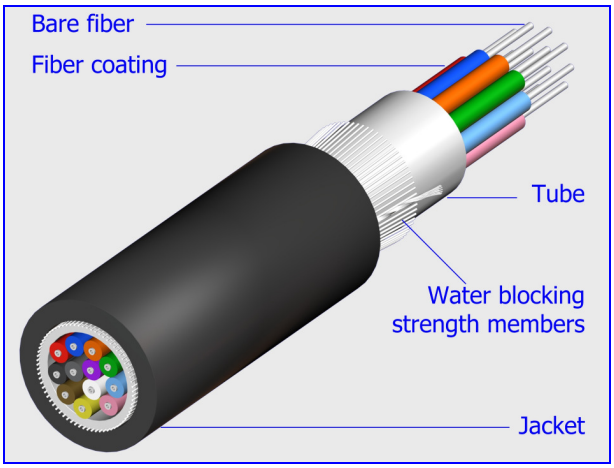
SL Series *Compact Loose Central Tube Fiberoptic Cable*



APPLICATIONS

- Both indoor and outdoor
- Ducts, aerial installations and direct burial (armored option)
- Distribution and general purpose cables

CABLE DESCRIPTION

The cable consists of a single tube containing 2 up to 24 fibers, which is filled with water-blocking gel. When the cable contains more than 12 fibers, they are divided in two groups. A colored thread identifies each group. Physical protection and tensile strength are provided by aramid yarn or fiberglass wound around the tube.

A wide range of jacket options is available: UV-stabilized PVC, halogen-free flame-retardant material, polyethylene with corrugated anti-rodent steel armoring, a jacket incorporating a sealed aluminum tape, and more. A ripcord is located under the jacket to facilitate jacket removal.

A Fig-8 self-supporting cable is available in all fiber-counts.

BENEFITS

- Small diameter and lightweight
- Cost-effective
- Wide operating temperature range
- Wide range of jacket options

MECHANICAL PROPERTIES

Typical properties are given in the Mechanical Properties Table. Actual properties depend on the cable construction.

OPTICAL PROPERTIES

See the Optical Properties Table.

MATERIALS

See information about the materials used in the Teldor Fiberoptic Cables.

STANDARDS

- Cables tested according to TIA/EIA-455 and IEC-60794-1-2. For details see Test Methods Table.
- Cables meet or exceed Telcordia (Bellcore) requirements for outside plant cables (GR-20) when the appropriate options are chosen
- Cables ordered with HFFR jackets meet IEC-60332-1 standard.
- On request cables meeting the IEC-60332-3 can be supplied.

MARKING

Cables are marked as follows
Teldor - Fiberoptic Cable - Cable Code - RoHS - Length in Meters
or per customer request. Fig-8 Self-supported cables do not comply with ROHS.

CABLE DIMENSIONS AND WEIGHTS

See list of most frequently ordered cables next page.

ORDERING

You can find the desired cable in the cable list next page or compose your own cable from the Cable Code Definition and Selection Guide.

Standard cable lengths vary with cable diameter. Other constructions, color codes and materials may be available. Please contact the Teldor Marketing Department.

