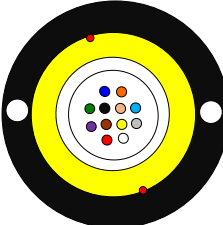
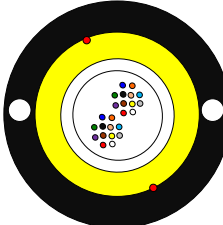


1. Application / Construction

Identification	OFC-4/8/12/24 G.652D-CAF-DB-S1 OFC-2 G.657A1-CAF-DB-S1		
Application	Duct or aerial cable		
Cross Section (not to scale)	 <p>2/4/8/12 F</p>	 <p>24 F</p>	
Configuration	<ul style="list-style-type: none"> - Central Loose tube with up to 24 optical fibers, filled with thixotropic compound - Strength member: Aramid yarns - Two parallel FRPs embedded in the sheath - Outer sheath: Black HDPE, two ripcords under sheath 		
Temperature Range	Storage and transport -40 to +70°C	Installation -10 to +50°C	Operation -40 to +70°C
Standards	IEC 60793-1, IEC 60793-2, IEC 60794-3-10		
ZTT Specification	ZTT 19-101160-1-C		
Customer Reference	Common standard		

2. Dimensions

Number of fibres	Unit	2	4	8	12	24
Loose tubes x fibers	/	1x2	1x4	1x8	1x12	1x24
Outer diameter (±0.4)	mm	5.3				5.8
Weight (± 15%)	kg/km	22				25

Note: sheath thickness not consider ripcord portion.

3. Mechanical Properties

Max. tensile load	900N
Crush resistance / 10 cm	500N
Bending radius (installation)	20 x Cable Ø
Bending radius (operation)	10 x Cable Ø

See Point 6: Test Methods

4. Marking

Fiber Colors	1	2	3	4	5	6	7	8	9	10	11	12
	red	green	blue	yellow	white	grey	brown	violet	aqua	black	orange	pink
Fiber Colors	13	14	15	16	17	18	19	20	21	22	23	24
	red	green	blue	yellow	white	grey	brown	violet	aqua	natural	orange	pink

Tube color: Natural

Outer Sheath: Black, ink jet, or hot foil, marking in 1 meter intervals as follows(for example):

ZTT OPTICAL CABLE OFC-24 G.652D-CAF-DB-S1 <batch ID> <meter marking >

5. Optical Fiber

Fiber type	G.652D		
Optical	Fibre attenuation .. cabled	1310nm ≤0.36 dB/km	1550nm ≤0.22 dB/km
	Mode field diameter (MFD)	1310nm: 9.2±0.5μm	
	Zero dispersion wavelength	1300~1324 nm	
	Zero dispersion slope	≤0.092 ps/nm ² ·km	
	Polarisation mode dispersion (PMD)	≤0.2 ps/√km	
	Cut-off wavelength	≤1260 nm	
	Macro bending loss 100 turns; Φ50 mm	@1625 nm ≤ 0.10 dB	
	Cladding diameter	125±1μm	
	Core/clad concentricity error	≤1.0%	
	Cladding non-circularity	≤0.6μm	
Mechanical	Proof stress	≥ 0.69 Gpa	

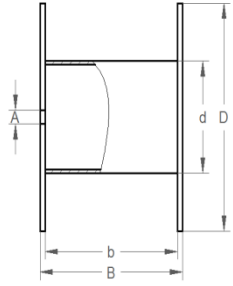
Fiber type	G.657A1		
Optical	Fibre attenuation .. cabled	1310nm ≤0.36 dB/km	1550nm ≤0.22 dB/km
	Mode field diameter (MFD)	1310nm: (8.6~9.2)±0.4μm	
	Zero dispersion wavelength	1300~1324 nm	
	Zero dispersion slope	≤0.092 ps/nm ² ·km	
	Polarisation mode dispersion (PMD)	≤0.2 ps/√km	
	Cut-off wavelength	≤1260 nm	
	Macro bending loss 10 turns; Φ30 mm 1 turn; Φ20 mm	@1550 nm ≤ 0.25 dB ≤ 0.75 dB	@1625 nm ≤ 1.00 dB ≤ 1.50 dB
	Cladding diameter	125±0.7μm	
	Core/clad concentricity error	≤1.0%	
	Cladding non-circularity	≤0.5μm	
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 Test duration: 5 minutes	- Fiber strain ≤ 0.6% - $\Delta\alpha \leq 0.1$ dB - No damage
Crush resistance IEC 60794-1-2 E3	Crush: see Point 3 Test duration: 1 min, number of tests: 3	- $\Delta\alpha \leq 0.05$ dB after test - No damage
Impact IEC 60794-1-2 E4	Impact energy: 3 J R = 10 mm, number of places/tests: 3 Impact number: 1	- $\Delta\alpha \leq 0.05$ dB after test - No damage
Repeated bending IEC 60794-1-2 E6	Bending radius: 20x cable \varnothing Load: 1kg 30 cycles	- $\Delta\alpha \leq 0.05$ dB after test - No damage
Torsion IEC 60794-1-2 E7	Sample length: 2 m $\pm 180^\circ$, 10 cycles	- $\Delta\alpha \leq 0.05$ dB after test - No damage
Bend IEC 60794-1-2 E11A	Bending radius: 20x cable \varnothing 4 bends, 3 cycles	- $\Delta\alpha \leq 0.05$ dB after test - No damage
Temperature cycling IEC 60794-1-2 F1	-40°C ~+70°C 12 hours at each temperature step 2 cycles	- $\Delta\alpha \leq 0.1$ dB/km - 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 (-1%,+3%)	4000m	 <p>D*d*B in cm</p>
OFC-2 G.657A1-CAF-DB-S1 OFC-4/8/12 G.652D-CAF-DB-S1	Drum type Dimensions Weight	Wooden 95*60*75 140kg	
OFC-24 G.652D-CAF-DB-S1		Wooden 95*60*75 152kg	

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

C	April 12, 2024	John	Erica	Felix	Update color code
B	Feb 06, 2020	Dendi	Erica	Felix	Modify aramid quantity
A	July 26, 2019	Amy	Erica	Felix	/

Version	Date	Prepared	Reviewed	Approved	Remark
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