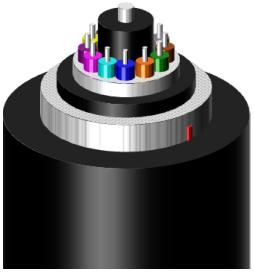
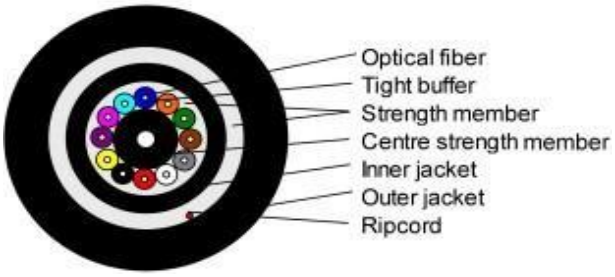
Table: SUN-DS-CB-IOC017-E **Version: A3**

SUN-GJPFJHFH Fiber Optic Cable

Sun Telecom's SUN-IC-GJPFJHFH Multi fiber distribution cable use several tight buffer fibers as optical communication medium, the tight buffer fiber wrapped with a layer of glass yarn as strength member units, and the inner jacket is completed with a LSZH jacket, the inner jacket wrapped with a layer of glass yarn as strength member units, and the outer jacket is completed with a LSZH jacket.

Cable Construction







Features

- Excellent stripping performance of tight buffer fiber
- Glass yarn as strength member providing good tensile strength
- Good anti-rodent performance due to glass fiber yarns

Applications

- Indoor or outdoor cable distribution
- Backbone cable distribution in a building

Fiber Optic Characteristics (ITU-T G652D)

Parameters		Specification	
		Before Cable	After Cable
Fiber Type		SM G652D fiber	
Mode Field Diameter (um)		8.6~9.2±0.4 (@1310nm)	
Cladding Diameter (um)		125±0.7	
Coating Diameter (um)		245±10	
Core Concentricity Error (um)		≤0.6	
Cladding Non-circularity (%)		≤1.0	
Zero Dispersion Wavelength (nm)		1300~1324	
Zero Dispersion Slope		≤0.092 ps/(nm^2·km)	
Polarization Mode Dispersion Coefficient (Max Individual Fiber)		≤0.2 $ps/\sqrt{km}$	
Cable Cut-off Wavelength (nm)		≤1260	
Fiber Attenuation (dB/km)	**@ 1310nm**	≤0.35	≤0.4
	@ 1550nm	≤0.21	≤0.3
Macro Bending Loss (dB)	**30mm radius, 100 turns**	≤0.05 @1550nm	

Optical Fiber Characteristics (OM1)

Parameters		Specification	
		Before Cable	After Cable
Fiber Type		OM1 fiber	
Core Diameter (um)		62.5±2.5	
Cladding Diameter (um)		125±1.0	
Coating Diameter (um)		245±10	
Core-cladding Concentricity Error (um)		≤1.5	
Cladding Non-circularity (%)		≤1.0	
Cladding-coating Concentricity Error (um)		≤12	
Bandwidth (MHz•km)	@ 850nm	≥ 200	
	@ 1300nm	≥ 500	
Numerical Aperture		0.275±0.015NA	
Fiber Attenuation (dB/km)	@ 850nm	≤2.8	≤3.5
	@ 1300nm	≤0.7	≤1.5

Optical Fiber Characteristics (OM3-300)

Parameters		Specification	
		Before Cable	After Cable
Fiber Type		OM3-300 fiber	
Core Diameter (um)		50±2.5	
Cladding Diameter (um)		125±1.0	
Coating Diameter (um)		245±10	
Core-cladding Concentricity Error (um)		≤12	
Cladding Non-circularity (%)		≤1.0	
Numerical Aperture (NA)		0.200±0.015	
Fiber Attenuation (dB/km)	@ 850nm	≤2.5	≤3.5
	@ 1300nm	≤0.8	≤1.5
Overfilled Modal Bandwidth (MHz.km)	@850nm	≥1500	
	@1300nm	≥500	
Effective Modal Bandwidth (MHz.km) @850nm		≥2000	
10Gbps Ethernet Link Distance SX (850nm) (m)		≤300	
Macro Bending Loss (dB)	100 turns @37.5mm radius	≤0.5 @850nm ≤0.5 @1300nm	

