SL Series

Compact Loose Central Tube Fiberoptic Cable

SUPERIOR CABLES LTD

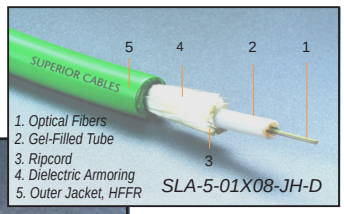
APPLICATIONS
- Both indoor and outdoor
- Ducts, aerial installations and direct burial (armored option)
- Gigabit Ethernet,10Gigabit Ethernet

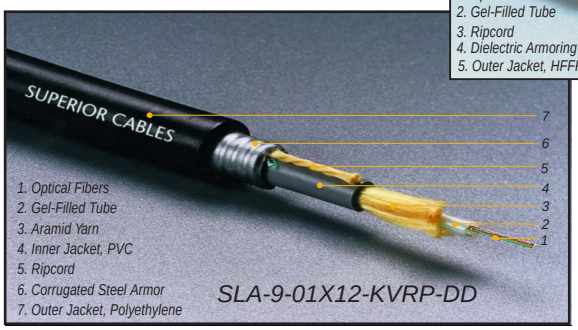
CABLE DESCRIPTION

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, glass yarn or fiberglass wound around the tube. A wide range of jacket options are available: UV-stabilized PVC & PE, 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.

BENEFITS
- Small diameter and light weight
- Cost-effective
- Wide operating temperature range
- Outer jacket is resistant to chemicals and corrodents

STANDARDS
- Both single mode and multi mode fibers meet Standards of ITU-T, EIA/TIA, ISO/IEC, Bellcore and ANSI/FDDI.
- Cables tested according to EIA/TIA-455, IEC-60794-1-2 and EN-187000
- Cables ordered with PVC or HFFR jackets meet IEC60332-1 standard. On request cables meeting the IEC60332-3 can be supplied.
- Superior Cables Telecommunications and Electronics Cables Division is ISO-9001 certified.





STANDARD CABLE SPECIFICATIONS

For more data please contact marketing department.

Max. Pulling Load	1500 N(typical) / 3000 N(specified)(*)
Max. Operating Load	60% of the Max. Pulling Load
Max. Compressive Load	For all SLA cables: 3000 N For all armored cables: 6000 N
Max. Vertical Rise	150m
Minimum Bending Radius for Installation	20 x cable O.D.
Minimum Long Term Bending Radius	20 x cable O.D. for armored cables 10 x cable O.D. for unarmored cables
Twist (Torsion) - Length	125 x cable O.D.
Cyclic Flexing	25 cycles for armored cables, 100 cycles for unarmored cables
Impact Resistance	2N.m (SLA), 3N.m(SLB)
Cable Outer Diameter	8mm (SLA, unarmored, 2~12C) 10mm (SLB, unarmored, 14~24C) 10mm (SLA, armored, 2~12C) 12mm (SLB, armored, 14~24C)
Loose Tube Diameter	3.3mm(SLA),4.5mm(SLB)
Operating Temperature Range	-40℃ to +80℃
Installation Temperature Range	-15℃ to +75℃
Storage Temperature Range	-40℃ to +75℃

(*) Aramid peripheral strength members may be added in order to reach the specified tensile load over 3000N.

ORDERING INFORMATION

The cable is marked with white embossed characters, as follows:
SCL - F.O. CABLE - Cable Type - Meter Mark.
The meter mark is printed every meter with an accuracy of A 1%.

SL □ – □ – 01X □□ – ••• – □ □ – □□

1 Loose Tube Diameter
A - 3.3 mm
B - 4.5 mm
Default
A (3.3 mm) for up to 12 fibers
B (4.5 mm) for 13 to 24 fibers.

2 Fiber Type
9 - Standard SM fiber per G.652
8 - NZDS SM fiber per G.655
6 - 62.5/125 multi-mode
5 - 50/125 multi-mode
1 - Two or more fiber types in a cable. Specify fibers by a remark
0 - Fibers and copper conductors in cable.

