffer cable applications, the fibre also performs perfectly in loose tube buffer constructions and demonstrates a high resistance to microbending.

The coating offers an excellent stable coating strip force over a wide range of environmental conditions and coating stripping leaves no residues on the bare glass fibre.

Profile.

The single mode fibre is of the matched cladding design with a nominal mode field diameter of 9.2 μm . It has a high level of splice compatibility in applications with optical fibres manufactured by other processes (PCVD, OVD, VAD).

Process.

This single mode fibre is manufactured using the MCVD process.

Specifications

Single Mode Optical Fibre.

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Characteristics	Conditions	Specified Values			Units
Optical Characteristics					
Attenuation Coefficient	1310 nm	≤ 0.34	≤ 0.36	≤ 0.38	[dB/km]
	1285 - 1330 nm	≤ 0.36	≤ 0.38	≤ 0.40	[dB/km]
	1550 nm	≤ 0.20	≤ 0.21	≤ 0.22	[dB/km]
Mode Field Diameter	1310 nm			9.2 ± 0.4	[µm]
	1550 nm			10.4 ± 0.8	[µm]
Fibre Cut-Off Wavelength		≥ 1180	≤ 1330		[nm]
Cable Cut-Off Wavelength			≤ 1260		[nm]
Chromatic Dispersion					
Zero-Dispersion Wavelength		≥ 1302	≤ 1322		[nm]
Zero-Dispersion Slope			≤ 0.091		[ps/(nm ² ·km)]
Dispersion Coefficient	1285 - 1330 nm		≤ 131		[ps/(nm·km)]
	1550 nm		≤ 18		[ps/(nm·km)]
Polarisation Mode Dispersion	1550 nm		Cabled: ≤ 0.5		[ps/(√km)]
Backscatter Characteristics [1] Step [2]	1310 nm, 1550 nm		≤ 0.05		[dB]
		Difference Backscatter Coefficient	≤ 0.03		[dB/km]
Reflections			Not allowed		
Group Index of Refraction (Typical)	1310 nm		1.466		
	1550 nm		1.467		
Geometrical Characteristics					
MFD Non-Circularity			≤ 6		[%]
MFD / Cladding Concentricity Error			≤ 0.6		[µm]
Cladding Diameter			125.0 ± 1.0		[µm]
Cladding Non-Circularity			≤ 1.0		[%]
Coating Diameter			245 ± 10		[µm]
Coating Non-Circularity			≤ 6		[%]
Coating Concentricity Error			≤ 12.5		[µm]
	Length	Standard lengths up to	25.2		[km]
Environmental Characteristics					
Temperature Dependence Induced Attenuation	1310 nm, 1550 nm -60°C to +85°C		≤ 0.05		[dB/km]
Temperature and Humidity Cycling Induced Attenuation	1310 nm, 1550 nm -10°C to +85°C, 90% R.H.		≤ 0.05		[dB/km]
Watersoak Dependence Induced Attenuation	1310 nm, 1550 nm 20°C for 30 days		≤ 0.05		[dB/km]
Damp Heat Dependence Induced Attenuation	1310 nm, 1550 nm 85°C, 85% R.H., 30 days		≤ 0.05		[dB/km]
Mechanical Characteristics					
Proof Test	off line		≥ 8.8		[N]
			≥ 1.0		[%]
			≥ 100		[KPSI]
			≥ 0.7		[GPa]
Fibre Curl Radius			≥ 4.0		[m]
Bending Dependence Induced Attenuation	1550 nm 100 turns, 60 mm diameter		≤ 0.05		[dB]
Dynamic Stress Corrosion Susceptibility Parameter			≥ 20		
Coating Strip Force	Typical average force		2		[N]
	Peak force	≥ 1.3	≤ 8.9		[N]

1. OTDR measurement with 1 µs pulse width.
 2. Mean of bi-directional measurement.