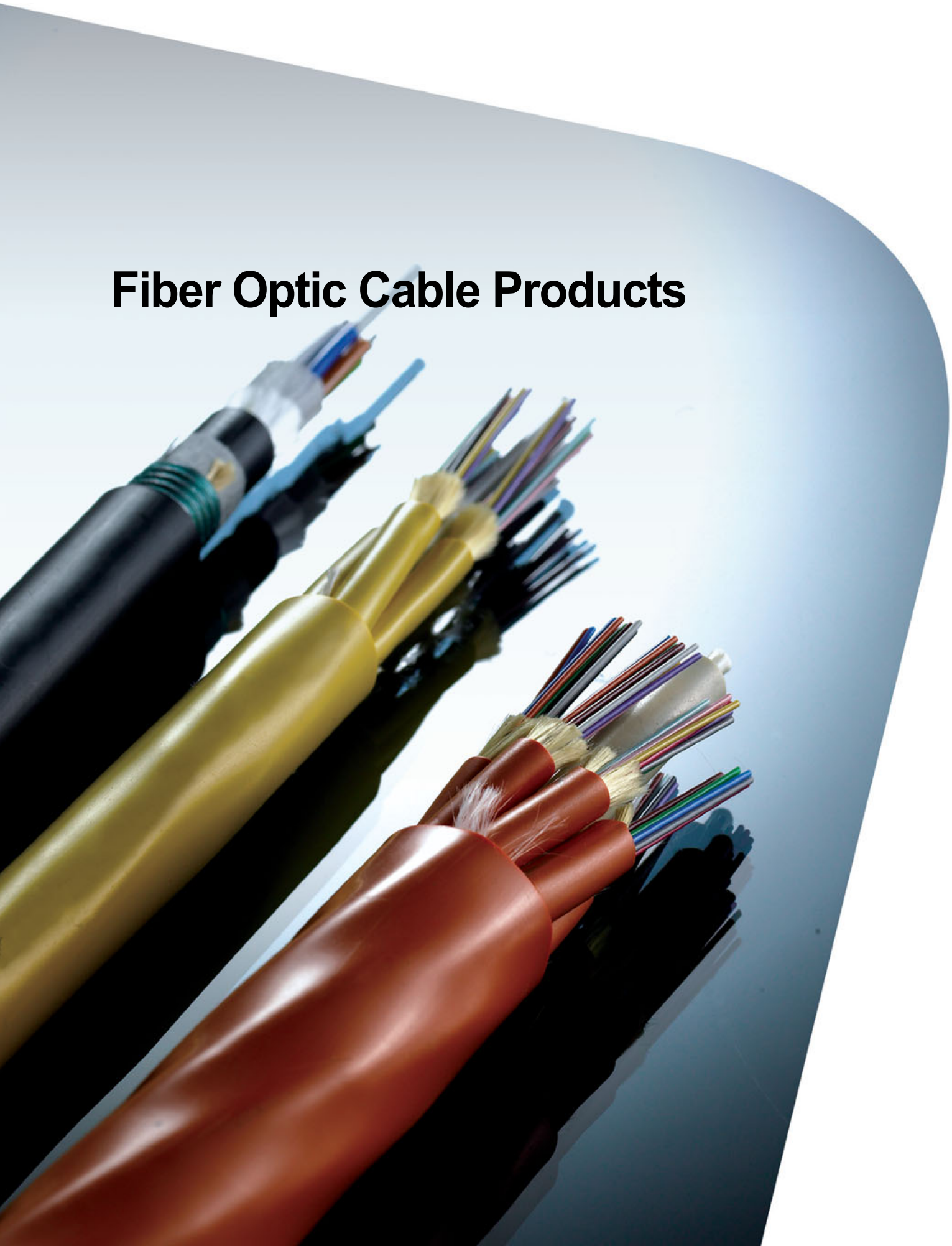
LS Cable
Leading Solution

Fiber Optic Cable Products



Leading Solution

LG Cable, LG Industrial Systems and LG-Nikko Copper,
Gaon Cable, E1 and Yesco are starting with
a new name, Leading Solution, LS.

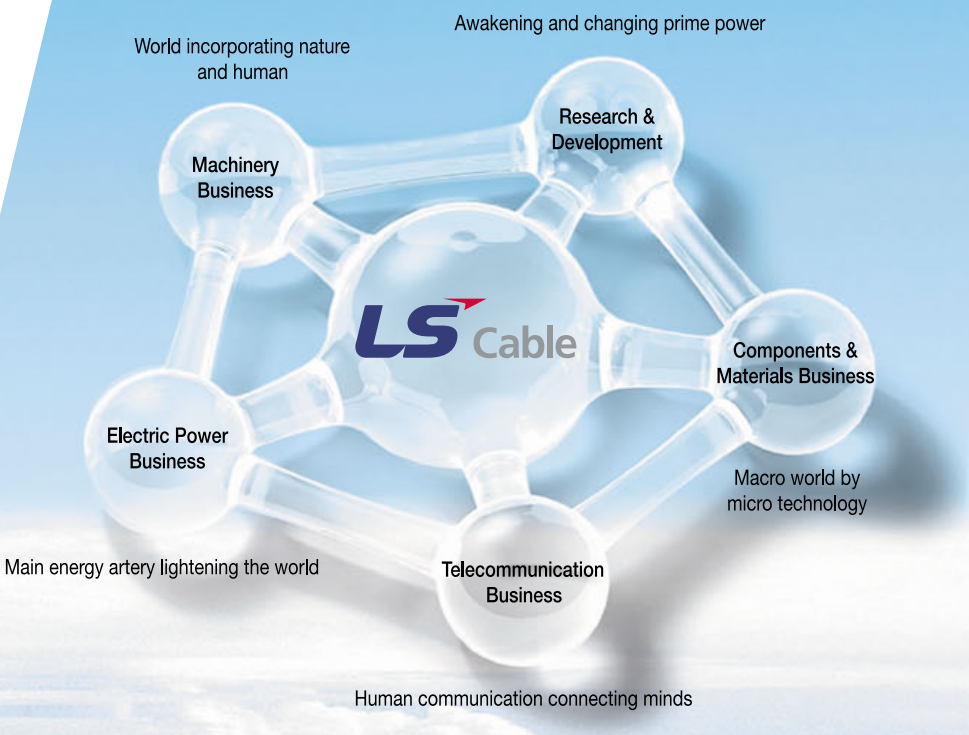
New Dream, New Start

To become a leader in the competitive global market, LG has been divided into three groups, electronics and chemicals for LG, energy and distribution for GS, Industrial electric · electronics and material for LS based on their business specialties.

LS' main companies, such as LS cable, LS industrial systems, LS-Nikko copper, Gaon cable, E1 and Yesco, are ranked as No.1 in their respective industry. However, LS won't just sit back, satisfied with being the best in Korea. We will pave the way for becoming the world's best in industrial electric · electronics and material industry with the new CI, LS.

Your good partner LG Cable is making a fresh start as LS Cable

LS Cable is No. 1 cable maker in Korea and its business fields are telecommunication, electric power, components & materials and machinery. Also, LS Cable is creating new businesses particularly in component and materials industry. LS Cable makes its best to accomplish the vision, 'Your No.1 Creative Partner' and be one of the world leaders with high technology and best level of service.



LS-Fiber Optic Cable Products

As a telecommunication cable manufacturer and a division of LS Cable, LS Data Communication Product and Components never stops researching, designing, developing, and manufacturing products with the higher level of quality to address the ever-changing demands in everyday life as well as in the industry.

Our quality control meets the most delicate requirements of international standards and the high level of quality is recognized both by local and international clients.

Our commitment to develop and deliver solutions to address our customers' needs and challenges keep our technology on the cutting edge and our know-how in the field more valuable, which our customers highly appreciate. We are looking forward to working with you.

Contents

Fibers

- Part Number Index
- Xwave™ & Xwave-s™
- Zwave-s™
- DreamLight™
- Multi Mode Fiber
- Giga™

Xwave™ & Xwave-s™

Low Water Peak & Zero Water Peak Single Mode Fiber

Description

LSC low water peak single mode fiber is full spectrum fiber designed for optical transmission systems operating over the entire wavelength range from 1260nm to 1625nm. This fiber offers customers industry leading performance specification, reliability and unsurpassed quality. LSC enhanced single mode fiber supports the most demanding application, including 10G ethernet, ATM, 10 and 40G SONET, and SDH using single channel, DWDM and multi-channel CWDM transmission. To extend today's and network or design tomorrow's emerging networks look for LSC enhanced SMF to provide you the greatest capacity and flexibility at lower cost.

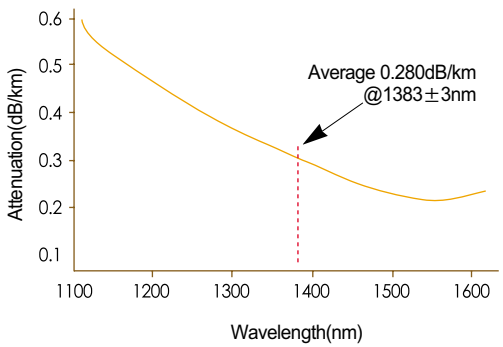
Features & Benefits

- A 50% increase in usable optical spectrum
- Transmission capability from 1260nm to 1625nm by removing the OH Ion around 1383nm
- Long term attenuation reliability by absence of hydrogen aging defects
- Excellent geometrical properties for active alignment splicing technique available with excellent splice loss control
- Mechanically strippable coating
- Environmentally compatible
- Meets all industry standards
  - ITU-T Recommendation G.652(Tables A,BC and D)
  - IEC Specifications 60793-2-50 Type b1.3
  - TIA/EIA 492-CAAB
  - Telcordia Generic Requirements GR-20-CORE

Performance

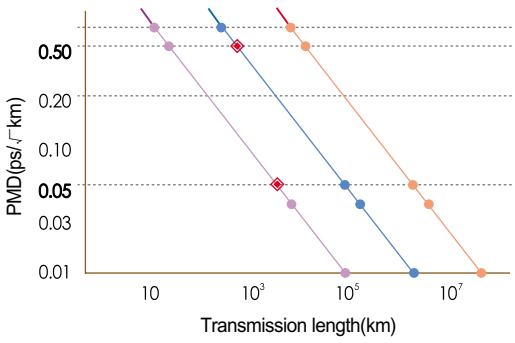
- Ultra Low Loss LWP SMF
  - Spectral attenuation after Hydrogen Aging

Over 50% More spectrum
- Optimun dispersion For 10 Gb/s
- Low cost operation



- Ultimate Low PMD Single Mode Fiber
  - Manufactured using unsurpassed quality Control, ultimate Low PMD SMF is specified At levels that improve upon even the most Recent PMD specifications in ITU G.652 D.

The PMD link design value is a term used to describe the PMD of concatenated lengths of fiber (also known as PMDQ). This value represents a statistical upper limit for total link PMD. IndividualPMD values may change when cabled.



Specifications

Characteristics		Specified Values	Tolerances	Unit
Optical Properties				
Attenuation	1310nm	≤0.34		dB/km
	1383nm	≤0.31*		dB/km
	1490nm	≤0.21		dB/km
	1550nm	≤0.20		dB/km
	1625nm	≤0.21		dB/km
Point Discontinuity	1550nm	0.05	Max	dB
Mode Field Diameter	1310nm	9.2	±0.4	μm
	1550nm	10.4	±0.5	μm
Cutoff Wavelength	Cable	1260	Max	nm
Chromatic Dispersion	1550nm	18	Max	ps/(nm • km)
	1625nm	22	Max	ps/(nm • km)
	Zero Dispersion Wavelength	1310~1324	Max	nm
	Slope @λ_0	0.092	Max	ps/(nm² • km)
Macro bending Attenuation	1turns, φ32mm 1550nm	0.03	Max	dB
	100turns, φ50mm 1310nm & 1550nm	0.03	Max	dB
	100turns, φ60mm 1625m	0.03	Max	dB
PMD	Link Design Value	≤0.06**	Max	ps/√m
	Maximum Individual Fiber	≤0.2	Max	ps/√m

* Attenuation values at this wavelength represent post-hydrogen aging performance. ** Complies with IEC 60794-3:2001, Section 5.5, Method I, September 2001. Alternative attenuation offerings available upon request.

Geometrical Properties				
Cladding Diameter		125	±0.7	μm
Cladding Non-Circularity		0.7	Max	%
Core/Cladding Concentricity Error		0.5	Max	μm
Coating Diameter		245	±5	μm
Coating Non-Circularity		6	Max	%
Coating/Cladding Concentricity Error		10	Max	μm
Mechanical Properties				
Proof Test	1s	100***	Min	kpsi
Fiber Curl	Radius of curvature	4	Min	m
Coating Strip Force	30mm - 500mm/min	1.3~8.9		n
Dynamic Tensile Strength (0.5meter gauge length)	Unaged	≥550	Min	kpsi
		750	Typical	kpsi
	Aged	≥440	Min	kpsi
		750	Typical	kpsi
Stress Corrosion Parameter unaged and aged		≥21	Min	
		≥25	Typical	

*** Higher Proof test levels available upon request.

Environmental Properties				
Temperature Cycling	-60℃ to +85℃	0.05***	Max	dB/km
Temperature Humidity Cycling	-10℃ to +85℃ up to 98% RH	0.05	Max	dB/km
Water Immersion	23 ± 2℃	0.05	Max	dB/km
Heat Aging	85 ± 2℃	0.05	Max	dB/km

**** Induced Attenuation 1310nm, 1550nm & 1625nm / Operating Temperature Range: -60℃ to +85℃

Performance Properties			
Effective Group Index (Neff)	1310m	1.467	Typical
	1550m	1.468	Typical

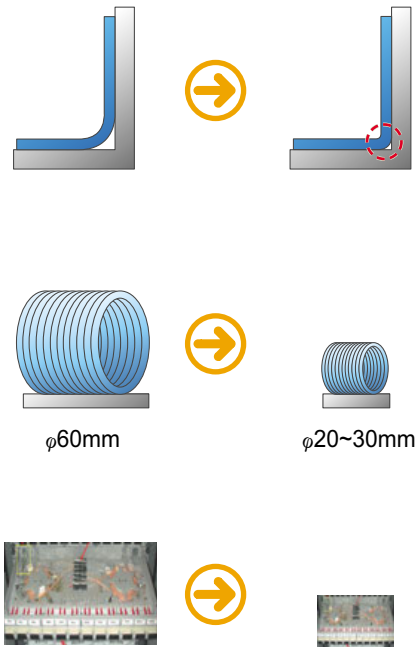
Zwave-s™
LWP Single Mode Bend Insensitive Fiber

Description
The design of low bending loss single mode fiber consists of a germanium doped core and a silica cladding. A dual protective acrylate coating is applied over the fiber cladding to cushion the fiber against microbending losses, provide abrasion resistance, and preserve the mechanical strength of the glass. Each fiber is proof tested so that it will survive installation loads and associated long-term residual stresses, even under extreme environmental conditions. Finally, each fiber is measured for optical and dimensional properties for compliance with all specifications listed in the respective fiber data sheets.