SL Series Technical Tables

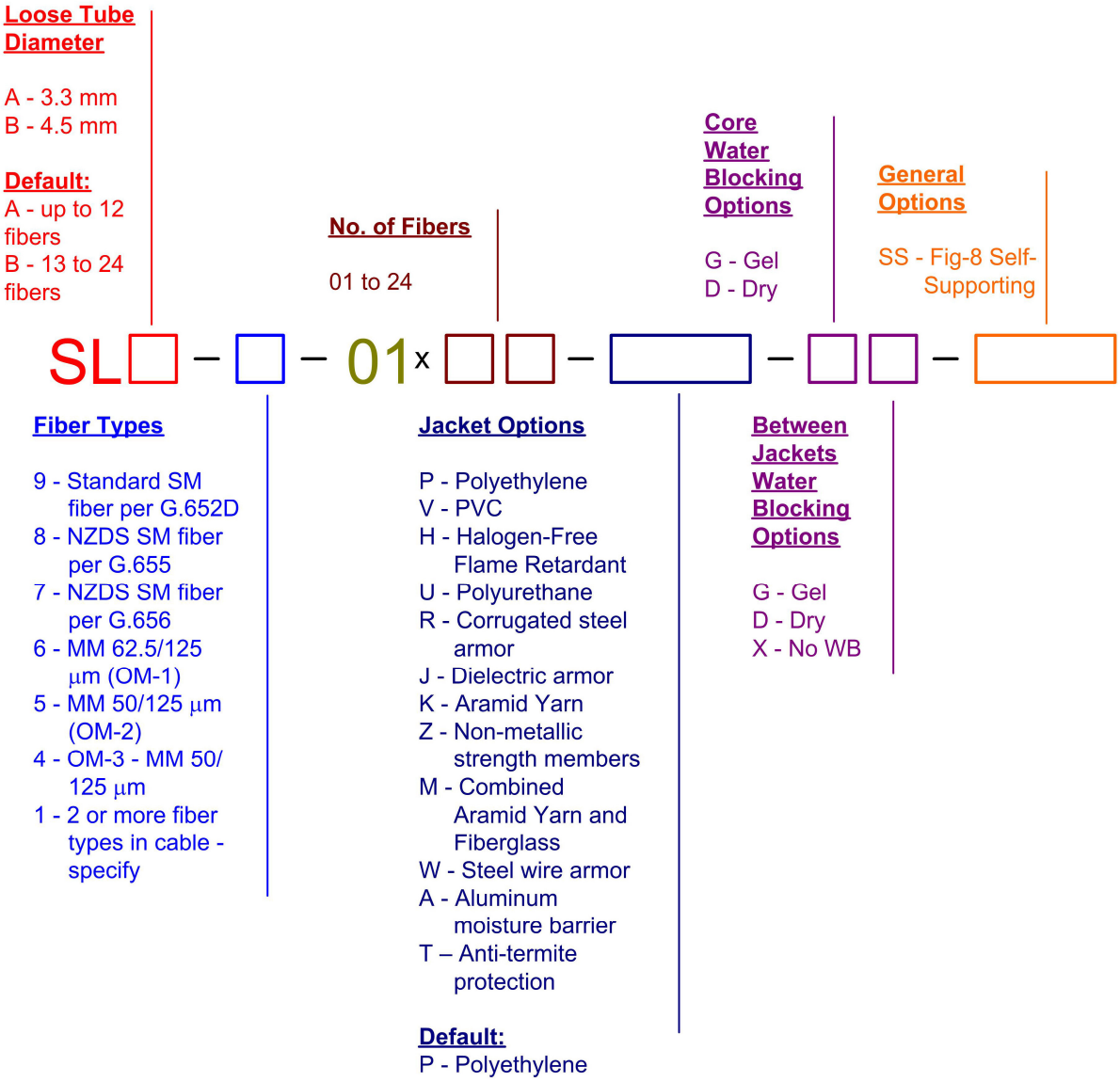
SL-Series Fiberoptic Cables
Typical Mechanical Properties

Max. Pulling Load	1500 N or the equivalent of the cable weight per km, whichever is higher
Max. Operating Load	60% of the Max. Pulling Load
Max. Compressive Load	For all SLA cables: 3000 N For all SLB cables: 4000 N
Repeated Impact	4.4 N.m (J) 3 x 2 impacts
Minimum Bending Radius for Installation	20 times the cable O.D.
Minimum Long Term Bending Radius	20 times the cable O.D. for armored cables, 10 times the cable O.D. for unarmored cables
Twist (Torsion) — Length	180°x10 times , 125 times the cable O.D.
Cyclic Flexing	25 cycles for armored cables 100 cycles for unarmored cables
Operating Temperature Range	-20°C to +70°C (With PE jacket)
Storage Temperature Range	-40°C to +70°C (With PE jacket)

Most Frequently Ordered SL Cables
Part Numbers, Codes, Dimensions and Weights

Part Number	Cable code	Dimensions (mm)	Weight (kg/km)
SLA Series			
F50060111B	SLA-5-01X06-ZP-D	7.0	40
F50120106B	SLA-5-01X12-ZP-D	7.0	40
F60060108B	SLA-6-01X06-ZP-D	7.0	40
F60120114B	SLA-6-01X12-ZP-D	7.0	40
F90060108B	SLA-9-01X06-ZRP-D	9.3	104
F90120124B	SLA-9-01X12-ZRP-D	9.3	104
SLB Series			
F50240107B	SLB-5-01X24-ZH-D	8	65
F50240114B	SLB-5-01X24-ZRP-D	10	115
F60240101B	SLB-6-01X24-ZH-D	8	65
F40240105B	SLB-4-01X04-ZRP-D	10	115
F30240101B	SLB-3-01X04-ZRP-D	10	115

SL Series Cable Code Definition and Selection Guide



Remarks

1. The default jacket colors are:

	PE	PVC	HFFR
SM Fibers	Black	Yellow	Yellow
MM Fibers	Black	Orange	Orange

Other jacket colors available please specify.

