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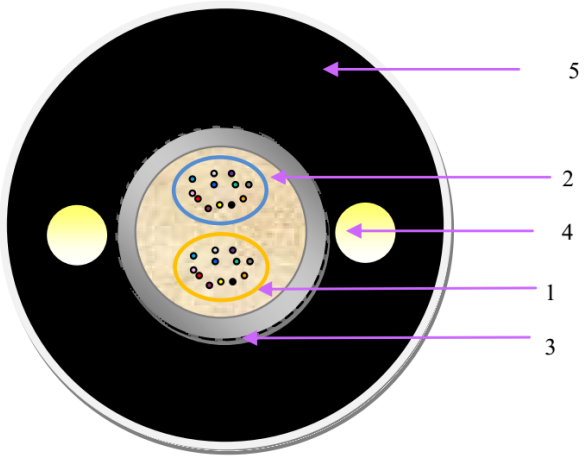
24F SM UT UA MICRODUCT OPTICAL FIBRE CABLE

1. **Optic Fibres are housed in PBT Loose Tube**
2. **Thixotropic jelly injected in loose tube with fibre**
3. **One Central Poly Butylene Terephthalate (PBTP) Loose Tube**
4. **FRP rods – 2 Nos (Nom. 1 mm dia) embedded within sheath**
5. **HDPE[UV] Black sheath (Nominal Thickness 1.8 mm).**



24F Cable Cross Section

Technical Specification From 4F to 12F Cable

Description	Typical Values											
Single Mode Optical Fibre	**Complying to ITU - T :G – 652D**											
Fibre Colour Code	Bl	Or	Gr	Br	Gy	Wh	Rd	Blk	Yel	Vio	Pi	Nat
SM Fibre Optical Performance	Max. Attenuation at 1310nm [dB/Km]				0.36		Max. Attenuation at 1550nm [dB/Km]				0.23	
Mechanical Performance	Max. Tensile Strength		Min. Bend Radius			Torsion		Compression			Impact	
	300 N		20 x Cable diameter – long term & 10 x Cable diameter – Short term			± 360 deg		1000 N/100mm			25 Nm	
Environmental Performance	Temperature		Operating			Installation			Storage/Shipping			
	Specification		- 40° C to + 70° C			- 10° C to + 50° C			- 40° C to + 70° C			
Physical	Description / Cable		24F : 12 fibre in 2 bundles									
	Elements / Fibre count		1 / 24									
	Cable diameter		Maximum 6.8 mm									
	Cable Weight		Nominal 35 Kg/Km									
	Std. Length		2/3/4km ±10%									

Specifications of Optical characteristics:

The cables are made with high quality optical fibres suitable for operation at 1310 nm and 1550 nm. The fibres conform to international standards ***ITU-T G 652D.*** The fibres have excellent geometrical properties to yield low splice loss. The fibres have dual acrylate coating and colour of the coating will not change over period of time. The fibres used in the cables conform to the following specifications:

Parameter	Unit	Specification
1. Cladding Diameter	μm	125.0 ± 1.0
2. Cladding Non-Circularity	%	≤ 1.0%
3. Coated Fiber Diameter	μm	235 to 255
4. Core/Cladding concentricity Error	μm	≤ 0.8
5. Mode Field Diameter	μm	9.3 ± 0.5 at 1310 nm 10.4 ± 0.5 at 1550 nm
6. Coating/cladding concentricity error	μm	≤ 12
7. Minimum Proof Strength Strain	GPa %	0.70 (100 kpsi) 1
8. Fiber Curl	m	≥ 4
9. Zero-Dispersion Wavelength	nm	1300 to 1324
10. Zero-Dispersion Slope	ps/nm²-km	≤ 0.092
11. Chromatic Dispersion 1285-1330 nm 1270-1340 nm 1550 nm 1625 nm	ps/nm-km	 ≤ 3.5 ≤ 5.3 ≤ 18 ≤ 22
12. Polarisation Mode Dispersion Coefficient for fibre.	ps/√km	≤ 0.2 at 1310 nm & 1550 nm
13. Fiber Cut-off Wavelength	nm	≥ 1150 ≤ 1320
14. Fiber Macrobend : (100 turns 60 mm dia.)	dB	≤ 0.05 at 1310 nm ≤ 0.10 at 1550 nm
15. Fiber Macrobend : (1 turn at 32 mm diameter)	dB	≤ 0.5 at 1550 nm
16. Coating Strip Force	N	1.3 ≤ F ≤ 8.9
17. Dynamic Tensile Strength	kpsi	Unaged : >550 (3.8 GPa) Aged : >440 (3.0 GPa)
18. Dynamic Fatigue		≥ 20
19. Static Fatigue		≥ 20