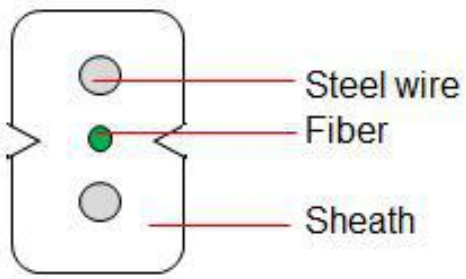
1. Cable description

This specification covers the general requirements and performance of cable for FTTH, which OPT offered including optical characteristics, mechanical characteristics and geometrical characteristics and etc.

2. Optical fiber

No.	Items		Unit	Specification
				G.657A2
1	Mode Field Diameter	1310nm	μm	8.6±0.4
		1550nm	μm	9.6±0.5
2	Cladding Diameter		μm	125±0.7
3	Cladding Non-Circularity		%	≤0.7
4	Core-Cladding Concentricity Error		μm	≤0.5
5	Coating Diameter		μm	245±5
6	Coating Non-Circularity		%	≤6.0
7	Cladding-Coating Concentricity Error		μm	≤ 12.0
8	Cable Cutoff Wavelength		nm	λcc≤ 1260
9	Attenuation(max.)	1310nm	dB/km	≤0.35
		1550nm	dB/km	≤0.21
10	Macro-Bending Loss	1turn×10mm radius @1550nm	dB	≤0.1
		1turn×10mm radius @1625nm	dB	≤ 0.2

3. Construction of cable



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4. Cable Parameters

The standard FTTH cable structure is shown in the following table, other structure and fibre count are also available according to customer requirements.

Items		Specifications
Fiber Count		1
Colored Coating Fiber	Dimension	250± 15μm
	Color	Green
Strength Member	Dimension	0.5mm
	Material	Steel wire
Jacket	Dimension	2.0*1.6
	Material	LSZH
	Color	White
Cable weight (Approx.)		7kg/km

5. Mechanical & Environmental Performance

Items	Unite	Specifications
Tension （Short Term）	N	230
Crush （Short Term）	N/10cm	1200
Min. Bend Radius（Dynamic）	mm	20D
Min. Bend Radius（Static）	mm	10D
Installation Temperature	℃	-5～+60
Operating Temperature	℃	-5～+60
Storage Temperature	℃	-5～+60

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6. Main mechanical & environmental performance test

Item	Test Method	Acceptance Condition
Tensile Strength IEC 60794-1-2-E1	Load: MAT Length of cable: about 50m Load time: ≥1min	Loss change ≤ 0.1dB@1550nm after test. No fiber break and no sheath damage.
Abrasion IEC 60794-1-2-E2B	Method 2 for other types of marking like ink jet printing Water soaked wool felt No. of cycles: 3 Minimum weight: 450g	The marking shall be legible at the completion of the test.
Crush Test IEC 60794-1-2-E3	Load: Short term crush Load time: ≥1min	Loss change ≤ 0.1dB@1550nm after test. No fiber break and no sheath damage.
Impact Test IEC 60794-1-2-E4	Radius: 300 mm Points of impact: 3 Times of per point: 1 Impact energy: 10J	Loss change ≤ 0.1dB/km@1550nm. No fiber break and no sheath damage.
Repeated Bending IEC 60794-1-2-E6	Bending radius: 15mm No. of cycle: 10	Loss change ≤ 0.1dB/km@1550nm. No fiber break and no sheath damage.
Cable bend IEC 60794-1-2-E11	Diameter of mandrel:30mm Number of turns:4 Number of cycles:3	Loss change ≤ 0.1dB/km@1550nm. No fiber break and no sheath damage.
Flame retardant IEC 60332-1	Sample length: 600mm±25mm Time: 60s	Pass the single cable vertical flame propagation test
Temperature Cycling IEC 60794-1-2-F1	Temperature: -5℃~+60℃ Time of each step: 12h Number of cycle: 2	Loss change ≤ 0.1dB/km@1550nm. No fiber break and no sheath damage.

-End of Specification-