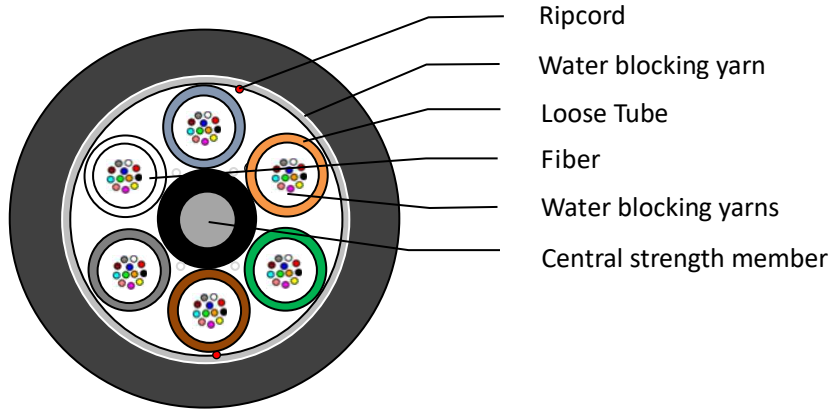


# **Canyon® Optical Fiber Cable Specification**

**Technity Solutions Inc.**

# Loose Tube Armored Duct Cable GYFY 12-432D

## Cable Design



## Cable Specification

Item	contents	Value									
		12	24	36	48	72	96	144	216	288	432
Fiber Counts		12	24	36	48	72	96	144	216	288	432
Loose tube	Number	1	2	3	4	6	8	12	18	24	18
	Outer diameter (mm)	2.4		2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Filler	Number	4		3	2	0	0	0	0	0	0
Max. fiber counts per tube	G.652D	12									24
Central strength member	Material	FRP									
	Diameter (mm)	2.6					2.5	3.0	2.6	2.8	2.6
	PE layer diameter (mm)	-					4.2	7.2	-	4.8	-
Water Blocking Material	Material	Water Blocking Tape & Yarn									
sheath	Material	MDPE									
	Color	Black									
	Thickness (mm)	Nominal: 1.6									
Ripcord	Number	2									
Cable diameter(mm) Approx.		11					12.6	15.7	15.9	18.1	16
Cable weight(kg/km) Approx.		91					107	162	158	200	127

## Color Code for Fiber and Loose Tube

Fiber color



Loose tube color(s)



## Cable Performance

Cable performance		
Test	Specified Value	Acceptance Criteria
Tensile <small>IEC 60794-1-21, E1</small>	2700N	$\Delta\alpha\leq 0.05$ dB, no sheath damage
Crush <small>IEC 60794-1-21, E3</small>	2000 N/10cm	$\Delta\alpha\leq 0.05$ dB, no sheath damage
Impact <small>IEC 60794-1-21, E4</small>	4.5 J	$\Delta\alpha\leq 0.05$ dB, no sheath damage
Repeated Bending <small>IEC 60794-1-21, E6</small>	R=30D, 25 cycles	$\Delta\alpha\leq 0.05$ dB, no sheath damage
Torsion <small>IEC 60794-1-21, E7</small>	1m, 10 cycles, $\pm 180^\circ$	$\Delta\alpha\leq 0.05$ dB, no sheath damage
Temperature Cycling <small>IEC 60794-1-22, F1</small>	2 cycles, -40~+70°C	$\Delta\alpha\leq 0.10$ dB/km, no sheath damage
Water Penetration <small>IEC 60794-1-22, F5</small>	3m sample, 1m height, 24 h	No water leakage

Item	Value		
Operation temperature	-40 °C to +70 °C		
Installation temperature	-15 °C to +70 °C		
Storage temperature	-40 °C to +70 °C		
Static bending radius	10 times the cable diameter		
Dynamic bending radius	20 times the cable diameter		
Tensile performance(N)		Crush(N/100mm)	
Short term	Long term	Short term	Long term
2700	900	2000	1000

## Fiber Performance


G.652D performance		
Characteristics		Acceptance Value
Attenuation	@ 1310nm	≤0.34 dB/km
	@ 1383nm	≤0.34 dB/km
	@ 1550nm	≤0.20 dB/km
	@ 1625nm	≤0.23 dB/km
Mode field diameter (MFD)	@ 1310nm	9.2±0.4 μm
	@ 1550nm	10.4±0.5 μm
Chromatic dispersion coefficient	1288~1339nm (absolute value)	≤3.5 ps/(nm·km)
	1271~1360nm (absolute value)	≤5.3 ps/(nm·km)
	@ 1550 nm	≤18 ps/(nm·km)
Zero-dispersion wavelength		1302nm~1322 nm
Zero-dispersion slope		≤0.092 ps/(nm <sup>2</sup> ·km)
Cable cut-off wavelength λ <sub>cc</sub> (nm)		≤1260 nm
Polarization mode dispersion (PMD, for fiber on the reel)		≤0.20 ps/km <sup>1/2</sup>
Cladding diameter		125±0.7 μm
Cladding non-circularity		≤0.60 %
Core/cladding concentricity error		≤0.5 μm
Proof test		≥0.69 GPa (100kpsi)

## Sheath Marking

The outer sheath is marked in 1 meter intervals as follows:

**2020 Canyon < Type designation (defined by purchaser) \*\*\*\* Ft**

Note: Telephone Symbol is like 

Laser Symbol is like 

## Cable Packing and Marking

### 1.1 Standard cable length for each reel

Standard length: 4000m per reel      Tolerance: ± 1%.

Other cable length available.

### 1.2 Reel type

Each length of the cable shall be wound on a separate iron wooden reel.

The arbor holes provided in the reels shall be approximately 105 mm with a wood or steel hub in the arbor hole (in lieu of fiberboard).

### 1.3 Reel marking

Details given below shall be distinctly marked with a weather-proof material on both outer sides of the reel flange:

Purchaser's name

Reel number

Name of the manufacturer

Year of manufacture

Arrow showing the direction the drum shall be rolled

## 1.4 Cable end retaining methods

Iron wooden reel: inner retaining.

Wooden reel: outer retaining recommended, inner retaining or groove retaining available.



Iron wooden reel



Wooden reel

----- **End of Specification** -----