Cable Specifications

Parameters		Specification			
Fiber Count		4	6	8	12
Centre Strength Member		/	FRP	FRP	FRP
Tight Buffer Fiber	Diameter (mm)	0.9±0.05			
	Material	LSZH			
Strength Member	Material	Glass yarns			
Inner Jacket	Cable Diameter (mm)	4.9±0.2	5.4±0.2	5.8±0.2	6.6±0.2

	Material	Flame retardant LSZH			
	Color	Black			
Strength Member	**Material**	Glass yarns			
Outer Jacket	**Cable Diameter (mm)**	9.3±0.3	9.5±0.3	10.7±0.3	11.5±0.5
	Material	Flame retardant LSZH			
	Color	Black			
Flame Retardant Performance		CPR Dca s1, d1, a1 (No certification)			
Tensile Strength (N)	**Short Term**	1100	1250	1250	1800
	Long Term	600	700	700	800
Crush Resistance ($N/100mm^2$)	**Short Term**	1500			
	Long Term	500			
Bending Radius (mm)	**Dynamic**	20D			
	Static	10D			
Attenuation (After Cable (dB/km)	**SM Fiber @1310nm**	≤ 0.4			
	SM Fiber @1550nm	≤ 0.3			
	MM Fiber @850nm	≤ 3.5			
	MM Fiber @1300nm	≤ 1.5			
Operating Temperature (°C)		-20 ~ +70			
Storage Temperature (°C)		-20 ~ +70			
Cable Weight (kg/km)		92	99	113	142

Tight Buffered Fiber Color Identification

The individual tight buffered fiber should comply with standard TIA/EIA-598-A and the color code as below.

Fiber Color

No.	**1**
Color	Natural

Tight Buffered Fiber Color Code

No.	**1**	**2**	**3**	**4**	**5**	**6**
Color	Blue	Orange	Green	Brown	Gray	White
No.	**7**	**8**	**9**	**10**	**11**	**12**
Color	Red	Black	Yellow	Violet	Pink	Aqua

Main Mechanical & Environmental Performance Test

Single Mode Fiber

Item	Test Method	Acceptance Condition
Tensile Strength IEC 60794-1-21-E1	- Load: Short term tension - Length of cable: ≥ 50m - Load time: 5min	- Fiber strain ≤ 0.6% - Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
	- Load: Long term tension - Length of cable: ≥ 50m - Load time: 5min	- Fiber strain ≤ 0.2% - No change attention after test. - No fiber break and no sheath damage.
Crush Test IEC 60794-1-21-E3A	- Load: Short term crush - Load time: 1min	- Loss change ≤ 0.1dB@1550nm after test. - No fiber break and no sheath damage.
	- Load: Long term crush - Load time: 10min	- Loss change ≤ 0.1dB@1550nm during test. - No fiber break and no sheath damage.
Impact Test IEC 60794-1-21-E4	- Radius of striking surface: 12.5 mm - Points of impact: 3 - Impact energy: 1J	- No fiber break and no sheath damage.
Repeated Bending IEC 60794-1-21-E6	- Bending radius: 20 x OD - No. of cycle: 100 - Load: 20N	- No fiber break and no sheath damage.
Torsion IEC 60794-1-21-E7	- Length: 1m - Twist angle: ±180° - No. of cycle: 10 - Load: 20N	- No fiber break and no sheath damage.
Kink IEC 60794-1-21-E10	- Loop diameter:20 x OD	- No kink occurs.
Temperature Cycling IEC 60794-1-22-F1	- Temperature: -20℃~+70℃ - Time of each step: 8h - Number of cycle: 2	- Loss change ≤ 0.4 dB@1550nm. - No fiber break and no sheath damage.
Flame resistance	-CPR Dca s1,d1,a1(no certification)	

