Optical mini cables A-DQ4Y nx12 G.657 A1

1. Construction / Application

Identification	Mini A-DQ4Y nx12 E9 G.657A1		
Application	Mini cable for blowing into microducts		
View			
Cross-section (not to scale)	96 fibres	144 fibres	288 fibres
Recommended for microduct dimension (A/I-Ø in mm)	12/8	14/10	
Construction	- Loose tubes with 12 optical fibres, filled with thixotropic compound - Stranded loose tubes; central strength member made of fibre reinforced plastic (FRP), if applicable incl. oversheathing; dummies if required - Cable strand: Dry, with water-blocking materials - Outer sheath: polyamide (PA), 1 underlying rip cord		
Temperature range	Storage and transport -30 to +70 °C	Installation -5 to +50 °C	Operation -25 to +70 °C
Standards	IEC 60794-1-1/2, IEC 60794-5, IEC 60794-5-20		

2. Dimensions

Number of fibres		96	144	288
Loose tubes x fibres		8x12	12x12	24x12
Loose tubes/dummies	1.L 2.L	8 / 0	12 / 0	9 / 0 15 / 0
Outer diameter (± 0,2)	mm	5.6	7.2	8.0
Weight (± 10%)	kg	32	48	60

3. Mechanical Properties

Max. tensile strength (Installation)	800 N
Crush resistance	500 N
Bending radius (under tension)	20x cable Ø
Bending radius (without tension)	15x cable Ø

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4. Identification

Outer sheath	Colour of outer sheath: black Printing method: ink jet

Colour sequence of fibres											
1	2	3	4	5	6	7	8	9	10	11	12
red	green	blue	yellow	white	grey	brown	violet	cyan	black	orange	pink

Colour sequence of Loose tubes	Each layer beginning with 1; from the 13th Loose tube white Dummies are natural coloured

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
red	green	blue	yellow	white	grey	brown	violet	cyan	black	orange	pink	white	white	white

5. Optical Fibre

Standard	ITU-T G.657A1			
Optical -	Fibre attenuation .. cabled	@ 1310 nm ≤0.36 dB/km	@ 1550 nm ≤0.22 dB/km	@ 1625 nm ≤0.26 dB/km
	Mode field diameter (MFD)	9.2 ± 0.4 µm	10.4 ± 0.8 µm	
	Zero dispersion wavelength	1300 ~ 1324 nm		
	Zero dispersion slope	≤0.092 ps/nm² ·km		
	Polarisation mode dispersion (PMD)	≤0.1 ps/√km		
	Cut-off wavelength	≤1260 nm		
	Macro bending loss .. 10 turns Ø30 mm .. 1 turn Ø20 mm	@1550 nm ≤0.25 dB ≤0.75 dB	@1625 nm ≤1.0 dB ≤1.5 dB	
Geometric -	Outer diameter	200 ± 10 µm		
	Cladding diameter	125 ± 0.7 µm		
	Core/clad concentricity error	≤0.6 µm		
	Cladding non-circularity	≤ 1.0 %		
Mechanical -	Proof stress	≥ 0.69 Gpa		

6. Order informations

part no.	Number of fibres	part name
071970	96	Mini A-DQ4Y 8X12 G.657A1 200 800N OD5.6 SW
071971	144	Mini A-DQ4Y 12X12 G.657A1 200 800N OD7.2 SW
071972	288	Mini A-DQ4Y 24X12 G.657A1 200 800N OD8.0 SW

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7. Test Methods

Checked	Conditions	Acceptance criteria
Tensile strength IEC 60794-1-2 E1	Tensile strength: see point 3 (Installation, Betrieb) Sample length: ≥ 50 m Test duration: 1 min	- Fibre strain <0.6% - Attenuation change reversible - No damage
Crush resistance IEC 60794-1-2 E3	Crush resistance: see point 3 Test duration: 15 min, number of tests: 3	- Attenuation change ≤ 0.05 dB - No damage
Impact IEC 60794-1-2 E4	Impact energy: 2J R = 300 mm, number of tests: 3	- Attenuation change ≤ 0.05 dB - No damage
Repeated bending IEC 60794-1-2 E6	Bending radius: 20x cable Ø 35 cycles, 100 N	- Attenuation change ≤ 0.05 dB - No damage
Torsion IEC 60794-1-2 E7	Sample length: 2 m ± 180°, 100N, 10 cycles	- Attenuation change ≤ 0.05 dB - No damage
Bend IEC 60794-1-2 E11	Bending radius: 20x cable Ø 4 bends, 3 cycles	- Attenuation change ≤ 0.05 dB - No damage
Temperature cycling IEC 60794-1-2 F1	-15 °C .. +50 °C -25 °C .. +70 °C	- Attenuation ≤ 0.05 dB/km - Attenuation ≤ 0.10 dB/km - Attenuation reversible
Water penetration IEC 60794-1-2 F5	Sample length: 3 m water column height: 1 m, Test duration: 24 h	- No water leakage

Spec.: 2019060425, Rev. 4.0

The products and information presented here are for technical calculation only. They are subject to technical progress and in no way represent the ability of shipment. Outer diameters are approximately.