Specifications of

Micro Optical Fiber Cable
(GYFDTY)

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1. General

1.1 This specification covers the requirements for the supply of jelly-filled core, single-mode optical fiber cables.

1.2 The single mode optical fiber cable comply with the requirements of this specification and generally meet any latest relevant ITU-T Recommendation G.652.

2. Fiber characteristics

2.1 G.652D

2.1.1 Geometric characteristics

Item		Construction
Mode field diameter	At 1310nm	9.2±0.4μm
	At 1550nm	10.4±0.5μm
Cladding diameter		125±0.7μm
Core concentricity error		≤0.5μm
Cladding non-circularity		≤0.7%
Cut-off wavelength (λcc)		≤1260nm
Primary coating diameter	(Not included color layer)	245±5μm
	(Included color layer)	245±10μm
Coating-cladding concentricity error		≤12.0μm
Fiber curl radius		≥4m

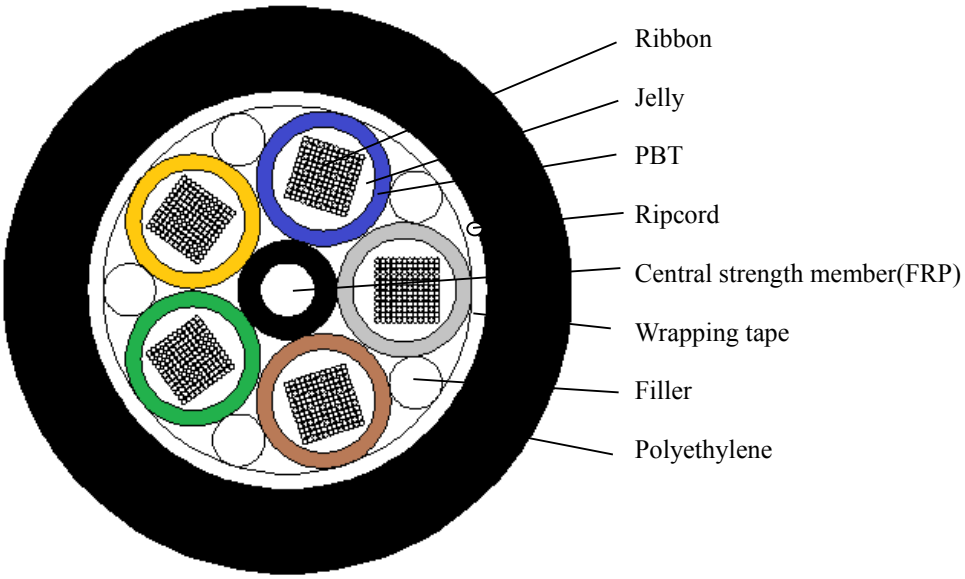
2.1.2 Transmission characteristics

Item		Performance
Attenuation	At 1310nm	≤0.36dB/km(max.)
	At 1383nm	≤0.35dB/km(max.)
	At 1550nm	≤0.25dB/km(max.)

Chromatic dispersion	from 1288 - 1339 nm	≤3.5ps/nm·km
	from 1270 - 1360 nm	≤5.3ps/nm·km
	At 1550nm	≤18ps/nm·km
Zero Dispersion Wave		1300-1324nm
Zero Dispersion Slope		0.092 ps/nm^2·km

3 Optical Fiber Cable

3.1 Cross section



Dimension of the cable

Amount of fiber	Fibers per ribbon	Ribbons per tube	*Nom. thickness of sheath	Diameter (Appr.)	Weight (Appr.)
			mm	mm	Kg/km
720	12	12	2.0	24.8	472

*Note：The minimum thickness of the sheath is 1.6mm.

3.3 Performance

NO	ITEM	TEST METHOD	SPECIFICATION
1	Tensile performance IEC749-1-E1	- Load: 2700N - Time: 1 minute	- Loss change ≤ 0.15 dB @1550 nm - No fiber break - No sheath damage
2	Impact IEC749-1-E4	- Impact hight:1m - Impact weight:450g - Number of impacts: 5 - Impact rate: 3 sec/cycle	- Loss change ≤ 0.15 dB @1550 nm - No fiber break - No sheath damage
3	Crush test IEC749-1-E3	- Load:1000 N /10cm - Time: 1 minute - Length: 100 mm	- Loss change ≤ 0.15 dB @1550 nm - No fiber break - No sheath damage
4	Repeated bending IEC794-1-E6	- Bending dia.: 20 x D - Load: 150N - Flexing rate: 3sec/cycle - No. of cycle: ≥30	- Loss change ≤ 0.15 dB @1550 nm - No fiber break - No sheath damage
4	Water penetration IEC794-1-E5B	- Height of water: 1m - Sample length: 3 m - Time: 24 hr	- No drip through the cable core assembly
5	Twist / Torsion IEC794-1-E7	- Length: 1 m - Load: 40N - Twist rate: 6sec/cycle - Twist angle: ±90° - No. of cycle: 10	- Loss change ≤ 0.15dB @1550 nm - No fiber break - No sheath damage
6	Temperature Cycling IEC794-1-E1	- Temperature step: +20ºC → -40ºC → +70ºC → +20ºC - Number of cycle: 2 - Time per each step: 12 hrs	- Loss change ≤ 0.15dB/km @1550 nm - No fiber break - No sheath damage

D*: Cable diameter

3.4 Temperature

Item		Performance
Temperature	Installation	-10℃ to +50℃
	Operation	-40℃ to +70℃
	Transportation	-45℃ to +70℃

4.Sheath marking