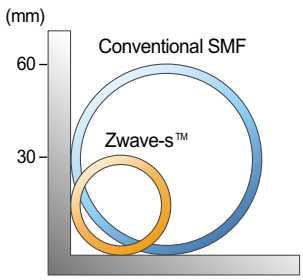
Features & Benefits
- Complies with ITU-T G657
- Bend-insensitive (~φ20mm)
- Low intrinsic loss
- Transmission capability from 1280nm to 1625nm by removing the OH Ion around 1383nm
- Excellent geometrical properties for active alignment splicing technique available with excellent splice loss control
- Matched cladding design for excellent microbending resistance
- Supported by a complete family of closures and connectors
- Mechanically strippable coating
- Environmentally compatible
- Meets all industry standards

Performance
- High Bending Performance

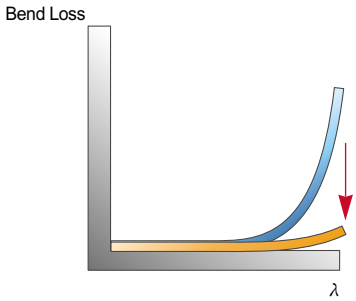
Compact Installation



- Maximum bending radius Conv. SMF vs. Zwave-s™



Bend insensitive!



Specifications

Characteristics		Specified Values	Tolerances	Unit
Optical Properties				
Attenuation	1310nm	≤0.35		dB/km
	1383nm	≤0.31		dB/km
	1550nm	≤0.21		dB/km
	1625nm	≤0.23		dB/km
Attenuation Uniformity	1550nm	0.05	Max	dB
Mode Field Diameter	1310nm	8.6	±0.5	μm
	1550nm	9.6	±0.8	μm
Cutoff Wavelength	Cable	1260	Max	nm
Chromatic Dispersion	1550nm	18	Max	ps/(nm • km)
	Zero Dispersion Wavelength	1300~1324		nm
	Slope@λ0	0.092	Max	ps/(nm² • km)
Macro bending Attenuation	10turns, φ30mm 1550nm	0.03	Max	dB
	1turns, φ20mm 1625m	0.2	Max	dB
Geometrical Properties				
Cladding Diameter		125	±0.7	μm
Cladding Non-Circularity		0.8	Max	%
Core/Cladding Concentricity Error		0.6	Max	μm
Coating Diameter		245	±5	μm
Coating Non-Circularity		6	Max	%
Coating/Cladding Concentricity Error		10	Max	μm
Mechanical Properties				
Proof Test	1s	100***	Min	kpsi
Fiber Curl	Radius of curvature	4	Min	m
Coating Strip Force	30mm - 500mm/min	1.3~8.9		n
Dynamic Tensile Strength (0.5meter gauge length)	Unaged	≥550	Min	kpsi
		750	Typical	kpsi
	Aged	≥440	Min	kpsi
		750	Typical	kpsi
Environmental Properties				
Temperature Cycling	-60℃ to +85℃, 1310&1550nm	0.05***	Max	dB/km
Temperature Humidity Cycling	-10℃ to +85℃, 1310&1550nm	0.05	Max	dB/km
Water Immersion	23℃, 1310&1550nm	0.05	Max	dB/km
Heat Aging	85℃, 1310&1550nm	0.05	Max	dB/km
Performance Properties				
Effective Group Index (Neff)	1310m	1.467	Typical	
	1550m	1.468	Typical	

*** Higher Proof test levels available upon request.

DreamLight™
Non Zero Dispersion Shifted Optical Fiber

Description

LSC DreamLight™ is designed for long-haul, high data rate and high capacity DWDM system.
DreamLight™ has optimum performance for 40Gb/s, 100GHz Channel spacing system in the C and L bands. By optimizing dispersion and effective area, the generation of non-linear effects in 50 GHz channel spacing system is successfully surpassed. To meet tomorrow's needs, DreamLightTM provides excellent characteristics for higher bit rate transmission. The reduced PMD makes it feasible the next generation 40Gb/s transmission system.

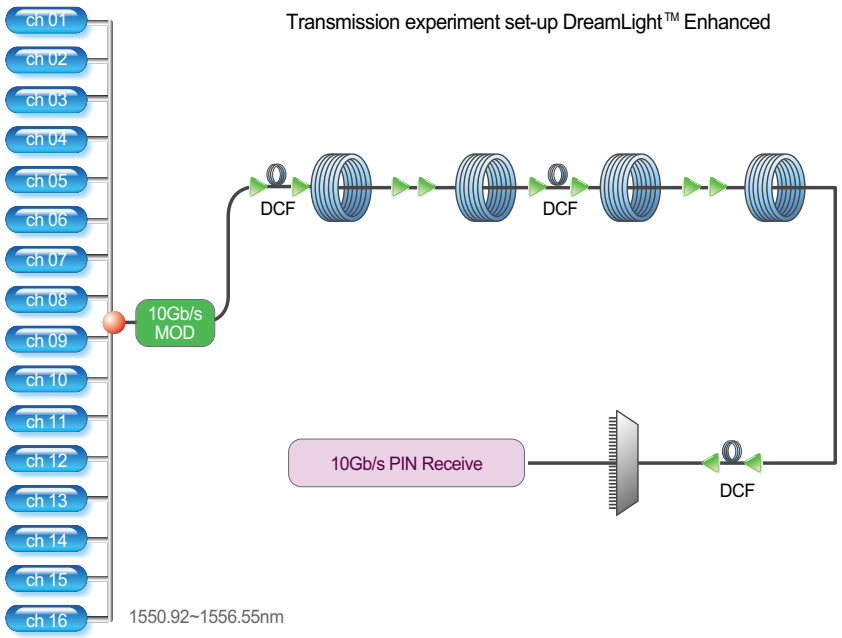
Features & Benefits

- Complies with ITU-T G655 & G656
- Provide optimum performance for 10Gb/s 50GHz channel spacing in the C band
- 100GHz and 50GHz compatibility with 10 Gb/s systems in C & L bands
- Make it feasible the next generation 40 Gb/s transmission system
- Compatible with future DWDM amplifier regions such as the S band
- Ensure single mode operation in 1310nm region
- Enhanced PMD performance
- Excellent geometrical characteristics
- Environmentally compatible
- Meets all industry standards

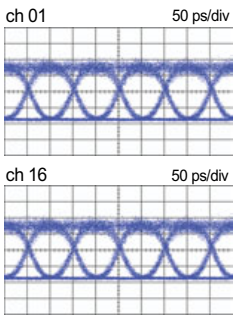
Performance

- It fully guarantees, > 320 km transmission in 16 x10 Gb/s, 50 GHz channel spacing

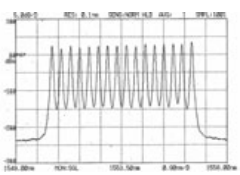
Transmission experiment set-up DreamLight™ Enhanced



Eye diagram of ch1 & ch16



Measured spectra after 320km



OSNR~25.5dB / Q-factor>21dB
BER~10^{-29}

Specifications

Characteristics	Unit	DreamLifht™ LA	DreamLifht™ Enhanced	DreamLifht™ RS
Optical & Geomrteical roperties				
ITU-T Reference		G.655A	G.655B&C	G.655A
Attenuation coefficient at 1550nm at 1625nm	dB/km	 ≤0.22 ≤0.25	 ≤0.22 ≤0.25	 ≤0.22 ≤0.25
Chromatic dispersion 1530 ~ 1565nm 1625nm	ps/nm.km	 2~6 ≤11.2	 5.5~10 ≤13.8	 2~7 ≤8.9
Polarization mode Dispersion Link Design Value Maximum Individual PMD	ps/(km)$^{\frac{1}{2}}$	 ≤0.1 ≤0.2	 ≤0.1 ≤0.2	 ≤0.1 ≤0.2
Macrobending loss (1550 & 1625nm) φ60mm, 100 turns φ32mm, 1 turn	dB	 ≤0.05 ≤0.5	 ≤0.05 ≤0.5	 ≤0.05 ≤0.5
Attenuation uniformity at 1550nm	db	0.05	0.05	0.05
Mode field diameter at 1550nm	um	9.6±0.5	9.3±0.5	8.4±0.6
Core concentricity error	um	0.6	0.6	0.6
Clad diameter	um	125±0.7	125±0.7	125±0.7
Clad non-circularity	%	0.8	0.8	0.8
Coating diameter	um	245±5	245±5	245±5
Fiber curl	m	Min.4	Min.4	Min.4

Characteristics		Specified Values	Tolerances	Unit
Mechanical Properties				
Proof Test Fiber Curl Coating Strip Force	1s 30mm - 500mm/min	100* 4 1.3	Min Min	kpsi m N
Dynamic Tensile Strength (0.5meter gauge length)	Unaged Aged 	≥550 750 ≥440 750	Min Typical Min Typical	kpsi kpsi kpsi kpsi

*** Higher Proof test levels available upon request.

Environmental Properties				
Temperature Cycling	-60℃ to +85℃, 1310&1550nm	0.05	Max	dB/km
Temperature Humidity Cycling	-10℃ to +85℃, 1310&1550nm	0.05	Max	dB/km
Water Immersion	23℃, 1310&1550nm	0.05	Max	dB/km
Heat Aging	85℃, 1310&1550nm	0.05	Max	dB/km

Performance Properties				
Effective Group Index (Neff)	1550m 1625m	1.468 1.469	Typical Typical	

Multi Mode Fiber

Description

LSC multi mode optical fiber consists of a germanium doped core and a matched silica cladding using modified Chemical Vapor Deposition process. LSC Multi mode optical fiber has a graded index profile with 50㎛ and 62.5㎛ core diameter and 125㎛ cladding diameter.These fibers have the highest bandwidth and lowest attenuation which is satisfying the use of 850nm and 1300nm The dual layer of UV-cured acrylate coating material is applied to the glass to provide excellent glass protection and be easy to work with and is well recognized as a superior coating performing "good mechanical strippability, enough cushion against microbending and strong color code retention". They are sufficiently optimized for the cables including loose tube and tight buffer cable with their outer diameter of 245㎛.

Features & Benefits

- Complies with ITU-T G651
- Designed for use at 850nm and 1300nm
- Low attenuation and high bandwidth, which overfills the transmission demand of IEEE 802.3z Gigabit Ethernet
- Excellent dimension controls for low splice loss
- Environmentally compatible
- Meets all industry standards

Specifications

Characteristics	Unit	50/125㎛ MMF	6.25/125㎛ MMF
Attenuation coefficient 850nm 1300nm	dB/km MHz.km	 ≤2.4	 ≤2.8
Bandwidth Premium 850nm / 1300nm Standard 850nm / 1300nm		 500/1000 400/800	 200/600 140/400
Attenuation uniformity at 850nm & 1300nm	dB	0.1	0.1
Macrobend loss (850 & 1300nm) φ75mm, 100 turns	dB	 0.5	 0.5
Numerical Aperture	-	0.200±0.015	0.275±0.15
Core Diameter	um	50±2.5	62.5±2.5
Core concentricity error	um	≤1.5	≤1.5
Core Non-Circularity	%	≤5	≤5
Clad diameter	um	125±1.0	125±1.0
Clad non-circularity	%	≤1.5	≤1.5
Coating diameter	um	245±5	245±5
Temperature Dependence(-60~85℃) 850nm&1300nm	dB/km	≤0.2	≤0.2
Temp-Humid -10~85℃(4~98%RH) 850nm&1300nm	dB/km	≤0.2	≤0.2
Coating StripForce	N	1.3~8.9	1.3~8.9
Effective Group Index(Neff) 850nm 1300nm	- 	 1.483 1.479	 1.496 1.487
Proof Test	kpsi	100	100

Giga™
For High Speed Local Network Superior Performance and Reliability !!

The rapid world-wide growth of the internet has prompted the performance improvement and infrastructure expansion of fiber optic communication system. The demand for higher quality and better performance optical communication had led to the continuous increase of deployment of new high speed network. Especially, faster access network service is needed to overcome the bandwidth bottleneck between local access network and long-haul network.

Fast Ethernet, FDDI, and ATM Protocol are the main protocols for the indoor and premises network solution, and Multimode Fiber and UTP Cable are used as main transmission media. In general, the transmission speed of LAN backbone network needs to be 10 times faster than desktop access line, which necessitates the introduction of Gigabit Ethernet system that offers high information carrying capacity. Gigabit Ethernet, being an extended version of Ethernet system, is preferred as the enterprise LAN and needs a new transmission media. LS Cable's newly developed Giga™ is the perfect media for Gigabit Ethernet system.

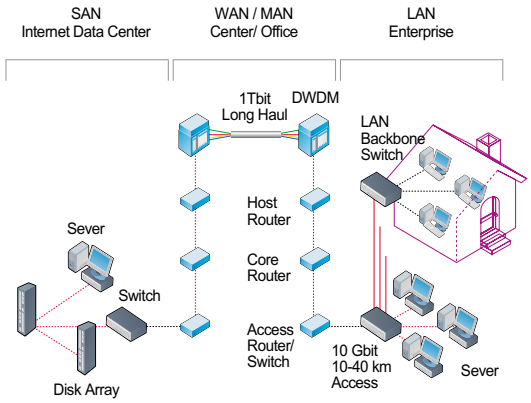


Figure 1. Optical System

Optical System

With the advent of Gigabit Ethernet Systems utilizing multimode fiber, the limiting factor in the fiber backbone was no longer the attenuation of the passive link, but rather the information carrying capacity of the fiber. Due to different signal characteristics of the transmitter, new test procedures and a new understanding of the interaction between the optical fiber and the optical signal were required.

Gigabit Ethernet systems are the result of the continual evolution of networks toward higher and higher speeds. The incessant demands of end-users to move large amounts of data at gigabit speeds required a new technology to handle the 100-fold increase in the transmitting speed used in the network. To this end, the Institute of Electrical and Electronic Engineers (IEEE) 802.3z committee revised the Ethernet protocol standards for transmission for optical networks at one gigabit. The revised protocol standards are based upon the Fast Ethernet system protocol developed in 1995. These new protocols are 1000Base-SX for 850nm wavelength using laser-based transceivers over multimode optical fiber and 1000Base-LX for 1300nm wavelength using laser-based transceivers over multimode or singlemode optical fibers, which are to be considered Gigabit Ethernet (GbE).

10-Gigabit Ethernet (10-GbE) standard considering the trend toward increasing traffic levels, as well as the development of more bandwidth-intensive applications, 10-Gbit/sec capability in both LANs and MANs will become extremely important. 10-GbE is the first Ethernet standard that will only function over optical fiber. Operation is over full-duplex mode and only with point-to-point connections, so collision detection protocols are not required.

