

# 1. Application / Construction

Identification	ADSS-24 B1.3-PE					
Application	ADSS Cable					
	24 fibers					
Cross Section (not to scale)						
Configuration	<ul> <li>PBT loose tube with 12 optical fibers, filled with thixotropic compound</li> <li>Stranded loose tubes</li> <li>Central strength member made of fibre reinforced plastic (FRP)</li> <li>Cable strand: dry, with water blocking yarns and water blocking tape</li> <li>Aramid yarns as additional strength member</li> <li>Outer sheath: PE, black, two ripcords under the sheath</li> </ul>					
Temperature Range	Storage and transport Installation Operation -40 to +70°C -10 to +50°C -40 to +70°C					
Standards	IEC 60793-1, IEC 60793-2, IEC 60794-4-20					
ZTT Specification	20-107625-A					
Customer Reference	Common standard					

#### 2. Dimensions

Number of fibers	/	24
Loose tubes x fibers	/	2x12
Loose tubes / Dummies	/	2/4
Outer diameter (±5%)	mm	10.8
Weight	kg/km	97

Sizes and values without tolerances are nominal values

### 3. Mechanical Properties

Max. tensile load	6.7 kN
Crush resistance / 10 cm	1500 N
Bending radius (installation)	20x cable Ø
Bending radius (operation)	10x cable Ø

See Point 6: Test Methods

Note: suitable for span 400m, NESC light, install sag 1.5%

### 4. Marking

	1	2	3	4	5	6	7	8	9	10	11	12
Fiber Colors	blue	orange	green	brown	slate	white	red	black	yellow	violet	rose	aqua
	1	2										
Tube Colors	blue	orange										

Outer Sheath: black, ink jet, marking in 1 meter intervals as follows (for example):

ZTT OPTICAL CABLE ADSS-24 B1.3-PE <fiber counts> <batch ID> <meter marking >



# 5. Optical Fiber

Standard	ITU-T G.652D						
	Fibre attenuation cabled	@ 1310 nm ≤0.36 dB/km	@ 1550 nm ≤0.22 dB/km				
	Mode field diameter (MFD)	9.2 ± 0.5 μm	10.4 ± 0.6 μm				
	Zero dispersion wavelength	1300~1	1300~1324 nm				
Optical	Zero dispersion slope	dispersion slope ≤0.092 ps/nr					
	Polarisation mode dispersion (PMD)	≤0.2 ps/√km					
	Cut-off wavelength	≤1260 nm					
	Macro bending loss 100 turns Ø50 mm	@1550 nm ≤0.05 dB	@1625 nm ≤0.10 dB				
	Outer diameter	245 ± 15 μm					
Geometric	Cladding diameter	125 ±	1.0 µm				
	Core/clad concentricity error	≤0.6 µm					
	Cladding non-circularity	≤1.	0 %				
Mechanical	Proof stress	≥0.69 Gpa					

### 6. Test Methods

Test	Conditions	Acceptance criteria
Tensile strength IEC 60794-1-2 E1	Tensile strength: see Point 3 Sample length: ≥ 50 m, Duration: 1 min	- Fiber strain:≤0.33%, ∆α reversible - No damage
Crush resistance IEC 60794-1-2 E3	Crush: see Point 3 Test duration: 1 min, number of test: 3	- ∆α ≤0.05dB after test - No damage
Impact IEC 60794-1-2 E4	Impact energy: 1 J R = 300 mm, number of places/tests: 3	- ∆α ≤0.05dB after test - No damage
Repeated bending IEC 60794-1-2 E6	Bending radius: 20x cable Ø 25 cycles	- ∆α ≤0.05dB after test - No damage
Torsion IEC 60794-1-2 E7	Sample length: 2 m ± 180°, 10 cycles	- ∆α ≤0.05dB after test - No damage
Bend IEC 60794-1-2 E11A	Bending radius: 10x cable Ø 4 bends, 3 cycles	- ∆α ≤0.05dB after test - No damage
Temperature cycling IEC 60794-1-2 F1	-40°C→ +70°C 12 hours at each step, 2 cycles	- ∆α≤0.15dB/km and reversible - No damage
Water penetration IEC 60794-1-2 F5	Sample length: 3 m Water column height: 1 m Test duration: 24 h	- No water leakage

All optical measurements at 1550 nm

# 7. Logistics

Cable type	Length Tolerance	2km -1% / +3%	
ADSS-24 B1.3-PE	Drum Type Dimensions Weight	Wood 115*70*75 272	D*d*B in cm

Dimensions including protection. Indicative values, actually delivered drum sizes and weights may deviate. Cable ends sealed with caps

Version	Date	Prepared	Reviewed	Approved	Remark
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