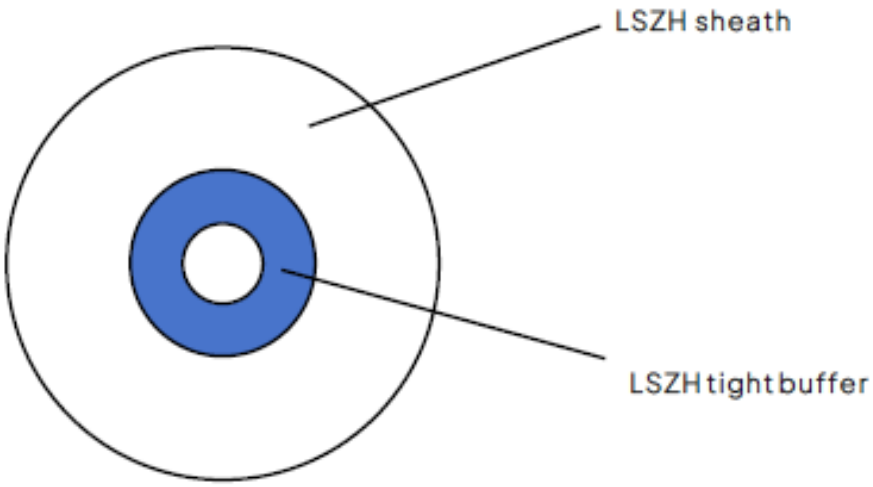
Air Blown Drop Cable

1F - G.657A1



For Schematic Purposes Only

Part Number:

10-12004.03A - 1F Riser Rated Air Blown Cable

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General / Scope

This Specification covers the design requirements and performance standard for the supply of optical fiber cable in the industry. RaDD ensures a stable quality control system for our cable products through several programs including ISO 9001, ISO 14001 and OHS.

Cable type	Application
10-12004.03A - 1F Riser Rated Air Blown Cable	Indoor/Outdoor Cable

Reference

The cable offered by YOFC are designed, manufactured and tested according to the standards as follows:

ITU-T G.657	Characteristics of a bending loss insensitive single mode optical fiber and cable for the access network
IEC 60794-1-1	Optical fiber cables-part 1-1: Generic specification-General
IEC 60794-1-21	Optical fiber cables- part1-2-Generic specification-Basic optical cable test procedure-Mechanical test methods
IEC 60794-1-22	Optical fiber cables- part1-2-Generic specification-Basic optical cable test procedure-Environmental test methods
IEC 60794-2	Optical fiber cables-part 2: Sectional specification-Indoor cables
IEC 60794-2-10	Optical fiber cables Part 2-10：Indoor cables-family specification for simplex and duplex cables

Life Time

Optical fiber cables supplied in compliance with this specifications is capable to withstand the typical service condition for a period of 25 years without detriment to the operation characteristics of the cable.

Application

Item		Value
Installation temperature		-10~+60℃
Operation temperature		-30~+70℃
Storage/shipping temperature		-40~+70℃
Bend Radius	Static	10D (D: Cable diameter)
	Dynamic	20D (D: Cable diameter)

Optical Fiber

Optical properties of the SM fiber are achieved through a germanium doped silica based core with a pure silica cladding which meets ITU-T G.657, UV curable acrylate protective coating is applied over the glass cladding to provide the necessary maximum fiber lifetime.

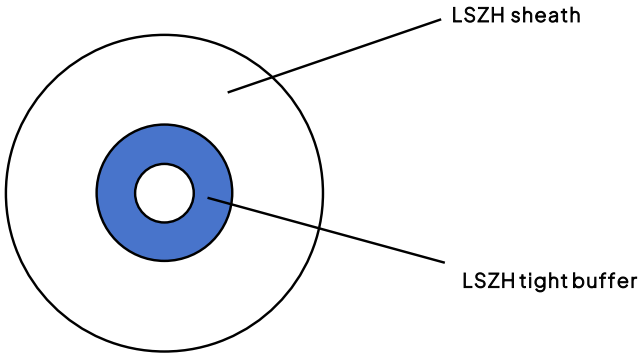
Geometrical, optical, and mechanical characteristics of fiber in cable as the following table:

Category	Description	Specification	
		Before cabled	After cabled
Geometric characteristic	Cladding diameter	125.0 ±0.7 μm	
	Cladding non-circularity	≤0.7 %	
	Core-cladding concentricity error	≤ 0.5 μm	
	Coating diameter (uncolored)	245±10 μm	
	Coating diameter (colored)	250±15 μm	
	Coating-cladding concentricity error	≤ 12 μm	
Transmission characteristic	Attenuation Coefficient at 1310 nm	≤ 0.35 dB/km	≤ 0.40 dB/km
	Attenuation Coefficient at 1383 nm	≤ 0.35 dB/km	≤ 0.40 dB/km
	Attenuation Coefficient at 1550 nm	≤ 0.21 dB/km	≤ 0.30 dB/km
	Attenuation Coefficient at 1625 nm	≤ 0.23 dB/km	≤ 0.30 dB/km
	Mode filed diameter at 1310nm	8.4~9.2μm	
	Cable cutoff wavelength (λcc)	≤ 1260 nm	
	Zero Dispersion Wavelength (λ0)	1300 ≤ λ0 ≤ 1324 nm	
	Zero Dispersion Slope (S0)	≤0.092 ps/(nm2.km)	
	Group Index of Refraction at 1310nm	1.466	
	Group Index of Refraction at 1550nm	1.467	
	Macro-bend loss (10 turns, 15mm,radius)	≤0.25 dB at 1550nm ≤ 1.0 dB at 1625nm	
	Macro-bend loss (1 turns, 10mm radius)	≤0.75 dB at 1550nm ≤ 1.5 dB at 1625nm	
Mechanical characteristic	Proof stress level	≥ 100kpsi (0.69Gpa)	
	Fibre curl radius	≥4 m	
Other Characteristics	Conform to IEC 60793-2-50		

Optical Cable/ Technical Characteristics

1 G.657A1 SM-fibers.

Cross Section of Cable



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Schematic for reference only

Fiber Identification

The color code of fiber will be identification in accordance with the following color sequence, other sequence also is available.

Fiber color code	1
	Natural

Dimensions and Descriptions of Cable Constructions

Item	Contents	Value
		1
Fiber	Color	Natural
Tight buffer fiber	Material	LSZH
	Color	Blue
	Outer Diameter(mm)	0.85±0.05
Outer sheath	Material	LSZH
	Color	White
	Diameter(mm)	1.8±0.2
Crush (N/100mm)		500
Cable weight(kg/km)		4

Mechanical, Physical and Environmental Test Characteristics

The mechanical and environmental performance of the cable are in accordance with the following table. Unless otherwise specified, all attenuation measurements required in this section shall be performed at 1550nm.

No.	Items	Test Method	Requirements
4.1	Crush	IEC 60794-1-21-E3 Load:500N Duration of load: 1min	The change in attenuation coefficient shall be less than or equal to 0.2dB during the test. Additional attenuation: ≤0.05dB after test. No significant damage to cable components.
4.2	Temperature cycling	IEC 60794-1-22-F1 Temperature range: -30 ℃ ～ +70℃ Cycles: 2 Temperature cycling test dwell time: 8hours	The change in attenuation coefficient shall be less than 0.1dB/km after the test.
4.3	Other parameters	According to IEC 60794-1	

Packaging and Drum

Cable Sheath Marking

Unless otherwise specified, the cable sheath marking of jet printing shall be as follows: Color: Black
Contents: the year of manufacture, the type of cable, cable number, length marking Outer sheath marking legend can be changed according to user's requests

Reel Length

Standard reel length: 10,000 & 20,000 ft/reel, other length is also available.

Cable Drum

The cables are packed in Plywood drums.

Cable Packing

Both ends of the cable will be sealed with suitable plastic heat shrinkable caps to prevent the entry of moisture during shipping, handling and storage. The inner end is available for testing.

Cable Environmental Requirement

Our products are in compliance with current RoHS. Please inform us detailed information if the products need to meet other laws, regulations and standards.