The key criteria for efficient and effective high-speed networks are as follow.

- Easy, straightforward migration to higher performance levels without disruption
- Low cost of ownership
- Familiar management tools and common skills base
- Flexibility in network design

TIA FO2.2.1 Working Group has been determining the necessary performance criteria for multimode fiber (MMF) and 850-nm laser transmitters to support emerging 10-Gbit/sec applications to at least 300 m. The effort succeeded in providing a low-cost solution meeting the distance requirements of the vast majority of in-building LANs, storage-area networks (SANs), and equipment room inter connections using 850-nm vertical-cavity surface-emitting laser (VCSEL) serial transceivers and laser-optimized 50-micron MMF.

Laser Sources & Gigabit MMF

The light source for Gigabit Ethernet system needs to be cost-effective for data transmission speed and installation. The typical light sources that satisfy these requirements are VCSEL and low cost FP-LD. Besides the operating bandwidth, another difference between LED and LD is beam pattern. The different operating patterns of multimode fiber using different light sources are shown in figure 2.

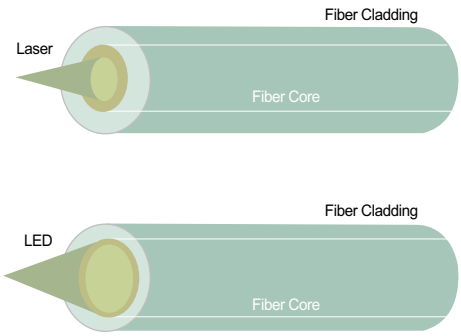


Figure 2. The operation pattern of Multimode Fiber by light source

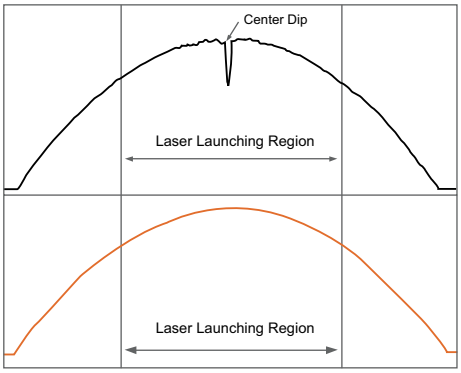


Figure 3. Index Profile of Multimode Fiber Conventional and Laser optimized MMF

LED has 100ß≠ beam size and excites entire core of multimode fiber. On the contrary, FP-LD or VCSEL have relatively smaller beam size than fiber core and the light is launched into the partial core of multimode fiber exciting few modes. These different launching conditions induce different transmission characteristics for the same multimode fiber. As a result, transmission capacity of multimode fiber varies with laser source type, therefore this variation results in the modification of the definition of bandwidth. Bandwidth was originally defined under the condition of all modes exciting in core using LED, called Over Filled Launching(OFL). However, OFL bandwidth is not a good indicator under the condition of few modes exciting in core using LD. This few mode exciting condition is redefined as laser-based bandwidth and specified in TIA/EIA FOTP-204 which is redefinition of FOTP-30 and FOTP-51.

For the enhancement of transmission performance of MMF, core index profile must be carefully controlled. Defects of refractive index profile affects the transmission quality of multimode fiber for Gigabit Ethernet system. Among these defects, index dip is the major factor that impairs the performance of multimode fiber. Index dip originates from the evaporation of volatile dopants in the MCVD process. Because gigabit transmission system uses LD instead of LED, core central defect, like index dip, must be eliminated. The elimination of refractive index dip can be achieved through the fine control of manufacturing process. Even in the absent of core center dip, finite tuning is also important factor for transmission performance.

LS Cable developed center dip free process and realized uniform index profile. Fig. 3-(a) shows the typical index profile of conventional multimode fiber and Fig.3-(b) shows index profile of newly developed multimode fiber.

TIA FO2.2.1 Working Group, which determined the performance requirements and accompanying new test procedure to measure the differential mode delay (DMD) property of the new fiber. The Telecommunications Industry Association (TIA) published the test procedure, FOTP-220.The ballot on a detailed fiber specification, to be published as TIA/EIA-492AAAC.

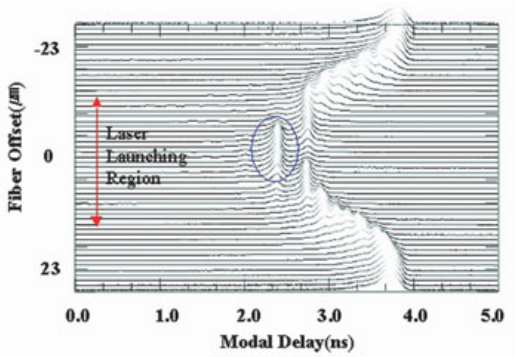


Figure 4. DMD Measurement scheme

Perturbations in the index profile capable of affecting the laser bandwidth can appear as negligible differences from the power-law profile using even the most sensitive index-profile measurement techniques. Fortunately, fiber-profile quality can be controlled and quantified using a technique called differential mode delay (DMD, FOTP-220), which measures the delay of each mode by scanning across the fiber core with a small launch spot. The DMD curve in Figure 4 illustrates the typical effect of an index depression at the center of the core. The delay of the lower-order modes (transmitted on or near the axis of the fiber) is affected significantly due to this perturbation. The information from the DMD scan can be used to make minute adjustments to the

index profile to equalize or flatten the DMD profile across the core of the fiber. It is critical point for system design to understand.

Figure 5 describes the inter-relationship between transmission capacity, OFL Bandwidth, RMLB(Retricted Modal Bandwidth), EMB(Effective Modal Bandwidth) and DMD. EMB is extended definition of RML Bandwidth. TIA FO-2.2.1 confirmed its specifications by measuring system EMB, the information-carrying capacity of a system, taking into account both fiber modal delays and transmitter launch condition. EMB measures the effects of multimode-fiber and transceiver interaction to accurately evaluate overall system performance.

Guarantee the Performance of Giga™ for 1Gigabit & 10Gigabit Ethernet system

IEEE 802.3z defines the system specification for Gigabit Ethernet under worst-case philosophy. Under this configuration, the transmission performance of multimode fiber can be newly defined. The Gigabit Ethernet Optical Link Model is used to qualify the transmission performance.

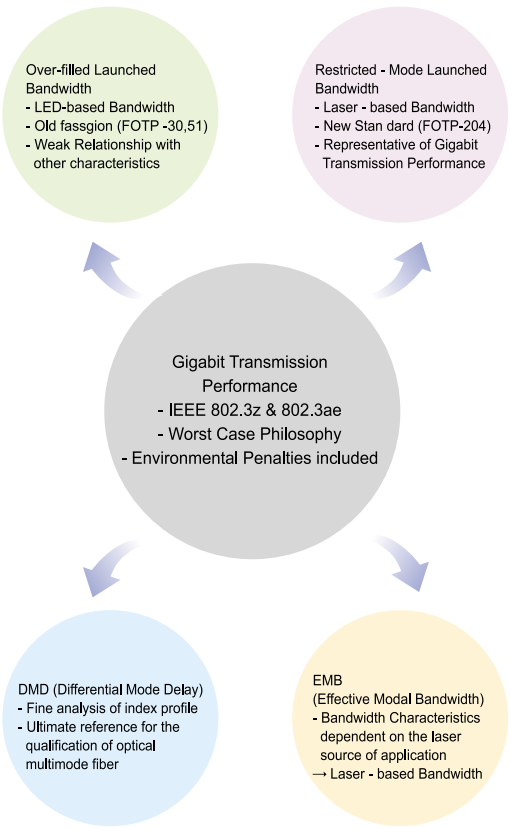


Figure 5. Optical characteristics of multimode fiber and inter-relationship

This model is based on the concept of power budgeting. The GbE link model was created by using worst-case models and applied empirically to LS product. The transmission performance test is conducted following IEEE802.3z. And the reliability of test result is enhanced with the aid of fiber shaker(FOTP-142) to simulate worst-case environment. Figure 6 shows the basic concept of transmission experiment.

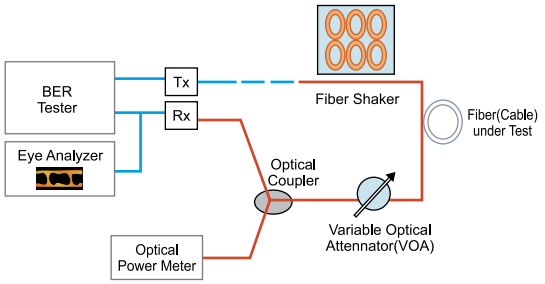


Figure 6. Transmission Measuring Equipment (According to IEEE802.3z & IEEE802.3ae)

LS Cable established the test-bed to measure transmission properties of multimode fiber satisfying international standards and set up mass production line which can guarantee the excellent minimum transmission distance of the fiber.

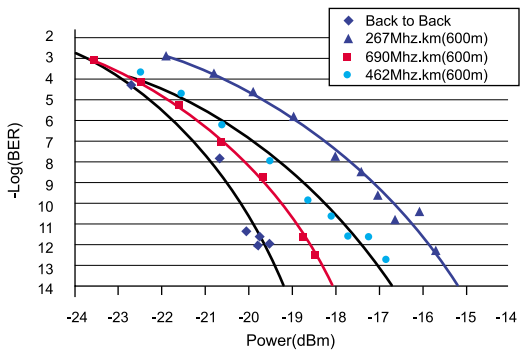


Figure 7. Measured power penalty dependence of EMB. For 1GbE Giga™ 62.5(62.5E) series MMF of 600meterswith different EMB bandwidth (267, 462, 690MHhz.km),the power penalty varies from 1dB to 4dB. (Receiver Sensitivity : -19.5dBm)

However, this direct test method is not easily implemented for mass production process. Therefore, some alternatives are needed. EMB & DMD are known to have close relationship with transmission capacity of multimode fiber, and can be referenced as representative characteristics for 1Gigabit & 10 Gigabit transmission performance. EMB is calculated with DMD characteristics for various commercially available GbE transmitters.

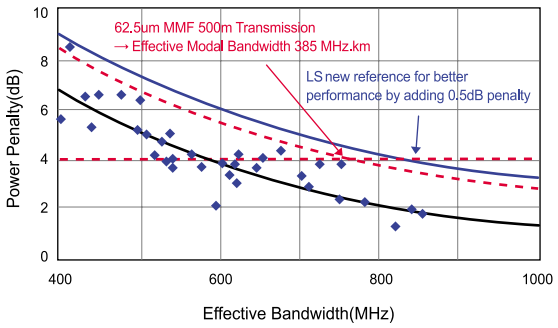


Figure 8. Power Penalty vs. EMB

Figure 7 and 8 show the results of 1GbE transmission experiment for Giga™ 62.5(62.5E) products.
As shown in figure 8, the test results coincide with IEEE power penalty link model.
For the application of MMF to short reach 10GbE system, DMD profile should be finely controlled. TIA/EIA-492AAAC defines the DMD characteristics of 10Gbps MMF with six templates of DMD mask. The fiber shall meet at least one of following six DMD templates, which each consists of both an inner and outer mask definition.

Template Number	Inner Mask DMD(ps/m) for 5um~18um	Outer Mask DMD(ps/m) for Oim~23um
1	≤ 0.23	0.70
2	≤ 0.24	0.60
3	≤ 0.25	0.50
4	≤ 0.26	0.40
5	≤ 0.27	0.35
6	≤ 0.33	0.33

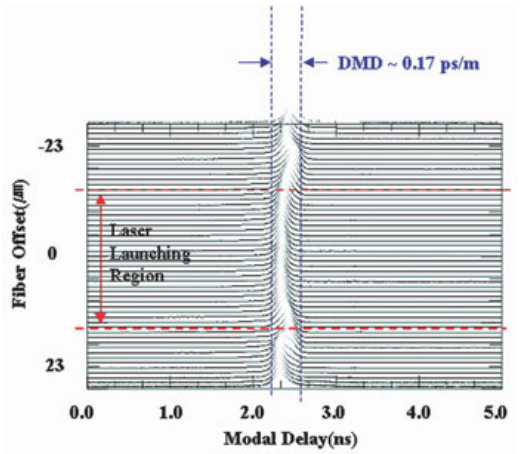
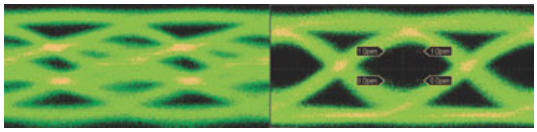


Figure 9. DMD Mask set defined on TIA/EIA-492AAAC and typical DMD profile of Enhanced MMF, Giga™ 50XE

To meet the DMD Mask requirements, LSC's Giga™ 50XE is manufactured carefully for 10GbE application. Figure 9 shows typical DMD characteristics of Giga™ 50XE.
With enhanced DMD characteristics, the transmission performance of Giga™ 50XE exceeds the IEEE recommendation.



(A) (B)

Figure 10. Transmitted eye diagram of (a) 150meters of conventional MMF and (b) 700meters of Giga™ 50XE

Giga™

Giga™ provides gigabit multimode fiber as the solution for emerging high speed local area network.

The superior performance of Giga™ surpasses the minimum requirements specified by IEEE802.3z and enhances your system performance with reliability.

Giga™ supports current indoor and premises network with superior performance up to 2,000m transmission length.

Giga™ 62.5E guarantees the minimum transmission length of 500m for 850nm and 1000m for 1300nm. Giga™ 50E guarantees 600m for 850nm and 2000m for 1300nm.

Giga™ 50XE is optimized for 10GbE and Fibre Channel applications. The safe transmission length exceeds 300m for the system compatible with 10Gbase-SW/SR.

Giga™ series products of high performance and reliability are the best solutions for your system.

