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REV. : 0

Specification

Simplex Cord Optic Cable

Compact and Easy-to-Locate Fiber Optic Cable for the Last Link in Your FTTx Network

1. SCOPE

1.1 Application

This specification covers the general requirements for fiber optic telecommunication cables.

1.2 Cable Description

Tight buffered fibers, Aramid Strength Member and LSZH Compound.

2. OPTICAL FIBER

The optical, geometrical, mechanical and environmental performance of the optical fiber shall be in accordance with Table 1 below.

Table 1. Performance of the single mode fiber (ITU-T G. 652.D)

Parameters		Value
Dimensional Specification		
Cladding Diameter		125±1 ㎛
Core-Clad Concentricity Error		≤0.8 ㎛
Cladding Non-Circularity		≤1%
Coating Material		Acrylate
Coating Diameter (Colored)		245±10 ㎛
Optical Specification		
Operational Wavelength		1310 nm and 1550 nm
Mode Field Diameter		9.2±0.4 ㎛@1310nm
Cabled Fiber Cutoff Wavelength		≤1260 nm
Zero Dispersion Wavelength Range		1300nm ~ 1324nm
Zero Dispersion Slope		0.092ps/(nm^2.km)
Polarization Mode Dispersion		0.2 ps/√km
Attenuation(After cabling)		≤ 0.35 dB/km @1310 nm ≤ 0.25 dB/km @1550 nm
Chromatic Dispersion	1285 ~1330 nm	≤ 3.5 ps/nm.km
	1550 nm	≤ 18 ps/nm.km
Proof Stress (100% testing)		0.69 N/m^2 (100 kpsi)

3. CABLE CONSTRUCTION

The construction of the cable shall be in accordance with Table 2.

Table 2. Construction of The Cable

ITEMS		DESCRIPTION
Number of Fiber		1
Tight buffered	Material	LSZH(Low Smoke Zero Halogen)
	Diameter	0.90mm ± 0.05mm
Strength Member		Aramid Yarns
Outer Jacket	Material	OFN, OFNR, OFNP Compound
	Diameter	2.0±0.1mm
Weight (Nom. kg/km)		4.4
Standard length		2km/4km

Tensile Strength	Dynamic	150N
	Static	70N
Crush	Dynamic	500N/mm
	Static	200N/mm

4. IDENTIFICATION

4.1 The Color Code of the individual fibers

Table 3. The Color Code of the fibers and Tight Buffered

Number	1
Color	Blue

4.2 Outer jacket color: Yellow and Other colors

5. PHYSICAL / MECHANICAL / ENVIRONMENTAL PERFORMANCE AND TESTS

5.1 Temperature Range

- Storage/Shipping temperature range : - 20 to + 70℃
- Operating temperature range : - 20 to + 70℃
- Installation temperature: - 10 to + 60℃

5.2 Mechanical and Environmental Performance of the Cable

The mechanical and environmental performance of the cable shall be in accordance with Table 4 below. Unless otherwise specified, all attenuation measurements required in this section shall be performed at 1550nm.

Table 4. The Mechanical and Environmental Performance of the Cable

ITEMS	TEST METHOD AND ACCEPTANCE CRITERIA
Tensile Loading Test	# Test method: IEC 60794-1-2 Method E1A or E1B - Mandrel diameter : 30D (D = cable diameter) - Tensile load : See the table 2 # Acceptance Criteria - Attenuation increment: ≤0.10 dB
Crush resistance	# Test method: IEC 60794-1-2 Method E3 - Applied load : See the table 2 - Duration of loading : 5 minutes # Acceptance Criteria - Attenuation increment : ≤0.10 dB
Impact Test	# Test method: IEC 60794-1-2 Method E4 - Height of impact: 300mm - Drop hammer mass: 0.1J - No. of impact : 3 point # Acceptance Criteria - Attenuation Increment: ≤0.10 dB
Resistance to Repeated Bending	# Test method: IEC 60794-1-2 Method E6 - Sheave diameter: 20D (D = cable diameter)

	- Applied load: 20N - No. of flexing cycles: 25 cycles - Cycle duration: 2 seconds # Acceptance Criteria - No visible damage to the coating
Temperature Cycling Test	# Test method: IEC 60794-1-2 Method F1 - Temperature cycling schedule : 20℃→ - 40℃ → + 85℃ - Soak time at each temperature: 12hours - Times : 1 cycle # Acceptance Criteria -.Attenuation Increment:≤0.10dB/km
Flame retardant test	# IEC 60332, UL1666

6. PACKING AND MARKING

6.1 Cable Marking

6.1.1 Standard length of cable shall be 2,000m. Other cable length is also available if requested by customer.

6.1.2 Each length of the cable shall be wound on a separate plastic reels.

6.1.3 Both ends of the cable shall be sealed with suitable plastic caps to prevent the entry of moisture during shipping, handling and storage.