SM Optical Fiber Specifications

Single Mode Fibers - Standard Specifications (1)

Parameter	Standard per ITU-T G.652D IEC 60793-2-50 B1.3	NZDS per ITU-T G.655 IEC 60793-2-50 B4	Bend-Insensitive ITU-T G.657A IEC 60793-2-50 B6_a	Units
Teldor Fiber Code	9	8	I	
Attenuation, Loose Tube Cables:				dB/km
@ 1310 nm	≤ 0.35		≤ 0.35	
@ 1550 nm	≤ 0.22	≤ 0.22	≤ 0.22	
@ 1625 nm	≤ 0.25	≤ 0.26	≤ 0.25	
Attenuation, Tight Buffer Cables:				dB/km
@ 1310 nm	≤ 0.40	-	≤ 0.40	
@ 1550 nm	≤ 0.30	-	≤ 0.30	
Dispersion: between 1285 and 1330 nm (O Band)	≤ 3.5	NA	≤ 3.5	ps/ (nm*km)
between 1460 and 1530 nm (S Band)	-	(2)	-	
between 1530 and 1565 nm (C Band)	≤ 18	2 – 6(3)	≤ 18	
between 1565 and 1625 nm (L Band)	≤ 22	4.5 – 11.2(3)	≤ 22	
Zero Dispersion Wavelength	1312±12	< 1520	1312±12	nm
Mode Field Diameter @ 1310 nm	9.2±0.4	NA	8.9±0.4	µm
@ 1550 nm	10.4±0.6	9.6±0.6	9.9±0.5	
Cable Cut-Off Wavelength	≤1260	≤1480	≤1260	nm
PMD (Individual fiber)	≤ 0.2	≤ 0.1	≤ 0.2	$ps/km^{1/2}$
Cladding Diameter	125±0.7	125±0.7	125±0.7	µm
Core/Cladding Concentricity Error	≤ 0.5	≤ 0.5	≤ 0.5	µm
Cladding Non-Circularity	≤1.0	≤1.0	≤1.0	%
Coating Diameter (un-dyed)	245±5	245±5	245±5	µm
Proof-Test Level	0.7	0.7	0.7	GN/m^2
Induced Macrobend @ 1550nm – 1 turn around a 7.5 mm mandrel			0.5	dB

1. For other fiber types, consult the Teldor Sales Department
2. Non-standard range. Dispersion is typically negative. Consult Teldor for details
3. Tighter dispersion tolerances may be available, consult Teldor for details

MM Optical Fiber Specifications

Multi Mode Fibers - Standard Specifications [1]

Parameter	50/125 µm			62.5/125 µm	Units
Teldor Fiber Code	**5**	**4**	**3**	**6**	
ISO/IEC 11801 Performance Category	OM2[2]	OM3[3]	OM4[4]	OM1	
Attenuation, Loose Tube Cables:					
@ 850 nm	≤ 2.8			≤3.2	dB/km
@ 1300 nm	≤ 0.9			≤1.0	
Attenuation, Tight Buffer and Semi-Tight Cables:					
@ 850 nm	≤3.0			≤3.5	dB/km
@ 1300 nm	≤1.0			≤1.0	
OFL Bandwidth[5] @ 850 nm	≥500[6]	≥1500	≥3500	≥200	MHz•km
@ 1300 nm	≥800[6]	≥500	≥500	≥600	
Efffective Modal Bandwidth@ 850nm		≥2000	≥4700[7]		
Numerical Aperture	0.20±0.015			0.275±0.015	
Core Diameter	50±2.5			62.5±3	µm
Cladding Diameter	125±1			125±2	µm
Core Non Circularity	≤4			≤5	%
Cladding Non-Circularity	≤0.7			≤1	%
Core/Cladding Offset	≤1.5			≤1.5	µm
Coating Diameter (Un-dyed)	245±10			245±10	µm
Proof-Test Level	0.7			0.7	GN/m^2

1. For other fiber specification, consult the Teldor Sales Department
2. As per IEC 60793-2-10 type A1a.1 and TIA 492AAAB
3. As per IEC 60793-2-10 type A1a.2 and TIA 492AAAC, link length 100 m. per 40/100 GbE (IEEE 802.3ba)
4. As per IEC 60793-2-10 type A1a.3 and TIA 492AAAD, link length 150 m. per 40/100 GbE (IEEE 802.3ba)
5. As per IEC 60794-1-41 and TIA/EIA 455-204
6. A 600/1200 MHz.km fiber is also available as a standard.
7. As per TIA 492AAAD