

Fiber Optic Simplex Cable

Model No: MCR-OPFC NCSM-02

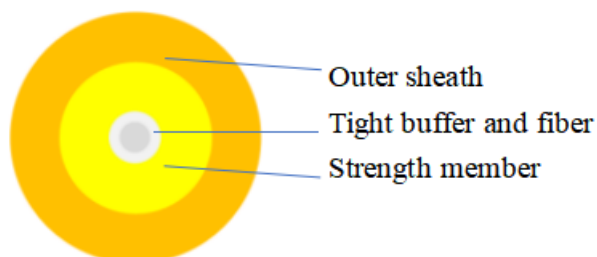
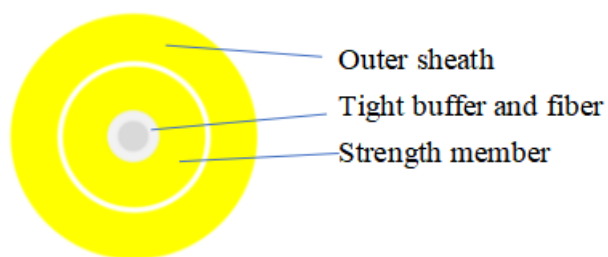
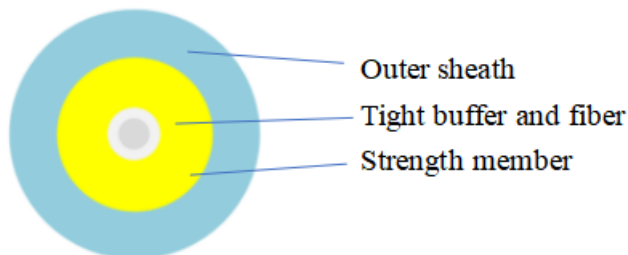
Description:

The cable uses a tight buffer fiber wrapped with a layer of aramid yarn as the optical communication medium, and it is completed with an outer sheath.

Description:

- Excellent flexibility and bendability
- Simple structure, light weight and high practicability
- The aramid yarn makes the cable have excellent tensile strength
- FTTH (Fiber to The Home)
- Pre-terminated in the factory
- Indoor cabling and outdoor aerial connectivity

Main body diagram:



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Physical Characteristics of Fiber Optic Cable:

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Optical Fiber	Mode	G.652D/G.657A1/G.657A2/OM1/OM2/OM3/OM4/OM5
	Qty	1
	Fiber Color	Natural
Tight buffer	Material	LSZH/Riser(PVC)/Plenum(PVC)
	Diameter	0.90±0.05 mm
	Color	White
Strength member	Material	Aramid yarns
Outer sheath	Material	LSZH/Riser(PVC)/Plenum(PVC)resistent
	Color	Yellow For G.652D/G.657A1/G.657A2; Orange For OM1/OM2; Aqua For OM3/OM4; OM5 For Color can be defined
	Diameter	2.0±0.2 mm
Tensile strength	Short-term	150 N
	Long-term	80 N
Crushing resistance	Short-term	500 N/10cm
	Long-term	100 N/10cm

The characteristics of Optical:

Characteristic		Unit	G.652D	G.657A1/G657A2
Cladding diameter		μ m	125±0.7	125±0.7
Core/cladding concentricity		μ m	≤0.6	≤0.5
Cladding Non-circularity		%	≤1.0	≤1.0
Mode field diameter (MFD)	1310nm	μ m	9.2±0.4	8.6±0.4
	1550nm		10.4±0.5	9.8±0.5
Cable cut-off wavelength (c)		nm	≤1260	≤1260
Zero-dispersion wavelength		nm	1300~1324	1300~1324
Zero-dispersion slope		ps/(nm ² -km)	≤0.092	≤0.092
Attenuation (Cable)	1310nm	dB/km	≤0.38	≤0.38
	1550nm		≤0.26	≤0.26

Characteristic	Unit	OM1	OM2	OM3-300	OM4	OM5
Core layer diameter	μm	62.5±2.5	50.0±2.5	50.0±2.5	50.0±2.5	50.0±2.5
Cladding diameter	μm	125 ±1.0	125 ±1.0	125 ±1.0	125 ±1.0	125 ±1.0
Core/cladding concentricity	μm	≤1.5	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Cladding Non-circularity	%	≤1.0	≤1.0	≤1.0	≤1.0	≤1.0
Bandwidth (Min)	850nm	MHz.km	200	500	1500	3500
	1300nm		500	500	500	500
Attenuation (Cable)	850nm	dB/km	≤3.5	≤3.5	≤3.5	≤3.5
	1300nm		≤1.2	≤1.2	≤1.2	≤1.2

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Performance of Optical Fiber Cable

- Cable bending radius: 10 x cable diameter (static), 20x cable diameter (dynamic)
- Application temperature range

Operating temperature range	-20°C to +60°C
Storage / Transport temperature range	-10°C to +50°C
Installation temperature range	-5°C to +40°C

- Mechanical & environmental performance

No	Item	Test Method	Acceptance Condition
1	Tensile Strength IEC 60794-1-21-E1	Load: See Tensile strength Length of cable under load: 50 m Load time: 1min	Loss changes 0.4dB/km@1550 nm No fiber break and no sheath damage.
2	Crush Test IEC 60794-1-21-E3	Load: 500N Load time: 1min	Loss changes 0.4 dB/km@1550 nm No fiber break and no sheath damage.
3	Impact Resistance IEC 60794-1-2-E4	Points of impact: 3 Times of per point: 1 Impact weight: 1N Height: 1 m	Loss changes 0.4 dB/km@1550 nm No fiber break and no sheath damage.
4	Repeated Bending IEC 60794-1-2-E6	Bending radius: 20 x cable diameter Load: 20 N Angle: 90° No. of cycle: 100	Loss changes 0.4dB/km@1550 nm No fiber break and no sheath damage.
5	Temperature Cycling Test IEC 60794-1-2-F1	Temperature range: -20°C→60°C Time per step: 8hours Number of cycles: 2	Loss changes 0.4 dB/km@1550 nm No fiber break and no sheath damage.
6	Flame retardant test	LSZH: IEC 60332-1-2 PVC: OFNR、OFNP	Pass

Identification

	Item	Test Method
Marking	Color	Black
	Method	Ink jet printing
	Content	As per customer requirement
	Remark	Markings on the cable jacket shall be in every 1-meter interval in order to assist possible fault location in the future.

Production Line Display(clean room):

