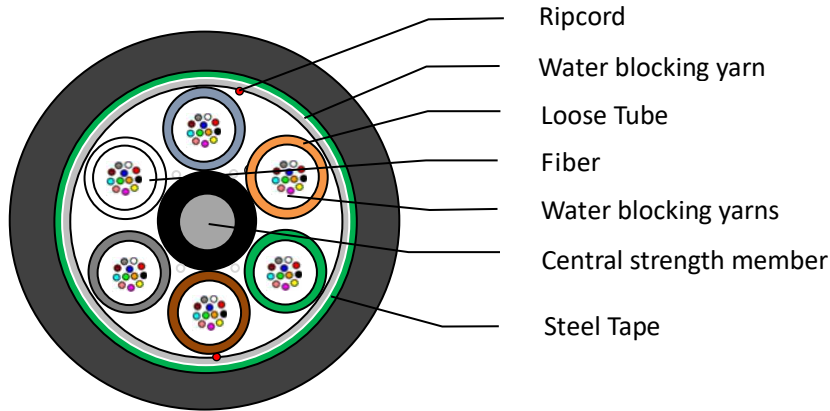


Canyon® Optical Fiber Cable Specification

Technity Solutions Inc.

Loose Tube Armored Duct Cable GYFS 12-432D

Cable Design

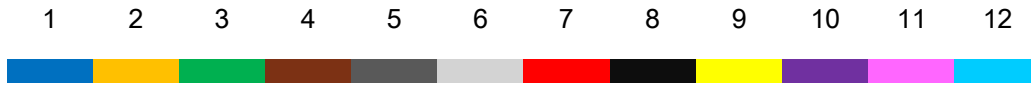


Cable Specification

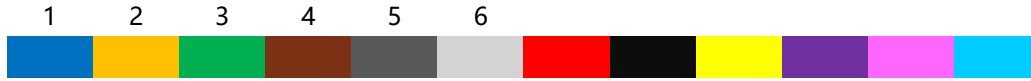
Item	Contents	Value								
		12	24	48	60	72	96	144	288	432
Loose tube	Number	1	2	4	5	6	8	12	24	18
	Outer diameter(mm)	2.4								2.8
Filler	Number	5	4	2	1	0	0	0	0	0
Fiber counts per tube		12								24
Central strength member	Material	FRP								
	Diameter (mm)	2.4					3	3.5	3.3	3.0
	PE layer diameter (mm)	-					4.2	6.9	4.8	-
Water Blocking Material	Material	Water Blocking Tape & Yarn								
Armor	Material	Steel tape (Special)								
Outer sheath	Material	MDPE								
	Color	Black								
	Thickness (Nominal: mm)	1.8						2.0	2.3	2.4
Ripcord	Number	2								
	Color	Red								
Cable diameter(mm) Approx.		12.3					14.1	17.3	20.9	20.9
Cable weight(kg/km) Approx.		132	130	126	125	123	155	227	296	294

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>	2200 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	2200	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 ² ·km)
Cable cut-off wavelength λ _{cc} (nm)		≤1260 nm
Polarization mode dispersion (PMD, for fiber on the reel)		≤0.20 ps/km ^{1/2}
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** -----