Table 1. Transmission length properties of Giga™

	Items	Transmission Length (m)		Optical Properties			
				Bandwidth (MHz.km)		Optical Attenuation(dB/km)	
		850nm	1300nm	850nm	1300nm	850nm	1300nm
1 Gbps	GipaPass™ 62.5	300	550	200	400	2.8	0.7
	GipaPass™ 62.5E	500	1000	200	600	2.4	0.6
	GipaPass™ 50	600	600	400	800		
	GipaPass™ 50E	600	2000	500	1000		
10 Gbps	GipaPass™ 50X	150	-	800	500	2.4	0.6
	GipaPass™ 50XE	300	-	800	500		
	GipaPass™ 50XXX	550	-	3500	500		

Geometrical Specifications

Glass Geometry

Cladding Diameter	125±1.0㎛
Core-Cladding Concentricity	3.0㎛
Cladding Non-Circularity	≤1.5%
Core Non-Circularity	≤5.0%

Coating Geometry

Cladding Diameter	245±1.0㎛
Core-Cladding Concentricity	≤10.0㎛

Standar Length(km/reel) 2.2~8.8km

Mechanical Specification

Proof Test

The entire fiber lengh is subjected to a tensile proot	Stress 100kpsi(0.7GN/m²)

* Higher Proof test levels are available

Coating

Coating Strip Force	1.3N≤S.F≤8.3N
Pullout Force	6.2N≤P.F≤22.2N

Environmental Specification

Test Condition	Induced Attenuation (dB/km)	
	850nm	1300nm
Temperature Dependance -65℃ to +85℃	≤0.20	≤0.20
Temp-Humid Cycling -10℃ to +85℃ (4~98% RH)	≤0.20	≤0.20

Environmental Specification

Test Condition	Induced Attenuation (dB/km)	
	50.0㎛	62.5㎛
850nm	1.483	1.496
1300nm	1.479	1.487

Fatigue Resistance Parameter(nd) 20

Fiber Optic Cables (Indoor)

- Part Number Index
- All Dielectric Single Jacketed Central Tube
- 900um 2fiber buffered Aramid yarn strength member
- 900um tight buffered Glass yarn strength member
- 900um tight buffered Aramid yarn strength member
- ONFR(riser rated), OFNP(plenum rated) or LSZH rated
- Micro Distribution Cable
- ONFR(riser rated), OFNP(plenum rated) or LSZH rated
- 900um tight buffered Aramid yarn strength member
  Interlocking Armored Cable

LSC Part No.

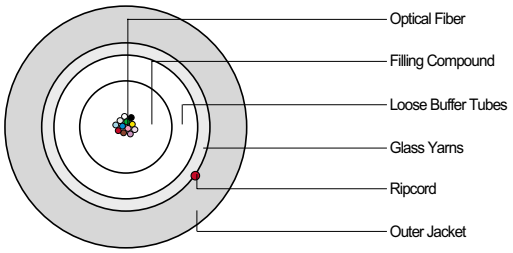
① Select Fiber Type	② Fiber Count : 2 digit No.	③ Sheath Color	④
SC = 9/125 ㎛ (ITU-T G652A,B)	Ex. 6 Fiber Count : 06, 24Fiber Count : 24	YL = Yellow	16 = 1.6 mm Diameter
SE = 9/125 ㎛ (ITU-T G652C,D)		OR = Orange	18 = 1.8 mm Diameter
HC = 62.5/125 ㎛ Standard	R = UL TYPE OFNR	AQ = Aqua	20 = 2.0 mm Diameter
HG = 50/125 ㎛ 1 Gbe	P = UL TYPE OFNP	BK = Black	24 = 2.4 mm Diameter
MC = 50/125 ㎛ Standard	Z = LSZH TYPE		29 = 2.9 mm Diameter
MG = 50/125 ㎛ 1 Gbe			
MX = 50/125 ㎛ 10 Gbe 300 meter Link Length			

LS FIBER OPTIC LOOSE TUBE CABLE

All Dielectric Single Jacketed Central Tube

Description / Applications

- All dielectric Single Jacket Central Loose Tube cable is a UV-stabilized, fully water blocked cable for outdoor duct applications (PE outer jacket) or Indoor/Outdoor applications (LSZH outer jacket)
- Loose tube design provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications.
- Compact design for limited conduit space
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) complied



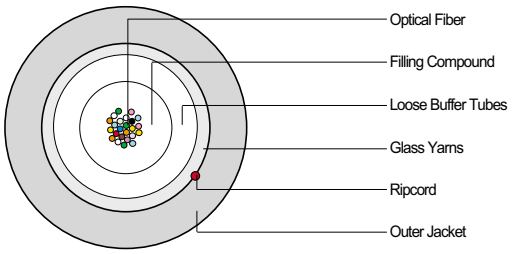
12-Fiber Cable

Specification

- Telcordia GR-20-CORE
- IEC 60793 / IEC 60794
- ITU-T G652

Options

- Fiber - Single mode, 50㎛, 62.5㎛ multi mode available
- Sequential meter or footage markings
- Outer jacket : Black UV- and moisture-resistant Polyethylene or LSZH (Low Smoke Zero Halogen)



24-Fiber Cable

Color Identification

01 - Blue	07 - Red	13 - Blue / Single stripe	19 - Red / Single stripe
02 - Orange	08 - Black	14 - Orange / Single stripe	20 - Natural
03 - Green	09 - Yellow	15 - Green / Single stripe	21 - Yellow / Single stripe
04 - Brown	10 - Violet	16 - Brown / Single stripe	22 - Violet / Single stripe
05 - Slate	11 - Rose	17 - Slate / Single stripe	23 - Rose / Single stripe
06 - White	12 - Aqua	18 - White / Single stripe	24 - Aqua / Single stripe

Mechanical Characteristics

Storage Temperature : -20 to + 70℃ / Operating Temperature : -10 to + 60℃

Fiber Count	Nominal Diameter		Nominal Weight		Maximum Tensile Load Short Term	Maximum Tensile Load Long Term	Crush Load Short Term	Crush Load Long Term	Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
	[mm]	[inch]	[kg/km]	[lb/kft]	[N]	[N]	[N/cm]	[N/cm]	[mm]	[inch]	[mm]	[inch]
2	6.3	0.25	45	0.10	1200	600	220	110	126	4.96	63	2.51
4	6.3	0.25	45	0.10	1200	600	220	110	126	4.96	63	2.51
6	6.3	0.25	45	0.10	1200	600	220	110	126	4.96	63	2.51
8	6.3	0.25	45	0.10	1200	600	220	110	126	4.96	63	2.51
10	6.3	0.25	45	0.10	1200	600	220	110	126	4.96	63	2.51
12	6.3	0.25	45	0.10	1200	600	220	110	126	4.96	63	2.51
16	6.8	0.27	55	0.12	1200	600	220	110	136	5.35	68	2.71
18	6.8	0.27	55	0.12	1200	600	220	110	136	5.35	68	2.71
24	6.8	0.27	55	0.12	1200	600	220	110	136	5.35	68	2.71

LSC Part No.

LSZH RATED : CT ☐☐ ZSJNA ☐☐
RISER RATED : CT ☐☐ RSJNA ☐☐
PLENUM RATED: CT ☐☐ PSJNA ☐☐
① ②

Transmission Performance

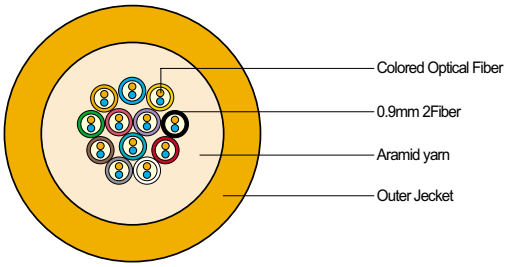
		9/125㎛ (1310/1550nm)	50/125㎛ Standard (850/1300nm)	50/125㎛ Gigabit (850/1300nm)	50/125㎛ 10Gigabit (850/1300nm)	62.5/125㎛ Standard (850/1300nm)	52.5/125㎛ Gigabit (850/1300nm)
Attenuation(dB/km) Typical values		0.4/0.3	3.0/1.0	3.0/1.0	3.0/1.0	3.5/1.0	3.5/1.0
Minimum Bandwidth (MHz • km)		-	500/500	500/500	1500/500	200/500	200/500
Ethernet Link Distance (m)	10Gbps	-	-	-	300	-	-
	1Gbps	-	-	550/550	-	-	250/550

LS FIBER OPTIC DISTRIBUTION CABLE

900um 2fiber buffered Aramid yarn strength member

Description / Applications

- Fiber to the desk cable for very high speed multimedia application
- Rugged construction : 2 fiber buffer structure with individually protected tubes
- Color coded tubes to identify transmitting and receiving fibers
- Small size and light weight
- Simplify pulling and installation work



Specification

- ISO/IEC 11801
- Telcordia GR-409-CORE
- ANSI/ ICEA S-83-596

Options

- Fiber - Single mode, 50㎛, 62.5㎛ multi mode available
- Outer Jacket color
  - Single Mode : Yellow
  - 62.5/125㎛ 1Gbe : Orange
  - 50/125 ㎛ 1Gbe : Orange
  - 50/125 ㎛ 10Gbe : Aqua
- Outer jacket : PVC or LSZH (Low Smoke Zero Halogen)

Color of Buffer

01 - Blue	07 - Red
02 - Orange	08 - Black
03 - Green	09 - Yellow
04 - Brown	10 - Violet
05 - Grey	11 - Pink
06 - White	12 - Aqua

Color of Fiber

01 - Blue
02 - Orange

Mechanical Characteristics

Storage Temperature : -10 to + 70℃ / Operating Temperature : 0 to + 60℃

Fiber Count	Nominal Diameter		Nominal Weight		Maximum Tensile Load Short Term	Maximum Tensile Load Long Term	Crush Load Short Term	Crush Load Long Term	Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
	[mm]	[inch]	[kg/km]	[lb/kft]	[N]	[N]	[N/cm]	[N/cm]	[mm]	[inch]	[mm]	[inch]
2	2.9	0.11	10	0.02	300	150	35	13	58	2.28	29	1.15
4	4.5	0.18	20	0.04	660	300	35	13	90	3.54	45	1.79
6	5.2	0.20	23	0.05	660	300	35	13	104	4.09	52	2.07
8	5.3	0.21	25	0.06	660	300	35	13	106	4.17	53	2.11
12	5.7	0.22	30	0.07	660	300	35	13	114	4.49	57	2.27
16	6.0	0.24	35	0.08	660	300	35	13	120	4.72	60	2.39
24	6.7	0.26	40	0.09	660	300	35	13	134	5.28	67	2.67

LSC Part No.

LSZH RATED : 2DT□□Z□□ □□
RISER RATED : 2DT□□R□□ □□
PLENUM RATED: 2DT□□P□□ □□
① ② ③

Transmission Performance

	9/125㎛ (1310/1550nm)	50/125㎛ Standard (850/1300nm)	50/125㎛ Gigabit (850/1300nm)	50/125㎛ 10Gigabit (850/1300nm)	62.5/125㎛ Standard (850/1300nm)	52.5/125㎛ Gigabit (850/1300nm)
Attenuation(dB/km) Typical values	0.5/0.4	3.0/1.0	3.0/1.0	3.0/1.0	3.5/1.0	3.5/1.0
Minimum Bandwidth (MHz • km)	-	500/500	500/500	1500/500	200/500	200/500
Ethernet Link Distance (m) 10Gbps	-	-	-	300	-	-
Ethernet Link Distance (m) 1Gbps	-	-	550/550	-	-	250/550

LS FIBER OPTIC DISTRIBUTION CABLE

900um tight buffered Glass yarn strength member

Description / Applications

- Distribution cables are rugged, high performance optical communication cables for inside plant installations
- Backbone & Computer Room Cabling
- Compact design for limited conduit space
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) complied

Specification

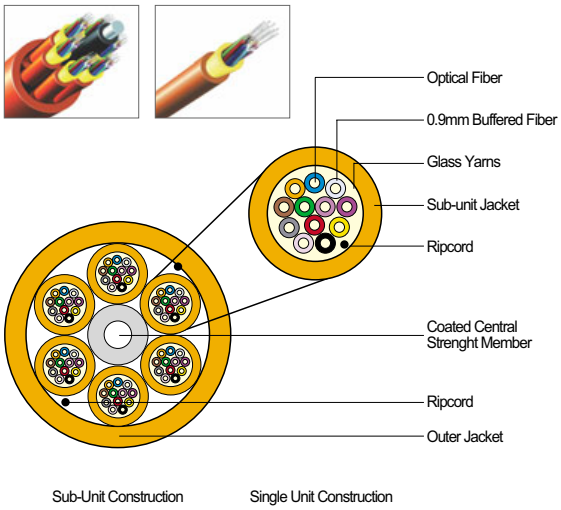
- ISO/IEC 11801
- Telcordia GR-409-CORE
- ANSI/ ICEA S-83-596

Options

- Fiber - Single mode, 50㎛, 62.5㎛ multi mode available
- Sub-unit & Outer Jacket color
  - Single Mode : Yellow
  - 62.5/125㎛ 1Gbe : Orange
  - 50/125㎛ 1Gbe : Orange
  - 50/125㎛ 10Gbe : Aqua
- If the cable will be used indoor/outdoor applications, outer cable jacket shall be black
- Outer jacket : PVC or LSZH (Low Smoke Zero Halogen)

Subunit Identification

The identification code & number is printed on the sub-unit jacket every 10 cm (eg. SM#1, SM#2)



Color of Buffer

01 - Blue	07 - Red	13 - Blue / Black dash	19 - Red / Black dash
02 - Orange	08 - Black	14 - Orange / Black dash	20 - Black / White dash
03 - Green	09 - Yellow	15 - Green / Black dash	21 - Yellow / Black dash
04 - Brown	10 - Violet	16 - Brown / Black dash	22 - Violet / Black dash
05 - Grey	11 - Pink	17 - Grey / Black dash	23 - Pink / Black dash
06 - White	12 - Aqua	18 - White / Black dash	24 - Aqua / Black dash

Mechanical Characteristics

Storage Temperature : -20 to + 70℃ / Operating Temperature : -10 to + 60℃

Constuction	Fiber Count	Nominal Diameter		Nominal Weight		Maximum Tensile Load Short Term	Maximum Tensile Load Long Term	Crush Load Short Term	Crush Load Long Term	Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/kft]	[N]	[N]	[N/cm]	[N/cm]	[mm]	[inch]	[mm]	[inch]
Single Unit	2	4.5	0.18	25	0.06	660	300	35	13	90	3.54	45	1.79
	4	5.3	0.21	30	0.07	660	300	35	13	106	4.17	53	2.11
	6	5.7	0.22	35	0.08	660	300	35	13	114	4.49	57	2.27
	8	6	0.24	40	0.09	660	300	35	13	120	4.72	60	2.39
	12	6.7	0.26	50	0.11	660	300	35	13	134	5.28	67	2.67
	16	8.5	0.33	80	0.18	1320	660	50	13	170	6.69	85	3.38
	18	8.9	0.35	82	0.18	1320	660	50	25	178	7.01	89	3.54
	24	9.8	0.39	95	0.21	1320	660	50	25	196	7.72	98	3.90
6 Fiber Subunits	24*	13.9	0.55	180	0.40	1320	660	50	25	278	10.94	139	5.53
12 Fiber Subunits	48	18.3	0.72	295	0.65	1320	660	50	25	366	14.41	183	7.28

*Single mode 24fiber cable is subunit Construction only

LSC Part No.