Multi Mode Fiber

Item	Test Method	Acceptance Condition
Tensile Strength IEC 60794-1-2-E1	- Load: Short term tension - Length of cable: ≥ 50m - Load time: 5min	- Loss change ≤ 0.2dB@1300nm after test. - No fiber break and no sheath damage.
	- Load: Long term tension - Length of cable: ≥ 50m - Load time: 5min	- Loss change ≤ 0.2dB@1300nm after test. - No fiber break and no sheath damage.
Crush Test IEC 60794-1-2-E3	- Load: Short term crush - Load time: 1min	- Loss change ≤ 0.2dB@1300nm after test. - No fiber break and no sheath damage.
	- Load: Long term crush - Load time: 10min	- Loss change ≤ 0.2dB@1300nm after test. - No fiber break and no sheath damage.
Impact Test IEC 60794-1-2-E4	- Points of impact: 3 - Times of per point: 1 - Impact energy: 1J	- Loss change ≤ 0.2dB@1300nm after test. - No fiber break and no sheath damage.
Repeated Bending IEC 60794-1-2-E6	- Bending radius: 20 x OD - No. of cycle: 100 - Load: 40N	- Loss change ≤ 0.2dB@1300nm after test. - No fiber break and no sheath damage.

Torsion IEC 60794-1-2-E7	- Length: 1m - Twist angle: ±180° - No. of cycle: 10 - Load: 20N	- Loss change ≤ 0.2dB@1300nm after test. - No fiber break and no sheath damage.
Kink IEC 60794-1-2-E10	- Loop diameter:20 x OD	- No kink occurs.
Temperature Cycling IEC 60794-1-2-F1	- Temperature: -20℃~+70℃ - Time of each step: 8h - Number of cycle: 2	- Loss change ≤ 0.5dB@1300nm. - No fiber break and no sheath damage.
Flame resistance	-CPR Dca s1,d1,a1(no certification)	

Ordering Information

SUN-GJPFJHFH-6SM-Dca-I

Indoor and outdoor cable; Glass yarn strength member; SM G652D; 6 fibers; 0.9mm LSZH tight buffer fiber; double-layer flame retardant black LSZH jackets; Flame retardant performance comply to CPR Dca s1, d1, a1; Spec. table: IOC017

SUN-GJPFJHFH-12SM-Dca-I

Indoor and outdoor cable; Glass yarn strength member; SM G652D; 12 fibers; 0.9mm LSZH tight buffer fiber; double-layer flame retardant black LSZH jackets; Flame retardant performance comply to CPR Dca s1, d1, a1; Spec. table: IOC017

SUN-GJPFJHFH-4OM1-Dca-I

Indoor and outdoor cable; Glass yarn strength member; MM OM1; 4 fibers; 0.9mm LSZH tight buffer fiber; double flame retardant black LSZH jackets; Flame retardant performance comply to CPR Dca s1, d1, a1; Spec. table: IOC017

SUN-GJPFJHFH-8OM1-Dca-I

Indoor and outdoor cable; Glass yarn strength member; MM OM1; 8 fibers; 0.9mm LSZH tight buffer fiber; double-layer flame retardant black LSZH jackets; Flame retardant performance comply to CPR Dca s1, d1, a1; Spec. table: IOC017

SUN-GJPFJHFH-12OM3-300-Dca-I

Indoor and outdoor cable; Glass yarn strength member; MM OM3-300; 12 fibers; 0.9mm LSZH tight buffer fiber; double-layer flame retardant black LSZH jackets; Flame retardant performance comply to CPR Dca s1, d1, a1; Spec. table: IOC017

Note: *For the necessity of improvement, the material contained in this document is subject to change without notice.*

Version HT20250529