3 No. of (Fibers)
01 to 24

4 Jacket Options
P - Polyethylene
V - PVC
H - Halogen-Free, Flame-Retardant
U - Polyurethane
R - Corrugated Steel Armoring
J - Dielectric Rodent Resistance Armoring
K - Aramid Yarns
M - Combined Fiberglass roving and Aramid Yarn
A - Aluminum Moisture Barrier
W - Steel Wire Armoring
Z - Glass Yarn Anti-Rodent polymer

5 Cable Core Water-Blocking Options
X - No water blocking
G - Water-blocking gel
D - Dry water blocking

6 Jacket Water-Blocking Options (for cables with more than one jacket)
X - No water blocking
G - Water-blocking gel
D - Dry water blocking

7 General Options
SS - Figure-8 Self-Supporting

Optical fiber characteristics

The optical characteristics below pertain to cabled fibers.

SINGLE-MODE FIBERS

Parameter	Standard Single Mode Fiber per ITU-T G.652*	Non-Zero Dispersion Shifted Fiber per ITU-T G.655*		Units
Fiber Code	9	8		
Attenuation, Loose Tube Cables	Standard	Metro Area	Long Haul	
@ 1310 nm	O0.35	O0.40	-	dB/km
@ 1550 nm	O0.22	O0.24	O0.25	dB/km
@ 1625 nm	-	O0.25	O0.25	dB/km
Attenuation, Tight Buffer Cables				
@ 1310 nm	O0.45	-		dB/km
@ 1550 nm	O0.35	-		dB/km
Dispersion between 1285 and 1350 nm	O 3.5	-	-	ps/(nm x km)
between 1530 and 1565 nm	O18.0	2.0-6.0	2.0-6.0	ps/(nm x km)
between 1565 and 1625 nm	-	4.0-9.8	4.0-11.2	ps/(nm x km)
Zero Dispersion Wavelength	1311 A 11	-		nm
Mode Field Diameter				
@ 1300 nm	9.2 A 0.5	-	-	um
@ 1550 nm	10.4A1.0	8.4A0.6	9.6A0.4	um
Cable Cut-Off Wavelength	O1260	-		nm
CladdingDiameter	125A1.0	125A1.0	125A1.0	um
Core/Cladding Concentricity Error	O0.5	O0.5	O0.6	um
Cladding Non-Circularity	O1.0	O1.0	O1.0	%
Coating Diameter	245 A 10	245A10	245A10	um
Proof-Test Level	0.7	0.7	0.7	GN/m^2

MULTI-MODE FIBERS

Parameter	50/125	62.5/125	Units
Fiber Code	5(1,2)	6 (1)	-
ISO/IEC 11801 Classification(2)	OM2 OM2+ OM3	OM1	-
Attenuation, Loose Tube Cables			
@ 850 nm	O 3.0	O 3.2	dB/km
@ 1300 nm	O 1.0	O 0.9	dB/km
Attenuation, Tight Buffer and Semi-Tight Cables			
@ 850 nm	O 3.5	O 3.5	dB/km
@ 1300 nm	O 1.2	O 1.5	dB/km
Bandwidth* @ 850 nm	P500 P600 P1500	P 200	MHz*km
@ 1300 nm	P800 P1200 P 500	P 600	MHz*km
Numerical Aperture	0.20A 0.015	0.275A0.015	-
Core Diameter	50 A 3	62.5 A 3	um
Cladding Diameter	125 A2	125 A 2	um
Core Non Circularity	O 6	O 6	%
Cladding Non-Circularity	O 2	O 2	%
Core/Cladding Offset	O 3	O 3	um
Coating Diameter	245 A10	245A10	um
Proof-Test Level	0.7	0.7	GN/m^2

(1) Patch cord grade fibers have lower bandwidth: 62.5/125 fiber code 4: 200 MHz.km at both 850 and 1300 nm 50/125 fiber code 3: 400 MHz.km at both 850 and 1300 nm.

(2) See Fiber Material for Bandwidth performance

09-2003