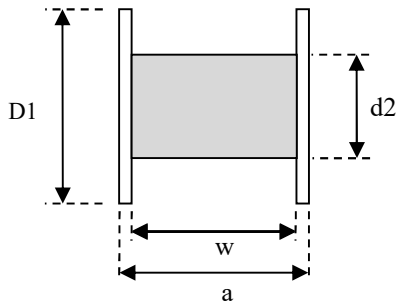
6.1.4 The cable ends shall be securely fastened to the reel to prevent the cable from becoming loose in transit or during placing operations.

6.1.5 Each reels shall be well packed in individual carton box.

6.2 Packing Detail

7.2.1 Reel dimension

Cable Type	Dimension				Cable Length	Weight (kg/EA)
	D1	d2	W	a		
1F	360mm	150mm	280mm	318mm	4km	1.7kg



6.2.2 Carton Box

Material	Size (mm)	Weight (kg / EA)
Kraft liner	370(W) x 350(L) x 375(H)	1.0

6.2.3 Pallet packing

Material	Size (mm)	Weight (kg / EA)	Box Quantity (EA)	Remark
Wooden	1140(W) x1080(L) x 140(H)	16	36	* 40ft container: - 20 Pallets/2,880km * 20ft container: - 10 Pallets/1,440km

6.2.4 Box design:
According to customer's request

7. QUALITY CONTROL

7.1 Incoming Inspection

All the raw materials that are used for optical fiber cable shall be inspected by the raw material testing methods that are specified by the manufacturer and that are based on 'Korea Standard' or 'ASTM'.

In some cases, suppliers' test report shall substitute for the raw material manufacturer's test. Any materials that do not meet the manufacturer's raw material specification shall be rejected or scrapped, and the passed materials only shall be used in the process. Some raw material specifications and subsequent raw material test method may be changed without notice, if and only if the new specification and the new test method do not affect the quality of optical fiber cable.

7.2 In-Process Inspection

Semi-final goods shall be inspected in accordance with specified manufacturer's testing method. The testing method may be changed without notice, if it does not affect quality of optical fiber cable.

7.3 Final Cable Inspection

Following quality properties of finished cable shall be tested to assure the field performances.

- √ Construction / Material
- √ Mechanical
- √ Optical characteristics

7.4 Quality System

International Industrial Certification (IIC) applied ISO 9001 and ISO 14001 to assure the conformance to specified requirements during our production.

8. SAFETY

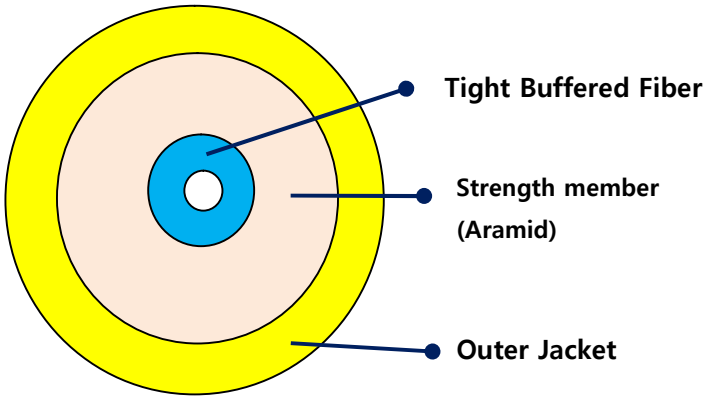
8.1 ROHS Directive

All cables and any associated packing and labeling materials shall meet RoHS (Restriction of the Use of certain Hazardous Substances) regulations as appropriate.

8.2 ISPM 15 Directive

All wooden packing materials shall meet ISPM (International Standards for Phytosanitary Measures) regulations as appropriate.

Cross-Sectional Drawing



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