LSZH RATED : DT□□ GZ □□ □□
RISER RATED : DT□□ GR □□ □□
PLENUM RATED: DT□□ GP □□ □□
① ② ③

Transmission Performance

		9/125㎛ (1310/1550nm)	50/125㎛ Standard (850/1300nm)	50/125㎛ Gigabit (850/1300nm)	50/125㎛ 10Gigabit (850/1300nm)	62.5/125㎛ Standard (850/1300nm)	52.5/125㎛ Gigabit (850/1300nm)
Attenuation(dB/km) Typical values		0.5/0.4	3.0/1.0	3.0/1.0	3.0/1.0	3.5/1.0	3.5/1.0
Minimum Bandwidth (MHz • km)		-	500/500	500/500	1500/500	200/500	200/500
Ethernet Link Distance (m)	10Gbps	-	-	-	300	-	-
	1Gbps	-	-	550/550	-	-	250/550

LS FIBER OPTIC DISTRIBUTION CABLE

900um tight buffered Aramid yarn strength member

Description / Applications

- Distribution cables are rugged, high performance optical communication cables for inside plant installations
- Backbone & Computer Room Cabling
- Compact design for limited conduit space
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) optional

Specification

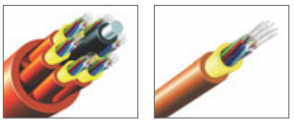
- ISO/IEC 11801
- Telcordia GR-409-CORE
- ANSI/ ICEA S-83-596

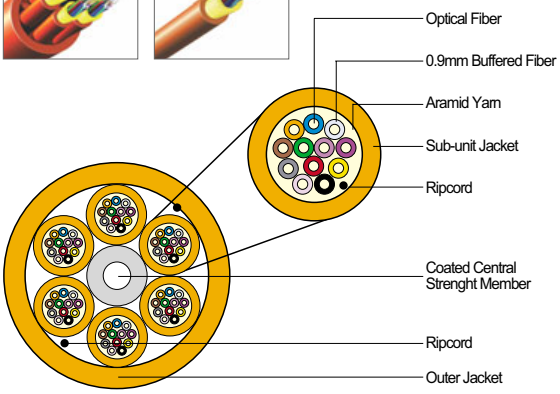
Options

- Fiber - Single mode, 50㎛, 62.5㎛ multi mode available
- Sub-unit & Outer Jacket color
  - Single Mode : Yellow
  - 62.5/125 ㎛ 1Gbe : Orange
  - 50/125 ㎛ 1Gbe : Orange
  - 50/125 ㎛ 10Gbe : Aqua
- If the cable will be used indoor/outdoor applications, outer cable jacket shall be black
- Outer jacket : PVC or LSZH (Low Smoke Zero Halogen)

Subunit Identification

The identification code & number is printed on the sub-unit jacket every 10 cm (eg. SM#1, SM#2)





Sub-Unit Construction Single Unit Construction

Color of Buffer

01 - Blue	07 - Red	13 - Blue / Black dash	19 - Red / Black dash
02 - Orange	08 - Black	14 - Orange / Black dash	20 - Black / White dash
03 - Green	09 - Yellow	15 - Green / Black dash	21 - Yellow / Black dash
04 - Brown	10 - Violet	16 - Brown / Black dash	22 - Violet / Black dash
05 - Grey	11 - Pink	17 - Grey / Black dash	23 - Pink / Black dash
06 - White	12 - Aqua	18 - White / Black dash	24 - Aqua / Black dash

Mechanical Characteristics

Storage Temperature : -20 to + 70℃ / Operating Temperature : -10 to + 60℃

Constuction	Fiber Count	Nominal Diameter		Nominal Weight		Maximum Tensile Load Short Term	Maximum Tensile Load Long Term	Crush Load Short Term	Crush Load Long Term	Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/kft]	[N]	[N]	[N/cm]	[N/cm]	[mm]	[inch]	[mm]	[inch]
Single Unit	2	4.5	0.18	20	0.04	660	300	50	25	90	3.54	45	1.79
	4	5.3	0.21	25	0.06	660	300	50	25	106	4.17	53	2.11
	6	5.7	0.22	30	0.07	660	300	50	25	114	4.49	57	2.27
	8	6	0.24	35	0.08	660	300	50	25	120	4.72	60	2.39
	12	6.7	0.26	40	0.09	660	300	50	25	134	5.28	67	2.67
	16	8.5	0.33	70	0.15	1320	660	100	50	170	6.69	85	3.38
	18	8.9	0.35	75	0.17	1320	660	100	50	178	7.01	89	3.54
	24	9.8	0.39	90	0.20	1320	660	100	50	196	7.72	98	3.90
6 Fiber Subunits	24*	13.9	0.55	160	0.35	1320	660	100	50	278	10.94	139	5.53
12 Fiber Subunits	48	18.3	0.72	275	0.61	1320	660	100	50	366	14.41	183	7.28

*Single mode 24fiber cable is subunit Construction only

LSC Part No.

LSZH RATED : DT□□ KZ □□ □□
RISER RATED : DT□□ KR □□ □□
PLENUM RATED: DT□□ KP □□ □□
① ② ③

Transmission Performance

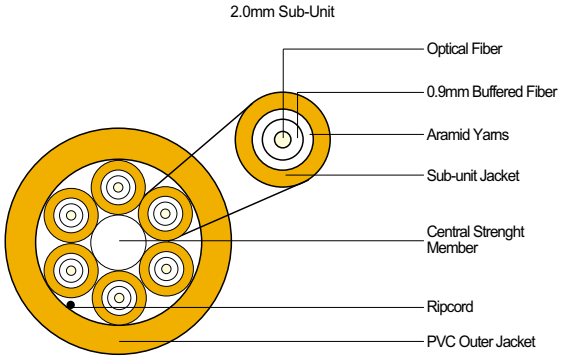
		9/125㎛ (1310/1550nm)	50/125㎛ Standard (850/1300nm)	50/125㎛ Gigabit (850/1300nm)	50/125㎛ 10Gigabit (850/1300nm)	62.5/125㎛ Standard (850/1300nm)	52.5/125㎛ Gigabit (850/1300nm)
Attenuation(dB/km) Typical values		0.5/0.4	3.0/1.0	3.0/1.0	3.0/1.0	3.5/1.0	3.5/1.0
Minimum Bandwidth (MHz • km)		-	500/500	500/500	1500/500	200/500	200/500
Ethernet Link Distance (m)	10Gbps	-	-	-	300	-	-
	1Gbps	-	-	550/550	-	-	250/550

LS FIBER OPTIC BREAK OUT CABLE

ONFR(riser rated), OFNP(plenum rated) or LSZH rated

Description / Applications

- Breakout cables are rugged, high performance optical communication cables for inside plant installations
- OFNR(riser rated), OFNP(plenum rated) or LSZH (low smoke zero halogen rated)
- Backbone & Computer Room Cabling
- Direct Termination on 2.0 mm Sub-Units
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) complied



Specification

- ISO/IEC 11801
- Telcordia GR-409-CORE
- ANSI/ ICEA S-83-596

Options

- Fiber - Single mode, 50㎛, 62.5㎛ multi mode available
- Higher fiber counts available upon request
- Other Sub-Unit Diameters Available (1.8mm, 2.4 mm, 2.9mm etc.)
- Buffered fiber : Natural (white)
- Sub-unit & Outer Jacket color
  - Single Mode : Yellow
  - 62.5/125 ㎛ 1Gbe : Orange
  - 50/125 ㎛ 1Gbe : Orange
  - 50/125 ㎛ 10Gbe : Aqua

Subunit Identification

The identification code & number is printed on the sub-unit jacket every 10 cm (eg. 62.5MM#1, 62.5MM#2)

Mechanical Characteristics

Storage Temperature : -20 to + 70℃ / Operating Temperature : -10 to + 60℃

Fiber Count	Nominal Diameter		Nominal Weight		Maximum Tensile Load		Crush Load		Minimum Bend Radius			
					Short Term	Long Term	Short Term	Long Term	Loaded		Installed	
	[mm]	[inch]	[kg/km]	[lb/kft]	[N]	[N]	[N/cm]	[N/cm]	[mm]	[inch]	[mm]	[inch]
2	7.5	0.30	50	0.11	660	300	35	13	150	5.91	75	2.98
4	7.7	0.30	55	0.12	660	300	35	13	154	6.06	77	3.06
6	8	0.31	65	0.14	660	300	35	13	160	6.30	80	3.18
8	9.5	0.37	85	0.19	660	300	35	13	190	7.48	95	3.78
12	10.5	0.41	95	0.21	1320	660	35	13	210	8.27	105	4.18

LSC Part No.

LSZH RATED : BT□□KZ □□ □□
RISER RATED : BT□□KR □□ □□
PLENUM RATED: BT□□KP □□ □□
① ② ③

Transmission Performance

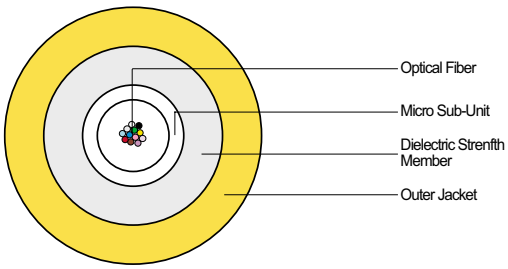
		9/125㎛ (1310/1550nm)	50/125㎛ Standard (850/1300nm)	50/125㎛ Gigabit (850/1300nm)	50/125㎛ 10Gigabit (850/1300nm)	62.5/125㎛ Standard (850/1300nm)	52.5/125㎛ Gigabit (850/1300nm)
Attenuation(dB/km) Typical values		0.5/0.4	3.0/1.0	3.0/1.0	3.0/1.0	3.5/1.0	3.5/1.0
Minimum Bandwidth (MHz • km)		-	500/500	500/500	1500/500	200/500	200/500
Ethernet Link Distance (m)	10Gbps	-	-	-	300	-	-
	1Gbps	-	-	550/550	-	-	250/550

LS FIBER OPTIC DISTRIBUTION CABLE

Micro Distribution Cable

Description

- Colored fiber, Micro sub-unit, dielectric strength member, Outer jacket
- Micro Sub-unit cable containing Max. 12 optical fibres
- Outer sheath: PVC OFNR(riser rated), PVC OFNP(plenum rated) or LSZH(low smoke zero halogen rated)
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) complied



Color of Fiber

01 - Blue	05 - Grey	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Pink
04 - Brown	08 - Black	12 - Aqua

Color of Micro Sub-unit

Natural or white

Color of Sheath

SM-Yellow

MM-Orange

Mechanical Characteristics

Storage Temperature : -20 to + 70℃ / Operating Temperature : -10 to + 60℃

Fiber Count	Nominal Diameter		Nominal Weight		Maximum Tensile Load Short Term	Maximum Tensile Load Long Term	Crush Load Short Term	Crush Load Long Term	Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
	[mm]	[inch]	[kg/km]	[lb/kft]	[N]	[N]	[N/cm]	[N/cm]	[mm]	[inch]	[mm]	[inch]
2	3.8	0.15	15	0.03	300	100	7.4	3.7	76	2.99	38	1.51
4	3.8	0.15	15	0.03	300	100	7.4	3.7	76	2.99	38	1.51
6	3.8	0.15	15	0.03	300	100	7.4	3.7	76	2.99	38	1.51
8	3.8	0.15	15	0.03	300	100	7.4	3.7	76	2.99	38	1.51
12	3.8	0.15	15	0.03	300	100	7.4	3.7	76	2.99	38	1.51

LSC Part No.

LSZH RATED : MD□□ KZ□□ □□
RISER RATED : MD□□ KR□□ □□
PLENUM RATED: MD□□ KP□□ □□
① ② ③

Transmission Performance

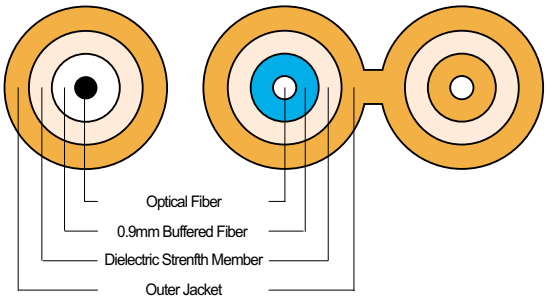
		9/125㎛ (1310/1550nm)	50/125㎛ Standard (850/1300nm)	50/125㎛ Gigabit (850/1300nm)	50/125㎛ 10Gigabit (850/1300nm)	62.5/125㎛ Standard (850/1300nm)	52.5/125㎛ Gigabit (850/1300nm)
Attenuation(dB/km) Typical values		0.5/0.4	3.0/1.0	3.0/1.0	3.0/1.0	3.5/1.0	3.5/1.0
Minimum Bandwidth (MHz • km)		-	500/500	500/500	1500/500	200/500	200/500
Ethernet Link Distance (m)	10Gbps	-	-	-	300	-	-
	1Gbps	-	-	550/550	-	-	250/550

LS FIBER OPTIC SIMPLEX AND DUPLEX CORD

ONFR(riser rated), OFNP(plenum rated) or LSZH rated

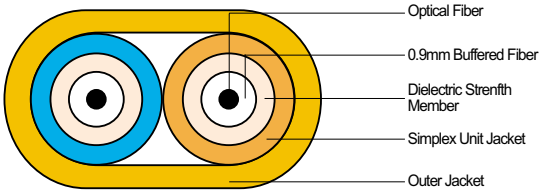
Description / Applications

- Short Run Office & Computer Room Cabling
- Patch cords, Pigtails and Jumpers
- Equipment Interconnects
- OFNR(riser rated), OFNP(plenum rated) or LSZH(low smoke zero halogen rated)
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) complied



Construction

- Simplex
  - Buffer color : Natural (white)
- Zipcord
  - Buffer color : Blue and Orange
- Duplex Flat :
  - Buffer color : Natural (white)
  - Simplex unit color : Blue and Orange
- Fiber - Single mode, 50㎛, 62.5㎛ multi mode available
- Jacket color
  - Single Mode : Yellow
  - 62.5/125 ㎛ 1Gbe : Orange
  - 50/125 ㎛ 1Gbe : Orange
  - 50/125 ㎛ 10Gbe : Aqua



Specification

- ISO/IEC 11801
- Telcordia GR-409-CORE
- ANSI/ ICEA S-83-596

Mechanical Characteristics

Storage Temperature : -40 to + 70℃ / Operating Temperature : -10 to + 70℃

SIMPLEX CORD		Buffered Fiber Outer diameter	Nominal Diameter		Nominal Weight		Maximum Tensile Load Short Term	Maximum Tensile Load Long Term	Crush Load Short Term	Crush Load Long Term	Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[um]	[mm]	[inch]	[kg/km]	[lb/kft]	[N]	[N]	[N/cm]	[N/cm]	[mm]	[inch]	[mm]	[inch]
SIMPLEX CORD	Riser/Pleum rate 1.6mm	600±50um	1.6	0.06	3.0	0.01	130	65	3.5	1.5	32	1.26	16	0.64
	Riser/Pleum rate 1.8mm	600±50um	1.8	0.07	4.0	0.01	130	65	3.5	1.5	36	1.42	18	0.72
	Riser/Pleum rate 2.0mm	900±50um	2.0	0.08	4.0	0.01	130	65	3.5	1.5	40	1.57	20	0.80
	Riser/Pleum rate 2.4mm	900±50um	2.4	0.09	6.5	0.01	300	150	3.5	1.5	48	1.089	24	0.95
	Riser/Pleum rate 2.9mm	900±50um	2.9	0.11	9.5	0.02	300	150	3.5	1.5	58	2.28	29	1.15
ZIPCORD	Riser/Pleum rate 1.6mm	600±50um	1.6	0.06	5.5	0.01	200	100	3.5	1.5	32	1.26	16	0.64
	Riser/Pleum rate 1.8mm	600±50um	1.8	0.07	7.0	0.02	200	100	3.5	1.5	36	1.42	18	0.72
	Riser/Pleum rate 2.0mm	900±50um	2.0	0.08	8.0	0.02	200	100	3.5	1.5	40	1.57	20	0.80
	Riser/Pleum rate 2.4mm	900±50um	2.4	0.09	12.0	0.03	500	250	3.5	1.5	48	1.89	24	0.95
	Riser/Pleum rate 2.9mm	900±50um	2.9	0.11	17.0	0.04	500	250	3.5	1.5	58	2.28	29	1.15
DUPLEX FLAT	Riser/Pleum rate 2.0mm	900±50um	2.0	0.08	18.0	0.04	260	130	3.5	1.5	40	1.57	20	0.80
	Riser/Pleum rate 2.8mm	900±50um	2.8	0.11	28.0	0.06	500	250	3.5	1.5	56	2.20	28	1.11

LSC Part No.

