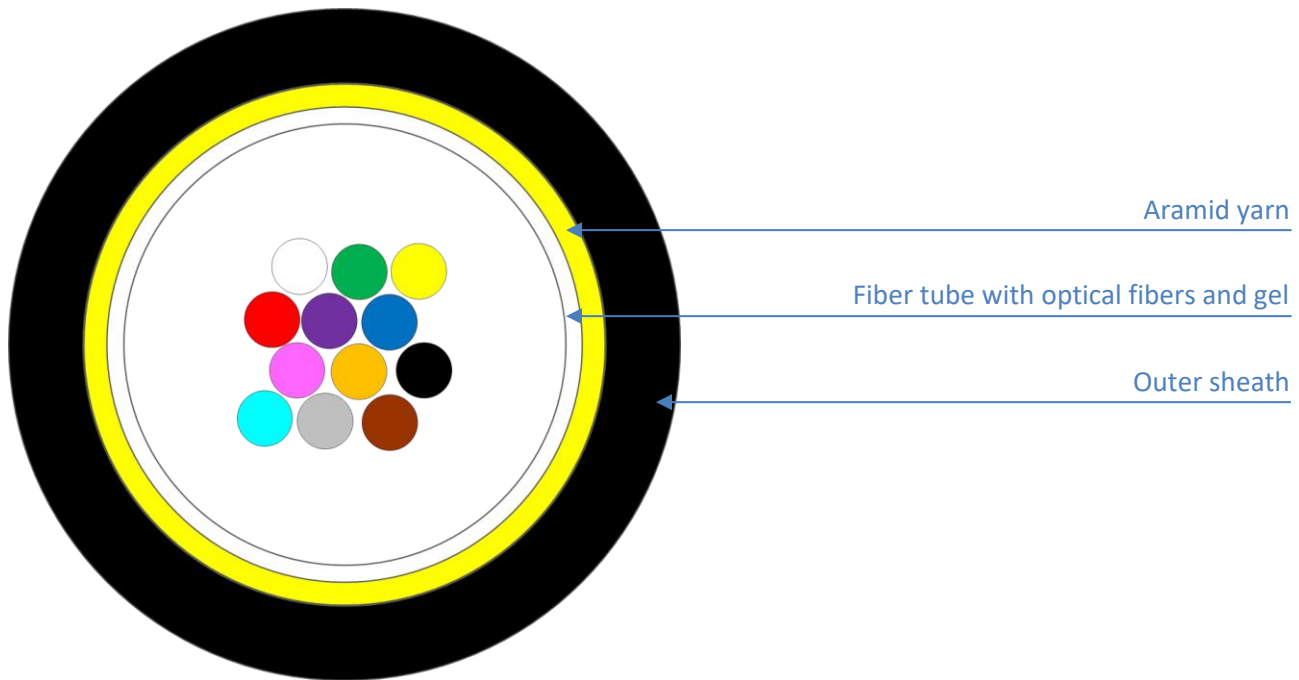





MICRO CABLE, UNITUBE, NANO

FOR BLOWING INSTALLATION IN MICRO DUCTS



1. APPLICATION/CONSTRUCTION

Identification	GYCXT6Y- 2/4/12/24 G.652.D+G.657.A1		
Application	Duct installation		
Cross section (not to scale)	2-4 fibers	12 fibers	24 fibers
			
Configuration	<ul style="list-style-type: none"> - Central loose tube with up to 24 optical fibers, filled with thixotropic compound. - Strength member: Aramid yarn - Outer sheath: HDPE, black 		
Temperature Range	Storage and transport -40°C ~ +70°C	Installation -10°C ~ +60°C	Operation -40°C ~ +60°C
Standards	IEC 60793-1, IEC 60793-2, IEC 60794-5		
CPR	Fca (EN 50575:2014+A1:2016)		

2. DIMENSIONS

2.1 2F ~ 12F ϕ 2.5mm, 24F ϕ 3.6mm

Number of fibers		2	4	12	24
Loose tube x fibers	/	1x2	1x4	1x12	1x24
Outer sheath thickness	mm	0.3			
Outer diameter ($\pm 0,2$)	mm	2.5			3.6
Weight/km	mm	8			10

Sizes and values without tolerances are nominal values

2.2 4F, 12F, 24F ϕ 4.0mm

Number of fibers		4	12	24
Loose tube x fibers	/	1x4	1x12	1x24
Outer sheath thickness	mm	0.4		
Outer diameter ($\pm 0,2$)	mm	4.0		
Weight/km	mm	12		

