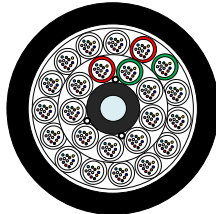


## 1. Application / Construction

Identification	GYFTY-288 G.652D		
Application	Duct Installation Cable		
Cross Section (not to scale)	288 fibers 		
Configuration	<ul style="list-style-type: none"> <li>- Loose tube with 12 optical fibers, filled with thixotropic compound</li> <li>- Stranded loose tubes and fillers if necessary</li> <li>- Central strength member made of fibre reinforced plastic (FRP) with PE coating</li> <li>- Cable strand with water blocking yarns and tape</li> <li>- Outer sheath: Black PE, UV proof</li> </ul>		
Temperature Range	Storage and transport -30 to +70°C	Installation -5 to +50°C	Operation -20 to +60°C
Standards	IEC 60793-1, IEC 60793-2, IEC 60794-3-10, ITU-T G.652		
ZTT Specification	21-116461-8-B		
Customer Reference	3424010974		

## 2. Dimensions

Number of fibers		288
Loose tubes x fibers		24x12
Loose tubes / Dummies		Inner layer:9/0, Outer layer:15/0
Outer sheath thickness	mm	Min. 1.8
Outer diameter (±5%)	mm	17.5(≤21.0)
Weight/km	kg	230

Note: sizes and values without tolerances are nominal values

## 3. Mechanical Properties

Max. tensile load (N)	2700
Crush resistance (N/10cm)	1000
Bending radius (installation)	20x cable Ø
Bending radius (operation)	15x cable Ø

See Point 7: Test Methods

## 4. Marking

Fiber Colors	1 red	2 green	3 blue	4 yellow	5 white	6 grey	7 brown	8 violet	9 aqua	10 black	11 orange	12 pink
Tube Colors	1 red	2 green	3 natural	4 natural	5 natural	6 natural	7 natural	8 natural	9 natural	10 natural	11 natural	12 natural
	13 natural	14 natural	15 natural	-								

Note: each layer start form tube colors No.1

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

telephone handset HT SVK <number of fibers> ZTT 2021 xxxxM

## 5. Optical Fiber

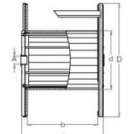
Standard	ITU-T G.652D ZTT-ALF®		
Optical	Fibre attenuation .. cabled	@ 1310 nm ≤0.38 dB/km	@ 1550 nm ≤0.23 dB/km
	Refractive index profile	Step	
	Mode field diameter (MFD)	9.2 ± 0.5 μm	-
	Zero dispersion wavelength	1300~1324 nm	
	Zero dispersion slope	≤0.092 ps/nm <sup>2</sup> ·km	
	Dispersion coefficient	@ 1310 nm ≤3.5 ps/nm.km	@ 1550 nm ≤19.0 ps/nm.km
	PMD individual value	≤0.2 ps/√km	
	Cut-off wavelength	≤1260 nm	
	Macro bending loss .. 100 turns Ø60 mm	@1550 nm ≤0.05 dB	@1625 nm ≤0.10 dB
Geometric	Cladding diameter	125 ± 1.0 μm	
	Coating Diameter	250 ± 15 μm	
	Core/clad concentricity error	Max. individual value: 1μm Max. average value: ≤0.5μm	
	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 Length: ≥ 50 m, Duration: 1 min	- Fiber strain: ≤0.6%, Δα ≤0.15dB - Δα reversible after test
Crush resistance IEC 60794-1-2 E3	Crush: see Point 3 Test duration: 1 min, test number: 3	- Δα ≤0.05dB after test - No damage
Impact IEC 60794-1-2 E4	Impact energy: 3J R = 10 mm, number of places: 3	- Δα ≤0.05dB after test - No damage
Repeated bending IEC 60794-1-2 E6	Bending radius: 20x cable Ø 25 cycles	- Δα ≤0.05dB after test - No damage
Torsion IEC 60794-1-2 E7	Sample length: 2 m ± 180°, 10 cycles	- Δα ≤0.05dB after test - No damage
Bend IEC 60794-1-2 E11A	Bending radius: 10x cable Ø 3 turns, 3 cycles	- Δα ≤0.05dB after test - No damage
Temperature cycling IEC 60794-1-2 F1	-20°C → +60°C 12 hours at each step, 2 cycles	- Δα ≤0.15dB/km and reversible
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	4km -1% / +3%	 D*d*B in cm
GYFTY-288 G.652D	Drum Type Dimensions Weight	Iron-wood 165*80*105 1108 kg	

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

Version	Date	Prepared	Reviewed	Approved	Remarks
B	May 06, 2022	John	Erica	Xue Zhaojian	Update fiber characteristics
A	Feb 19 2021	John	Erica	Xue Zhaojian	