SIMPLEX CORD : SC □□ □ 01 □□ □□
ZIPCORD : DC □□ □ 02 □□ □□
DUPLEX FLAT : DF □□ □ 02 □□ □□
① ② ③ ④

Transmission Performance

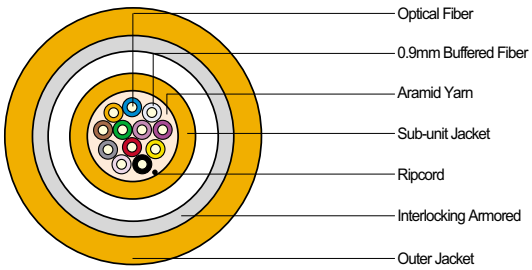
		9/125㎛ (1310/1550nm)	50/125㎛ Standard (850/1300nm)	50/125㎛ Gigabit (850/1300nm)	50/125㎛ 10Gigabit (850/1300nm)	62.5/125㎛ Standard (850/1300nm)	52.5/125㎛ Gigabit (850/1300nm)
Attenuation(dB/km) Typical values		0.5/0.4	3.0/1.0	3.0/1.0	3.0/1.0	3.5/1.0	3.5/1.0
Minimum Bandwidth (MHz • km)		-	500/500	500/500	1500/500	200/500	200/500
Ethernet Link Distance (m)	10Gbps	-	-	-	300	-	-
	1Gbps	-	-	550/550	-	-	250/550

LS FIBER OPTIC DISTRIBUTION CABLE

900um tight buffered Aramid yarn strength member Interlocking Armored Cable

Description / Applications

- Distribution cables are rugged, high performance optical communication cables for inside plant installations
- Intra-building backbones and installations in riser and general-purpose environments
- Industrial and heavy traffic areas requiring extra protection for optical cables
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) optional
- Enhance crush protection compared to unarmored cable



Specification

- ISO/IEC 11801
- Telcordia GR-409-CORE
- ANSI/ ICEA S-83-596

Options

- Fiber - Single mode, 50㎛, 62.5㎛ multi mode available
- Sub-unit & Outer Jacket color
  - Single Mode : Yellow
  - 62.5/125 ㎛ 1Gbe : Orange
  - 50/125 ㎛ 1Gbe : Orange
  - 50/125 ㎛ 10Gbe : Aqua
- If the cable will be used indoor/outdoor applications, outer cable jacket shall be black
- Outer jacket : PVC or LSZH (Low Smoke Zero Halogen)

Subunit Identification

The identification code & number is printed on the sub-unit jacket every 10 cm (eg. SM#1, SM#2)

Color of Buffer

01 - Blue	07 - Red	13 - Blue / Black dash	19 - Red / Black dash
02 - Orange	08 - Black	14 - Orange / Black dash	20 - Black / White dash
03 - Green	09 - Yellow	15 - Green / Black dash	21 - Yellow / Black dash
04 - Brown	10 - Violet	16 - Brown / Black dash	22 - Violet / Black dash
05 - Grey	11 - Pink	17 - Grey / Black dash	23 - Pink / Black dash
06 - White	12 - Aqua	18 - White / Black dash	24 - Aqua / Black dash

Mechanical Characteristics

Storage Temperature : -20 to + 70℃ / Operating Temperature : -10 to + 60℃

	Fiber Count	Inner Diameter [mm]	Armored Cable [mm]	Nominal Weight [kg/km]	Maximum Tensile Load Short Term [N]	Maximum Tensile Load Long Term [N]	Minimum Bend Radius Loaded [mm]	Minimum Bend Radius Installed [mm]
Single Unit	2	4.5	12.0	135	660	300	240	120
	4	5.3	12.0	140	660	300	240	120
	6	5.7	12.0	145	660	300	240	120
	8	6.0	13.3	165	660	300	266	133
	12	5.7	13.3	170	660	300	266	133
	16	8.5	17.5	200	1320	660	350	175
	24	9.8	17.5	215	1320	660	350	175
6 Fiber Subunits	24*	13.9	21.6	330	1320	660	432	216

*Single mode 24fiber cable is subunit Construction only

LSC Part No.

LSZH RATED : IRDT□□Z□□□□
RISER RATED : IRDT□□R□□□□
PLENUM RATED: IRDT□□P□□□□
① ② ③

Transmission Performance

		9/125㎛ (1310/1550nm)	50/125㎛ Standard (850/1300nm)	50/125㎛ Gigabit (850/1300nm)	50/125㎛ 10Gigabit (850/1300nm)	62.5/125㎛ Standard (850/1300nm)	52.5/125㎛ Gigabit (850/1300nm)
Attenuation(dB/km) Typical values		0.5/0.4	3.0/1.0	3.0/1.0	3.0/1.0	3.5/1.0	3.5/1.0
Minimum Bandwidth (MHz • km)		-	500/500	500/500	1500/500	200/500	200/500
Ethernet Link Distance (m)	10Gbps	-	-	-	300	-	-
	1Gbps	-	-	550/550	-	-	250/550

Fiber Optic Cables (Outdoor)

LSC Part No.

① Select Central Strength Member
- D: FRP
- M: Steel wire

② Select Outer Strength Member
- G: Glass yarn
- K: Aramid

③ Select Jacket Type
- E..E: Polyethylene
- Z..Z: LSZH

④ Select Core Type
- B: Dry Core
- J: Jelly Filled

⑤ Select Fiber Type
- SC = 9/125 ㎛ (ITU-T G652A,B)
- SE = 9/125 ㎛ (ITU-T G652C,D)
- HC = 62.5/125 ㎛ 1 Gbe
- HG = 50/125 ㎛ Extended Distance
- MC = 50/125 ㎛ 1 Gbe
- MG = 50/125 ㎛ 10 Gbe 300 meter Link Length
- MX = 50/125 ㎛ 10 Gbe 300 meter Link Length

⑥ Select Fiber Count

❶ Select Fiber Type
- SE = 9/125 ㎛

❷ Max. Span(m)

❸ Select Fiber Type
- SC = 9/125 ㎛ (ITU-T G652A,B)
- SE = 9/125 ㎛ (ITU-T G652C,D)

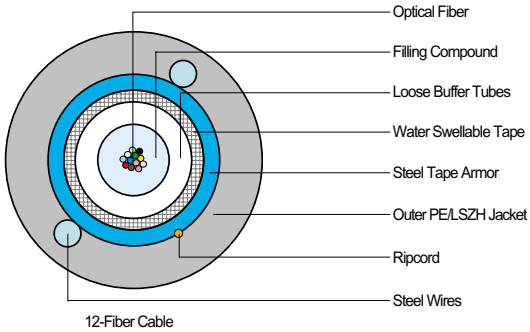
CT-NJBSME

LS FIBER OPTIC LOOSE TUBE CABLE

Single Jacket Single Armor Central Loose Tube Cable

Description / Applications

- Single Jacket Single armored Central loose tube cable is a UV-stabilized, fully water blocked cable for outdoor duct and direct burial applications.
- Loose tube design provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications.
- This lightweight cable offers durability and flexibility required for many outside plant application.
- Compact design for limited conduit space
- The cables are well suited for campus-type environments in and between buildings without building entry joints
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) complied



12-Fiber Cable

Specification

- Telcordia GR-20-CORE
- IEC 60793, 60794
- IEC 60332-1, 3

Color Identification

01 - Blue	07 - Red	13 - Blue / Single stripe	19 - Red / Single stripe
02 - Orange	08 - Black	14 - Orange / Single stripe	20 - Natural
03 - Green	09 - Yellow	15 - Green / Single stripe	21 - Yellow / Single stripe
04 - Brown	10 - Violet	16 - Brown / Single stripe	22 - Violet / Single stripe
05 - Slate	11 - Rose	17 - Slate / Single stripe	23 - Rose / Single stripe
06 - White	12 - Aqua	18 - White / Single stripe	24 - Aqua / Single stripe

Mechanical Characteristics

Storage Temperature : -40 to + 70℃ / Operating Temperature : -10 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
2	CT-NJBSM□/□□-02	10.4	0.41	130/178	87/120	1,500	69	600	28	220	125	110	63	20.8	8.19	10.4	4.09
4	CT-NJBSM□/□□-04	10.4	0.41	130/178	87/120	1,500	69	600	28	220	125	110	63	20.8	8.19	10.4	4.09
6	CT-NJBSM□/□□-06	10.4	0.41	130/178	87/120	1,500	69	600	28	220	125	110	63	20.8	8.19	10.4	4.09
8	CT-NJBSM□/□□-08	10.4	0.41	130/178	87/120	1,500	69	600	28	220	125	110	63	20.8	8.19	10.4	4.09
10	CT-NJBSM□/□□-10	10.4	0.41	130/178	87/120	1,500	69	600	28	220	125	110	63	20.8	8.19	10.4	4.09
12	CT-NJBSM□/□□-12	10.4	0.41	130/178	87/120	1,500	69	600	28	220	125	110	63	20.8	8.19	10.4	4.09
18	CT-NJBSM□/□□-18	10.4	0.41	130/178	87/120	1,500	69	600	28	220	125	110	63	20.8	8.19	10.4	4.09
24	CT-NJBSM□/□□-24	10.4	0.41	130/178	87/120	1,500	69	600	28	220	125	110	63	20.8	8.19	10.4	4.09

*Denotes norminal value for PE / LSZH Jacketed Cable.

LSC Part No.

CT-NJBSM□/□□-□□
③ ⑤ ⑥

Shipping Information

Standard Reel Length	4000m

*Other Cable lengths may be available upon request

CT-NJBGEN

LS FIBER OPTIC LOOSE TUBE CABLE

All Dielectric Single Jacketed Central Tube with Polyamide coat for Insect-resistant

Description / Applications

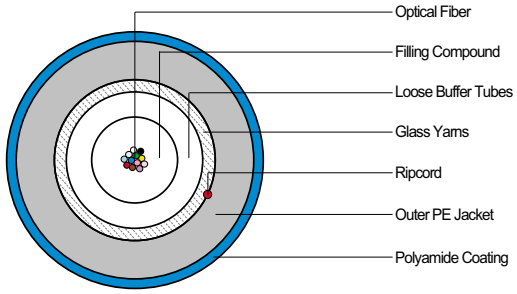
- All dielectric Single Jacket Central Loose Tube cable is a UV-stabilized, fully water blocked cable for outdoor duct applications.
- Polyamide coated sheath construction provides resistance against insects.
- Loose tube design provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications.
- This lightweight cable offers durability and flexibility required for many outside plant uses.
- Compact design for limited conduit space

Specification

- Telcordia GR-20-CORE
- IEC 60793 / IEC 60794
- ITU-T G652

Color Identification

01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Pink
04 - Brown	08 - Black	12 - Aqua



12-Fiber Cable

Mechanical Characteristics

Storage Temperature : -20 to + 80℃ / Operating Temperature : -10 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
2	CT-□□SJNA02-N	7.7	0.30	53	36	2,000	93	700	32	220	125	110	63	15.4	6.06	7.7	3.03
4	CT-□□SJNA04-N	7.7	0.30	53	36	2,000	93	700	32	220	125	110	63	15.4	6.06	7.7	3.03
6	CT-□□SJNA06-N	7.7	0.30	53	36	2,000	93	700	32	220	125	110	63	15.4	6.06	7.7	3.03
8	CT-□□SJNA08-N	7.7	0.30	53	36	2,000	93	700	32	220	125	110	63	15.4	6.06	7.7	3.03
10	CT-□□SJNA10-N	7.7	0.30	53	36	2,000	93	700	32	220	125	110	63	15.4	6.06	7.7	3.03
12	CT-□□SJNA12-N	7.7	0.30	53	36	2,000	93	700	32	220	125	110	63	15.4	6.06	7.7	3.03

LSC Part No.

