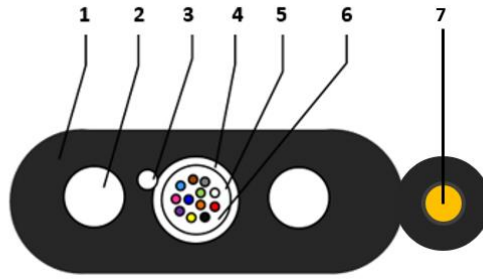


# **Canyon® Optical Fiber Cable Specification**

**Technity Solutions Inc.**

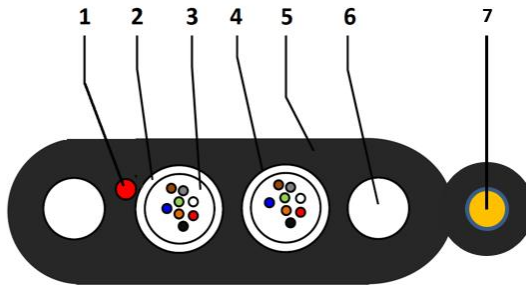
## GYFBXTC8Y-2-12 B6a1G+24AWG

### Cable Design



**GYFBXTC8Y-2-12 B6a1G+24AWG**

- 1.PE sheath      2.Non-metallic strength member      3.Water blocking material  
 4.Loose tube      5.Tube filling      6.Optical fiber      7. 24AWG Copper wire



**GYFBXTC8Y-13-24B6a1G+24AWG**

1. Water blocking material      2. Loose tube      3.Tube filling compound  
 4. UV Fiber      5.Outer Sheath      6. Strength member      7. 24AWG Copper wire

### Cable Specification

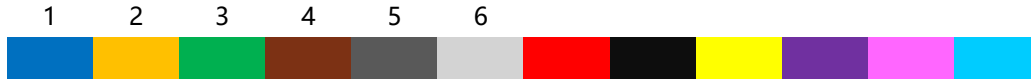
Item	contents	Value	
Loose tube	number	1	2
	Outer diameter (mm)	2.0	
Copper Wire diameter (mm)		0.58	0.58
Max. fiber counts per tube	G.652D	2-12	13-24
strength member	material	FRP	FRP
	number	2	2
	diameter (mm)	2.0	
Water Blocking Material	Material	Water Blocking Yarn	
	number	1	
sheath	Material	HDPE	
	Color	Black	
	Thickness(mm)	Nominal: 0.8	
Cable diameter(mm) Approx.		(10.5±0.3mm)×(3.8±0.3mm)	(11.5±0.3mm)×(3.8±0.3mm)
Cable weight(kg/km) Approx.		40 ± 5 kg/km	57 ± 5 kg/km

## 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>	1350N	$\Delta\alpha\leq 0.05$ dB, no sheath damage
Crush <small>IEC 60794-1-21, E3</small>	1500 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	
	2~12	24
<b>Tensile performance(N)</b>	1350	1350
<b>Crush(N/100mm)</b>	1500	1500
<b>Operation temperature:</b>	-40°C~+70°C	
<b>Installation temperature</b>	-15°C~+60°C	
<b>Storage temperature</b>	-40°C~+70°C	

## Fiber Performance

**FiberHome® B6a.1 (G.657A1) single mode fiber**

Characteristics		Acceptance Value
Attenuation	@ 1310nm	$\leq 0.340$ dB/km
	@ 1383nm	$\leq 0.340$ dB/km
	@ 1550nm	$\leq 0.200$ dB/km
	@ 1625nm	$\leq 0.240$ dB/km
Mode field diameter (MFD)	@ 1310nm	8.20-8.65 $\mu$ m
Chromatic dispersion coefficient	1288~1339nm (absolute value)	$\leq 3.5$ ps/(nm·km)
	1271~1360nm (absolute value)	$\leq 5.3$ ps/(nm·km)


	@1550 nm	$\leq 18 \text{ ps}/(\text{nm}\cdot\text{km})$
Zero-dispersion wavelength		1300nm~1324nm
Zero-dispersion slope		$\leq 0.092 \text{ ps}/(\text{nm}^2\cdot\text{km})$
Cable cut-off wavelength $\lambda_{cc}$ (nm)		$\leq 1260 \text{ nm}$
Polarization mode dispersion (PMD, for fiber on the reel)		$\leq 0.20 \text{ ps}/\text{km}^{1/2}$
Cladding diameter		$125\pm 0.7 \mu\text{m}$
Cladding non-circularity		$\leq 0.7\%$
Core/cladding concentricity error		$\leq 0.5 \mu\text{m}$
Proof test		$\geq 0.69 \text{ GPa}$ (100kpsi)

## Sheath Marking

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

**2022 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:  $\pm 1\%$ .

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

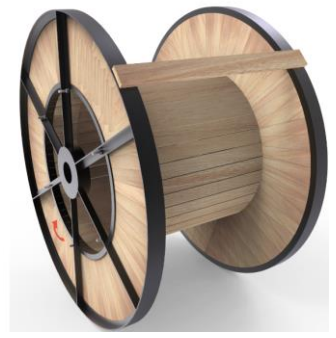
### 1.4 Cable end retaining methods

Iron wooden reel: inner retaining.

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



Iron wooden reel



Wooden reel

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