Sizes and values without tolerances are nominal values

3. MECHANICAL PROPERTIES

Number of fibers		2 ~ 24
Max tensile load	N	100
Crush resistance/10 cm	N	300
Bending radius (Dynamic)	/	20x cable ϕ
Bending radius (Static)	/	10x cable ϕ

See point 6: Test Methods

4. MARKING

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

Remark: Fibers 13 to 24 with color ring

Outer sheath marking: Black, ink jet white print marking with 1-meter intervals:

ZTT OPTICAL CABLE GYCXT6 <n> G.652D+G.657.A1 <batch ID> <meter marking>

<n>: Fiber qty

5. OPTICAL FIBER

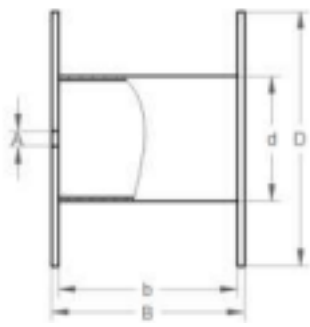
Standard	ITU-T G.657.A1+G.562.D TELE WAVE Premium™R10		
Optical	Fiber attenuation, cabled	1310 nm: ≤0.36dB/km	1550 nm: ≤0.22dB/km
	Mode Field Diameter (MFD)	1310 nm: 9.2 ± 0.4μm	1550 nm: 10.4 ± 0.6μm
	Zero dispersion wavelength	1300~1324 nm	
	Zero dispersion slope	≤0.092 ps/nm ² ·km	
	Polarization mode dispersion (PMD)	≤0.2 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 (uncolored)	245 ± 10 μm	
	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 load: see Point 3 Sample length: ≥ 50 m Test duration: 1 min	- Δα reversible - No damage
Crush resistance IEC 60794-1-2 E3	Crush: see Point 3 Test duration: 1 min Number of tests: 3	- Δα reversible No damage
Impact IEC 60794-1-2 E4	Impact energy: 1J R=300mm Impact points: 3 Impact number: 3	- Δα reversible No damage
Repeated bending IEC 60794-1-2 E6	Bending radius: 20x cable ø Qty. of cycles: 25	- Δα reversible No damage
Torsion IEC 60794-1-2 E7	Sample length: 2 m Angles: ± 180° Qty. of cycles: 5	- Δα≤0.1dB - No damage

Bend IEC 60794-1-2 E11A	Bending radius: 10x cable ϕ Qty. of cycles: 3 Qty of bends: 4	- $\Delta\alpha$ reversible - No damage
Temperature cycling IEC 60794-1-2 F1	Steps: -40°C~+70°C Test duration: 12 hours each temperature step Qty. of cycles: 2	- $\Delta\alpha \leq 0.15$ dB/km - Attenuation reversible - No damage
Water penetration IEC 60794-1-2 F5	Sample length: 3 m Test duration: 24 hours Water column height: 1 m	-No water leakage

7. LOGISTICS

Cable type	/	2 km drum -1% / +3%	
G2 ~ 12 (ϕ 2.5mm)	Drum type Dimension Weight	Plywood D53*B34 18kg	
G24 (ϕ 3.6mm)		Plywood D60*B42 25kg	
G2 ~G24 (ϕ 4.0mm)		Plywood D60*B42 25kg	

8. ORDERING INFORMATION

Elnr.	Product code	Product	Fiber Qty.	Fiber type	Category (fiber)
	K-BU-B-7A1-2.5-G2	Fiberkabel Unitube ϕ 2.5mm 2x G.652.D+G.657.A1	2	SM 9/125	OS2
	K-BU-B-7A1-2.5-G4	Fiberkabel Unitube ϕ 2.5mm 4x G.657.A1+G.652.D	4	SM 9/125	OS2
	K-BU-B-7A1-2.5-G12	Fiberkabel Unitube ϕ 2.5mm 12x G.657.A1+G.652.D	12	SM 9/125	OS2
	K-BU-B-7A1-3.6-G24	Fiberkabel Unitube ϕ 3.6mm 24x G.657.A1+G.652.D	24	SM 9/125	OS2

	K-BU-B-7A1-4.0-G4	Fiberkabel Unitube \varnothing 4.0mm 4x G.657.A1+G.652.D	4	SM 9/125	OS2
	K-BU-B-7A1-4.0-G12	Fiberkabel Unitube \varnothing 4.0mm 12x G.657.A1+G.652.D	12	SM 9/125	OS2
	K-BU-B-7A1-4.0-G24	Fiberkabel Unitube \varnothing 4.0mm 24x G.657.A1+G.652.D	24	SM 9/125	OS2

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