CT⑤SJNA⑥-N

⑤ ⑥

Shipping Information

Standard Reel Length	4000m

*Other Cable lengths may be available upon request

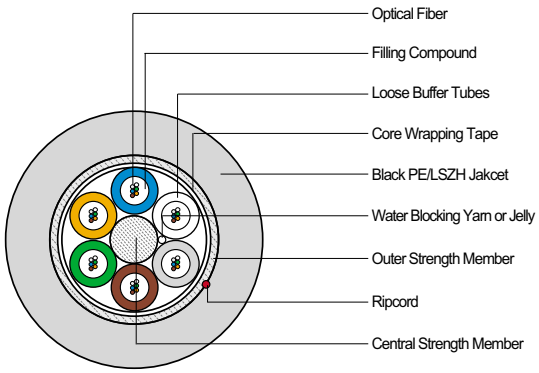
LT-DJBG(K)E(Z)

LS FIBER OPTIC MULTI LOOSE TUBE CABLE

All Dielectric Single Jacket Non-Armor Loose Tube Cable

Description / Applications

- All dielectric Single Jacket Multi Loose Tube cable is a UV-stabilized, fully water blocked cable for In/Outdoor duct applications.
- Loose tube design provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications.
- This lightweight cable offers durability and flexibility required for many outside plant uses.
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) Complied



36-Fiber Cable

Specification

- Telcordia GR-20-CORE
- IEC 60793 / IEC 60794
- IEC 60332-1,3
- IEEE 383

Color Identification

01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Pink
04 - Brown	08 - Black	12 - Aqua

Mechanical Characteristics

Storage Temperature : -40 to + 70℃ / Operating Temperature : -40 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
6	LT-DJB□□/□/□□-06	10.5/11.2	0.41/0.44	86/115	58/77	2,700	125	1,000	46	110	63	55	31	21/22.4	8.27/8.82	10.5/11.2	4.13/4.41
12	LT-DJB□□/□/□□-12	10.5/11.2	0.41/0.44	86/115	58/77	2,700	125	1,000	46	110	63	55	31	21/22.4	8.27/8.82	10.5/11.2	4.13/4.41
24	LT-DJB□□/□/□□-24	10.5/11.2	0.41/0.44	86/115	58/77	2,700	125	1,000	46	110	63	55	31	21/22.4	8.27/8.82	10.5/11.2	4.13/4.41
36	LT-DJB□□/□/□□-36	10.5/11.2	0.41/0.44	86/115	58/77	2,700	125	1,000	46	110	63	55	31	21/22.4	8.27/8.82	10.5/11.2	4.13/4.41
48	LT-DJB□□/□/□□-48	11.0/11.7	0.43/0.46	92/130	62/87	2,700	125	1,000	46	110	63	55	31	22/23.4	8.66/9.21	11.0/11.7	4.33/4.61
72	LT-DJB□□/□/□□-72	11.0/11.7	0.43/0.46	92/130	62/87	2,700	125	1,000	46	110	63	55	31	22/23.4	8.66/9.21	11.0/11.7	4.33/4.61
96	LT-DJB□□/□/□□-96	12.1/13.7	0.48/0.54	113/167	76/112	2,700	125	1,000	46	110	63	55	31	24/27.4	9.53/10.79	12.1/13.7	4.76/5.39
120	LT-DJB□□/□/□□-120	13.6	0.54	139	93	2,700	125	1,000	46	110	63	55	31	27	10.71	13.6	5.35
144	LT-DJB□□/□/□□-144	15.0	0.59	167	112	2,700	125	1,000	46	110	63	55	31	30	11.81	15	5.9
228	LT-DJB□□/□/□□-228	15.8	0.62	178	120	2,700	125	1,000	46	110	63	55	31	32	12.44	15.8	6.22
276	LT-DJB□□/□/□□-276	17.0	0.67	212	142	2,700	125	1,000	46	110	63	55	31	34	13.39	17	6.69
300	LT-DJB□□/□/□□-300	17.7	0.70	228	153	2,700	125	1,000	46	110	63	55	31	35	13.94	17.7	6.97

*Denotes norminal value for PE / LSZH Jacketed Cable.

LSC Part No.

LT-DJB□ □ /□/□□-□□
② ③ ④ ⑤ ⑥

Shipping Information

Standard Reel Length	4000m

*Other Cable lengths may be available upon request

LT-DJBEN

LS FIBER OPTIC MULTI LOOSE TUBE CABLE

All Dielectric Single Jacketed Multi Loose Tube with Polyamide Sheath for Insect-resistant

Description / Applications

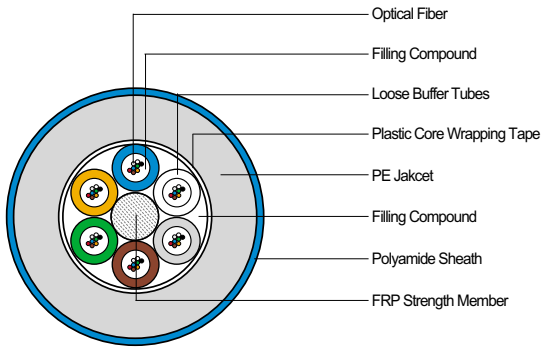
- All dielectric Single Jacket Multi Loose Tube cable is a UV-stabilized, fully water blocked cable for outdoor duct applications.
- Polyamide sheath construction provides resistance against insects.
- Loose tube design provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications.
- This lightweight cable offers durability and flexibility required for many outside plant uses.

Specification

- Telcordia GR-20-CORE
- IEC 60793 / IEC 60794
- ITU-T G652

Color Identification

01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Pink
04 - Brown	08 - Black	12 - Aqua



48-Fiber Cable

Mechanical Characteristics

Storage Temperature : -40 to + 80℃ / Operating Temperature : -30 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
4	LT□□SJNA04-N	10.5	0.41	115	77	2,000	93	900	42	220	125	110	63	21.0	8.27	10.5	4.13
8	LT□□SJNA08-N	10.5	0.41	115	77	2,000	93	900	42	220	125	110	63	21.0	8.27	10.5	4.13
16	LT□□SJNA16-N	10.5	0.41	115	77	2,000	93	900	42	220	125	110	63	21.0	8.27	10.5	4.13
24	LT□□SJNA24-N	10.5	0.41	115	77	2,000	93	900	42	220	125	110	63	21.0	8.27	10.5	4.13
32	LT□□SJNA32-N	10.5	0.41	115	77	2,000	93	900	42	220	125	110	63	21.0	8.27	10.5	4.13
48	LT□□SJNA48-N	10.5	0.41	115	77	2,000	93	900	42	220	125	110	63	21.0	8.27	10.5	4.13

LSC Part No.

LT□□SJNA□□-N
① ②

Shipping Information

Standard Reel Length	4000m

*Other Cable lengths may be available upon request

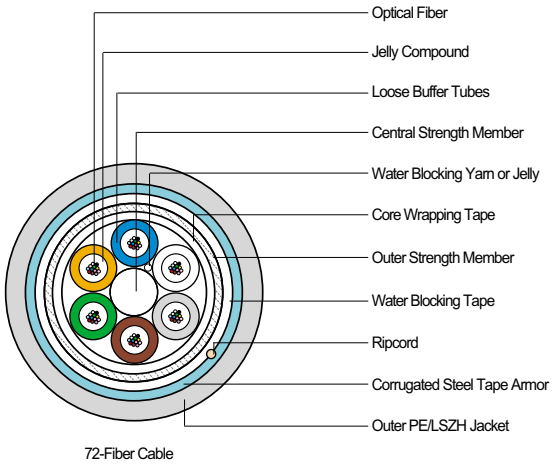
LT-D(M)JBG(K)SE(Z)

LS FIBER OPTIC MULTI LOOSE TUBE CABLE

Single Jacket Single Armor Loose Tube Cable

Description / Applications

- Single jacket single armor loose tube fiber optic cable provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications.
- The cable offers durability and flexibility required for many outside plant uses where added compressive strength, rodent resistance
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) Complied



72-Fiber Cable

Specification

- Telcordia GR-20-CORE
- IEC 60793 / IEC 60794
- IEC 332-1,3
- IEEE 383

Color Identification

01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Pink
04 - Brown	08 - Black	12 - Aqua

Mechanical Characteristics

Storage Temperature : -40 to + 70℃ / Operating Temperature : -10 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
6	LT-□JB□S□/□/□□-06	12.7	0.50	157/215	105/144	2,700	125	1,000	46	220	125	110	63	25.4	10.00	12.7	5.00
12	LT-□JB□S□/□/□□-12	12.7	0.50	157/215	105/144	2,700	125	1,000	46	220	125	110	63	25.4	10.00	12.7	5.00
24	LT-□JB□S□/□/□□-24	12.7	0.50	157/215	105/144	2,700	125	1,000	46	220	125	110	63	25.4	10.00	12.7	5.00
36	LT-□JB□S□/□/□□-36	12.7	0.50	157/215	105/144	2,700	125	1,000	46	220	125	110	63	25.4	10.00	12.7	5.00
48	LT-□JB□S□/□/□□-48	13.2	0.52	163/223	109/150	2,700	125	1,000	46	220	125	110	63	26.4	10.39	13.2	5.20
72	LT-□JB□S□/□/□□-72	13.2	0.52	163/223	109/150	2,700	125	1,000	46	220	125	110	63	26.4	10.39	13.2	5.20
96	LT-□JB□S□/□/□□-96	14.3	0.56	190/260	128/175	2,700	125	1,000	46	220	125	110	63	28.6	11.26	14.3	5.63
120	LT-□JB□S□/□/□□-120	15.8	0.62	225/308	151/207	2,700	125	1,000	46	220	125	110	63	31.6	12.44	15.8	6.22
144	LT-□JB□S□/□/□□-144	17.2	0.68	260/356	175/239	2,700	125	1,000	46	220	125	110	63	34.4	13.54	17.2	6.77
228	LT-□JB□S□/□/□□-228	18.0	0.71	279/382	187/257	2,700	125	1,000	46	220	125	110	63	36.0	14.17	18.0	7.09
276	LT-□JB□S□/□/□□-276	19.2	0.76	319/437	214/293	2,700	125	1,000	46	220	125	110	63	38.4	15.12	19.2	7.56
300	LT-□JB□S□/□/□□-300	19.9	0.78	340/466	228/313	2,700	125	1,000	46	220	125	110	63	39.8	15.67	19.9	7.83

*Denotes norminal value for PE / LSZH Jacketed Cable.

LSC Part No.

LT-□①JB□②S□③/□④/□□⑤-□□⑥

Shipping Information

Standard Reel Length	4000m

*Other Cable lengths may be available upon request

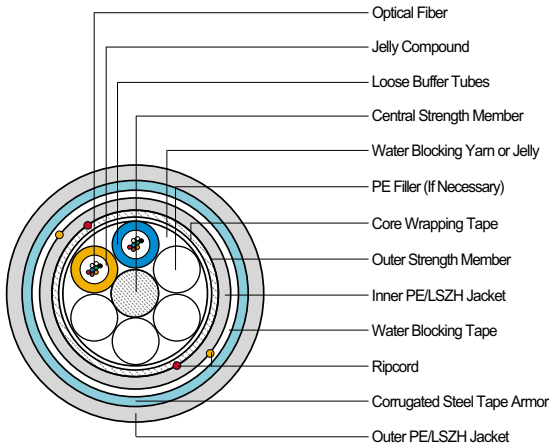
LT-D(M)JBG(K)ESE

LS FIBER OPTIC MULTI LOOSE TUBE CABLE

Double Jacket Single Armor Loose Tube Cable

Description / Applications

- Double jacket single armor loose tube fiber optic cable provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications.
- The cable offers durability and flexibility required for many outside plant uses where added compressive strength, rodent resistance
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) Complied



Specification

- Telcordia GR-20-CORE
- IEC 60793 / IEC 60794
- IEC 60332-1, 3
- IEEE 383

Color Identification

01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Pink
04 - Brown	08 - Black	12 - Aqua

Mechanical Characteristics

Storage Temperature : -40 to + 70℃ / Operating Temperature : -10 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
6	LT-□JB□S□/□/□□-06	14.7	0.58	199/273	134/183	2,700	125	1,000	46	220	125	110	63	29.4	11.57	14.7	5.79
12	LT-□JB□S□/□/□□-12	14.7	0.58	199/273	134/183	2,700	125	1,000	46	220	125	110	63	29.4	11.57	14.7	5.79
24	LT-□JB□S□/□/□□-24	14.7	0.58	199/273	134/183	2,700	125	1,000	46	220	125	110	63	29.4	11.57	14.7	5.79
36	LT-□JB□S□/□/□□-36	14.7	0.58	199/273	134/183	2,700	125	1,000	46	220	125	110	63	29.4	11.57	14.7	5.79
48	LT-□JB□S□/□/□□-48	15.2	0.60	212/290	142/195	2,700	125	1,000	46	220	125	110	63	30.4	11.97	15.2	5.98
72	LT-□JB□S□/□/□□-72	15.2	0.60	212/290	142/195	2,700	125	1,000	46	220	125	110	63	30.4	11.97	15.2	5.98
96	LT-□JB□S□/□/□□-96	16.3	0.64	242/332	162/223	2,700	125	1,000	46	220	125	110	63	32.6	12.83	16.3	6.42
120	LT-□JB□S□/□/□□-120	17.8	0.70	280/384	188/258	2,700	125	1,000	46	220	125	110	63	35.6	14.02	17.8	7.01
144	LT-□JB□S□/□/□□-144	19.2	0.76	320/438	215/294	2,700	125	1,000	46	220	125	110	63	38.4	15.12	19.2	7.56
228	LT-□JB□S□/□/□□-228	20.0	0.79	340/466	228/313	2,700	125	1,000	46	220	125	110	63	40.0	15.75	20.0	7.87
276	LT-□JB□S□/□/□□-276	21.2	0.83	384/526	258/353	2,700	125	1,000	46	220	125	110	63	42.4	16.69	21.2	8.35
300	LT-□JB□S□/□/□□-300	21.9	0.86	407/558	273/374	2,700	125	1,000	46	220	125	110	63	43.8	17.24	21.9	8.62

*Denotes norminal value for PE / LSZH Jacketed Cable.

LSC Part No.

LT- □JB□□S□/□/□□-□□
① ②③ ③ ④ ⑤ ⑥

Shipping Information

Standard Reel Length	4000m

*Other Cable lengths may be available upon request

Mini Flex™ Cable

LS FIBER OPTIC MICRO UNIT CABLE

Single Jacket Non Armor Loose Tube Cable

Description / Applications

- USingle Jacket Central Tube cable is a UV-stabilized, fully water blocked cable for In/Outdoor Duct application
- u-unit, QAW* & gel-free design provides high fiber density, rapid installation, easy break-out of bundles & tubes
- The cable offers durability and flexibility required for many outside plant uses where added RoHS complied

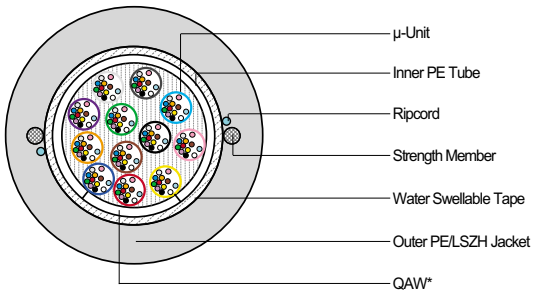
*Quick Access Window

Specification

- Telcordia GR-20-CORE
- IEC 60793 / IEC 60794
- IEC 60332-1, 3

Color Identification

01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Pink
04 - Brown	08 - Black	12 - Aqua



Mechanical Characteristics

Storage Temperature : -40 to + 70℃ / Operating Temperature : -40 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
24	MF-NBVE □□/□□-24	10.0	0.39	75/103	50/69	1,100	51	800	37	220	125	110	63	20.0	7.87	10.0	3.94
48	MF-NBVE □□/□□-48	12.0	0.47	75/103	50/69	1,100	51	800	37	220	125	110	63	240	9.45	12.0	4.72
72	MF-NBVE □□/□□-72	13.0	0.51	110/151	74/102	1,100	51	800	37	220	125	110	63	26.0	10.24	13.0	5.12
96	MF-NBVE □□/□□-96	14.2	0.56	120/164	81/110	1,100	51	800	37	220	125	110	63	28.4	11.18	14.2	5.59
144	MF-NBVE □□/□□-144	14.2	0.56	130/178	87/120	1,100	51	800	37	220	125	110	63	28.4	11.18	14.2	5.59

*Denotes norminal value for PE / LSZH Jacketed Cable.

