Central Tube Air-blown Micro Cable Specification

FIBRE KONZEPT

Central Loose tube -Dielectric-Single Sheath- G.657A1 Fiber

- **Central loose tube:** Loose tube , filled with a suitable water tightness compound, containing 12-24 fibers.
- **Aramid yarns:** Reinforcement members.
- **Ripcord(s):** 1 red ripcord under sheath.
- **Outer Sheath:** Black HDPE

Cable Specification

Cable Cores		12	24(200u)
No. of Fibers		12	24(200u)
Tube- Φ	mm	1.7±0.1	
The Thickness of outer sheath	mm	0.4±0.1	
Max. Cable Diameter	mm	2.5±0.1	
Nominal Cable Weight	Kg/km	5	

Cable Application

Temperature Range		Minimum Bend Radius	
Transportation & Storage	-20~+60℃	Load	20×D
Operation	-20~+60℃	Unload	10×D

Main Mechanical and Environmental Characteristics

Test	Test Standard	Specified Value	Acceptance Criteria
Tensile	IEC 60794-1-2-E1	150N, 1min	Δα reversible, no damage
Crush	IEC 60794-1-2-E3	500N, 1min, 3times	Δα reversible, no damage
Impact	IEC 60794-1-2-E4	0.15J, R=300mm, 3times	Δα reversible, no damage
Repeated Bending	IEC 60794-1-2-E6	R=20D, 25N, 25cycles	Δα reversible, no damage
Temperature cycling	IEC 60794-1-2-F1	-20~+60℃, 2cyces, 8h	Δα≤0.15dB/km, no damage
Water Penetration	IEC 60794-1-2-F5	3m cable, 1m water, 24h	No water leakage

Fiber and Tube Color

Color Identification of Fiber

Number	1	2	3	4	5	6	7	8	9	10	11	12
Color	Red	Green	Blue*	Yellow	White	Grey	Brown	Violet	Aqua	Black	Orange	Pink
Number	13	14	15	16	17	18	19	20	21	22	23	24
Color	Red*	Green*	Blue*	Yellow *	White*	Grey*	Brown*	Violet*	Aqua*	Nature*	Orange*	Pink*

* if the color number is more than 12, the fiber color code will be repeated again with black ring except black fiber which is nature color instead.

Color Identification of Tube

Number	1
Color	Natural

Cabled Fiber Performance (G.657A1 250μm)

Characteristics		Acceptance Value
Attenuation	@1310nm	≤0.35dB/km
	@1383nm	≤0.34dB/km
	@1550nm	≤0.21dB/km
	@1625nm	≤0.23dB/km
Mode Field Diameter	@1310nm	8.8±0.6μm
	@1550nm	9.8±0.5μm
Dispersion	@1300 +30/-15nm	≤3.5ps/(nm·km)
	@1550nm	≤18ps/(nm·km)
	@1625nm	≤22ps/(nm·km)
Zero-Dispersion Wavelength		1300nm～1324nm
Zero-Dispersion Slope		≤0.092ps/(nm2·km)
Cable Cutoff Wavelength λcc(nm)		≤1260nm
Macrobend loss	15mm radius, 10 turn, @1550	≤0.25dB
	15mm radius, 10 turn, @1625	≤1.00dB
	10mm radius, 1 turn, @1550	≤0.75dB
	10mm radius, 1 turn, @1625	≤1.5dB
Cladding Diameter		125±0.7μm
Cladding Non-circularity		≤0.7%
Core/Cladding Concentricity Error		≤0.5μm
Fiber diameter with coating (colored)		250±15μm
Proof Test		≥0.69 GPa (100psi)

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Dynamic Fatigue	≥20

Cabled Fiber Performance (G.657A1 200μm)

Characteristics		Acceptance Value
Attenuation	@1310nm	≤0.35dB/km
	@1383nm	≤0.34dB/km
	@1550nm	≤0.21dB/km
	@1625nm	≤0.23dB/km
Mode Field Diameter	@1310nm	8.8±0.6μm
	@1550nm	9.8±0.5μm
Dispersion	@1300 +30/-15nm	≤3.5ps/(nm·km)
	@1550nm	≤18ps/(nm·km)
	@1625nm	≤22ps/(nm·km)
Zero-Dispersion Wavelength		1300nm～1324nm
Zero-Dispersion Slope		≤0.092ps/(nm2·km)
Cable Cutoff Wavelength λcc(nm)		≤1260nm
Macrobend loss	15mm radius, 10 turn, @1550	≤0.25dB
	15mm radius, 10 turn, @1625	≤1.00dB
	10mm radius, 1 turn, @1550	≤0.75dB
	10mm radius, 1 turn, @1625	≤1.5dB
Cladding Diameter		125±0.7μm
Cladding Non-circularity		≤0.7%
Core/Cladding Concentricity Error		≤0.5μm
Fiber diameter with coating (colored)		250±15μm
Proof Test		≥0.69 GPa (100psi)
Dynamic Fatigue		≥20

Sheath Marking - The outer sheath is marked in 1 meter intervals.

Delivery Lengths - Standard delivery length will be 4/6 km with -1%/3% tolerance.

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