LSC Part No.

MF- NBVE ① ② / ③ ④ - ⑤ ⑥

Shipping Information

Standard Reel Length	4000m

*Other Cable lengths may be available upon request

Ez Access ™ Small Size Loose Tube Cable

LS FIBER OPTIC COMPACT CABLE

Single Jacket Single Armor Loose Tube Cable

Description / Applications

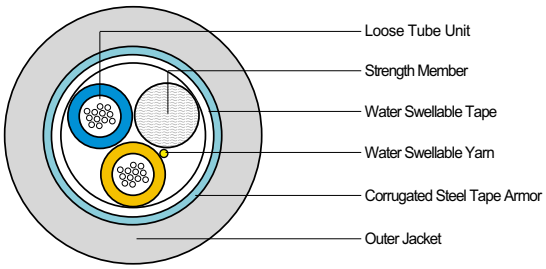
- Single Jacket Single Armor loose tube fiber cable is a UV-stabilized, fully water blocked cable for Outdoor Aerial application
- This small diameter & light weight cable offers durability and flexibility required for many outside plant application where added compressive strength, rodent resistance
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) Complied

Specification

- Telcordia GR-20-CORE
- IEC 60793 / IEC 60794

Color Identification

.01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Pink
04 - Brown	08 - Black	12 - Aqua



Mechanical Characteristics

Storage Temperature : -40 to + 70℃ / Operating Temperature : -40 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
12	LT-DJBSE/B/□□-12	10.6	0.42	103	69	1,200	56	800	37	220	125	110	63	21.2	8.35	10.6	4.17
24	LT-DJBSE/B/□□-24	11.3	0.44	118	80	1,200	56	800	37	220	125	110	63	22.6	8.90	11.3	4.45

LSC Part No.

LT- DJBSE/ B / ⑤□□ - ⑥□□

Shipping Information

Standard Reel Length	4000m

*Other Cable lengths may be available upon request

LT-DJBKE_100

ADSS (Max span : 100m) Aerial Fiber Optic Cable

Description / Applications

- All Dielectric Self Supporting (ADSS) Cable for Aerial Application.
- Black PE jacketed cable is a UV-stabilized, water blocked cable for outdoor aerial applications.
- Loose tube design provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications.
- High modulus aramid yarns provides high tensile strength and long term reliability.

Applications

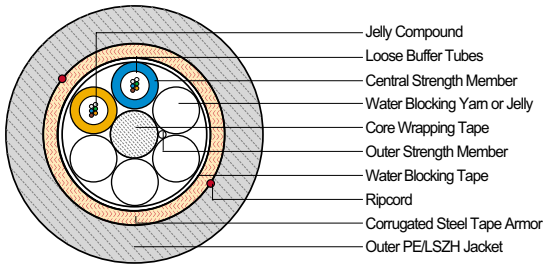
- Low-voltage transmission and distribution System (Space potential ≤ 12 kV)
- Railways and Telecommunications pole route.
- Suitable for all type of aerial lines

Specification

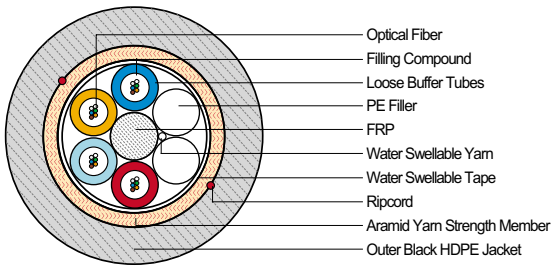
- IEC 60793 / IEC 60794, ITU-T G652D
- Telcordia GR-20-CORE, IEEE 1222

Color Identification

01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Rose
04 - Brown	08 - Black	12 - Aqua



12-Fiber Cable



48-Fiber Cable

Mechanical Characteristics

Storage Temperature : -40 to + 80℃ / Operating Temperature : -30 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
6	LS09ADSS006-S100	11.3	0.44	96	64	220	125	110	63	22.6	8.90	11.3	4.45
12	LS09ADSS012-S100	11.3	0.44	96	64	220	125	110	63	22.6	8.90	11.3	4.45
24	LS09ADSS024-S100	11.3	0.44	96	64	220	125	110	63	22.6	8.90	11.3	4.45
36	LS09ADSS036-S100	11.3	0.44	96	64	220	125	110	63	22.6	8.90	11.3	4.45
48	LS09ADSS048-S100	12.0	0.47	105	70	220	125	110	63	24.0	9.45	12.0	4.72
72	LS09ADSS072-S100	12.0	0.47	105	70	220	125	110	63	24.0	9.45	12.0	4.72

LSC Part No.

LS❶□□ADSS⑥□□□ - S❷□□□

Transmission Performance 1310nm/ 1550nm

Max. Attenuation	(dB/km)	0.35 / 0.25
Max. Dispersion	(ps/nm-km)	3.5 / 18
Max. PMD	(ps/√km)	0.2
Max. Field Diameter	(um)	9.2±0.4 / 10.5±1.0

Transmission Performance

Standard Reel Length	4000m

*Other Cable lengths may be available upon request

Loading / Sag Estimation

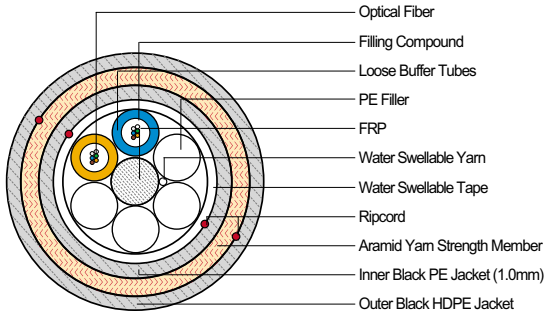
Items		Unit	Loading Estimation Light	
NESC Condition Code		-		
Fiber Counts		-	6~36	48~72
Installation	Load	kg(lb)	120 (264)	132 (290)
	Sag	m(ft)	1.0 (3.3)	1.0 (3.3)
Every Day Stress	Load	kg(lb)	111 (244)	123 (271)
	Sag	m(ft)	1.1 (3.6)	1.1 (3.6)
Max. Operating Stress	Load	kg(lb)	312 (687)	333 (733)
	Sag	m(ft)	4.0 (13.2)	3.9 (12.8)
Max. Sag	Vertical	m(ft)	2.1 (6.9)	2.1 (6.9)
	Horizontal	m(ft)	4.3 (14.1)	4.3 (14.1)
Max. Survival Wind Speed		km/hr	150	

LT-DJBEKE_200

ADSS (Max span : 200m) Aerial Fiber Optic Cable

Description / Applications

- All Dielectric Self Supporting (ADSS) Cable for Aerial Application.
- Black PE jacketed cable is a UV-stabilized, water blocked cable for outdoor aerial applications.
- Loose tube design provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications.
- High modulus aramid yarns provides high tensile strength and long term reliability



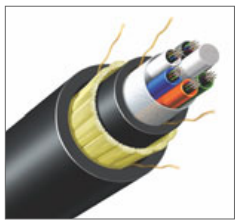
12-Fiber Cable

Applications

- Low-voltage transmission and distribution System (Space potential≤12 kV)
- Railways and Telecommunications pole route.
- Suitable for all type of aerial lines

Specification

- IEC 60793 / IEC 60794, ITU-T G652D, Telcordia GR-20-CORE



36-Fiber Cable

Color Identification

01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Rose
04 - Brown	08 - Black	12 - Aqua

Mechanical Characteristics

Storage Temperature : -40 to + 80℃ / Operating Temperature : -30 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
6	LS09ADSS006-S200	12.8	0.50	125	84	2,700	125	220	125	220	125	110	63	25.6	10.08	12.8	5.04
12	LS09ADSS012-S200	12.8	0.50	125	84	2,700	125	220	125	220	125	110	63	25.6	10.08	12.8	5.04
24	LS09ADSS024-S200	12.8	0.50	125	84	2,700	125	220	125	220	125	110	63	25.6	10.08	12.8	5.04
36	LS09ADSS036-S200	12.8	0.50	125	84	2,700	125	220	125	220	125	110	63	25.6	10.08	12.8	5.04
48	LS09ADSS048-S200	13.3	0.52	135	91	2,700	125	220	125	220	125	110	63	26.6	10.47	13.3	5.24
72	LS09ADSS072-S200	13.3	0.52	135	91	2,700	125	220	125	220	125	110	63	26.6	10.47	13.3	5.24
96	LS09ADSS096-S200	14.6	0.57	160	107	2,700	125	220	125	220	125	110	63	29.2	11.50	14.6	5.75
144	LS09ADSS144-S200	17.5	0.69	230	154	2,700	125	220	125	220	125	110	63	35.0	13.78	17.5	6.89
216	LS09ADSS216-S200	18.4	0.72	245	165	2,700	125	220	125	220	125	110	63	36.8	14.49	18.4	7.24
288	LS09ADSS228-S200	20.4	0.80	300	201	2,700	125	220	125	220	125	110	63	40.8	16.06	20.4	8.03

LSC Part No.

LS❶□□ADSS⑥□□□ - S❷□□□

Transmission Performance 1310nm/ 1550nm

Max. Attenuation	(dB/km)	0.35 / 0.25
Max. Dispersion	(ps/nm-km)	3.5 / 18
Max. PMD	(ps/√km)	0.2
Max. Field Diameter	(um)	9.2±0.4 / 10.5±1.0

Transmission Performance

Standard Reel Length	4000m

*Other Cable lengths may be available upon request

Loading / Sag Estimation

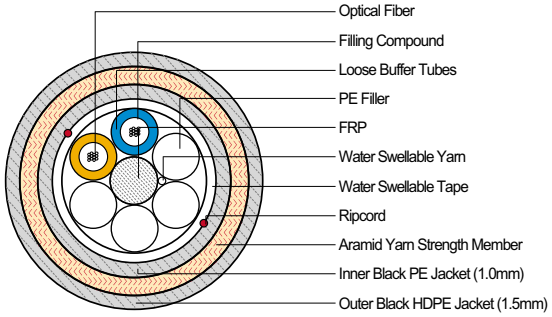
Items		Unit	Loading Estimation					
NESC Condition Code		-	Medium					
Fiber Counts		-	6~36	48~72	96	144	216	288
Installation	Load	kg(lb)	302	328	403	571	6.3	753
	Sag	m(ft)	2.0	2.0	2.0	2.0	2.0	2.0
Every Day Stress	Load	kg(lb)	292	316	388	552	586	733
	Sag	m(ft)	2.1	2.1	2.1	2.1	2.1	2.1
Max. Operating Stress	Load	kg(lb)	558	590	667	841	903	1050
	Sag	m(ft)	6.2	6.1	5.8	5.4	5.2	4.9
Max. Sag	Vertical	m(ft)	6.1	6.0	5.8	5.4	5.3	5.1
	Horizontal	m(ft)	4.5	4.4	4.1	3.6	3.6	3.3

LT-DJBEKE_400

ADSS (Span 400m) Aerial Fiber Optic Cable

Description / Applications

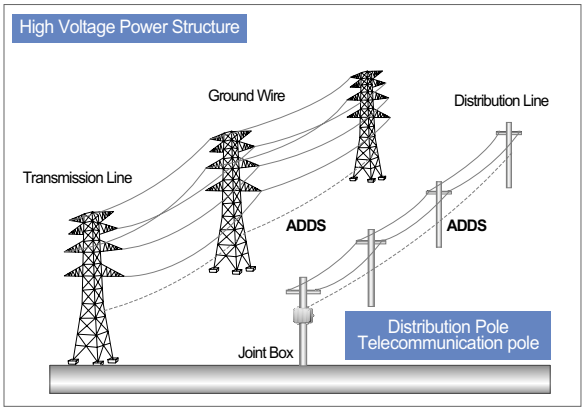
- All Dielectric Self Supporting (ADSS) Cable for Aerial Application.
- Black PE jacketed cable is a UV-stabilized, water blocked cable for outdoor aerial applications.
- Anti-tracking Jacket is also available upon request
- Loose tube design provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications.
- High modulus aramid yarns provides high tensile strength and long term reliability.



24-Fiber Cable

Applications

- Low-voltage transmission and distribution System
- Space potential ≤ 12 kV (with PE Jacket), ≤ 24 kV (with Anti-Tracking Jacket)
- Railways and Telecommunications pole route.
- Suitable for all type of aerial lines.



Specification

- IEC 60793 / IEC 60794, ITU-T G652D
  IEEE P1222, Telcordia GR-20-CORE

Color Identification

01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Rose
04 - Brown	08 - Black	12 - Aqua

Mechanical Characteristics

Storage Temperature : -40 to + 70℃ / Operating Temperature : -20 to + 60℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
6	LS09ADSS006-S400	14.0	0.55	150	101	2,700	125	220	125	220	125	110	63	28.0	11.02	14.0	5.51
12	LS09ADSS012-S400	14.0	0.55	150	101	2,700	125	220	125	220	125	110	63	28.0	11.02	14.0	5.51
24	LS09ADSS024-S400	14.0	0.55	150	101	2,700	125	220	125	220	125	110	63	28.0	11.02	14.0	5.51
36	LS09ADSS036-S400	14.0	0.55	150	101	2,700	125	220	125	220	125	110	63	28.0	11.02	14.0	5.51
48	LS09ADSS048-S400	14.0	0.55	150	101	2,700	125	220	125	220	125	110	63	28.0	11.02	14.0	5.51
72	LS09ADSS072-S400	14.0	0.55	150	101	2,700	125	220	125	220	125	110	63	28.0	11.02	14.0	5.51
96	LS09ADSS096-S400	15.4	0.61	180	121	2,700	125	220	125	220	125	110	63	30.8	12.13	15.4	6.06

LSC Part No.

LS□□ADSS □□□ - S□□□

❶ ⑥ ❷

Transmission Performance

1310nm/ 1550nm

Max. Attenuation	(dB/km)	0.35 / 0.25
Max. Dispersion	(ps/nm-km)	3.5 / 18
Max. PMD	(ps/√km)	0.2
Max. Field Diameter	(um)	9.2±0.4 / 10.5±1.0

*ITU-T G652 Compliant

Transmission Performance

Standard Reel Length	4000m

*Other Cable lengths may be available upon request

Loading / Sag Estimation

Items		Unit	Loading Estimation			
Fiber Counts		-	6~72		96	
NFSC Condition Code		-	Medium	Light	Medium	Light
Maximum Span Length		m	400	450	400	440
Installation	Load	kg(lb)	503	566	604	664
	Sag	m(ft)	6.0	6.8	6.0	6.6
Every Day Stress	Load	kg(lb)	496	558	594	654
	Sag	m(ft)	6.1	6.9	6.1	6.7
Max. Operating Stress	Load	kg(lb)	1061	1057	1200	1192
	Sag	m(ft)	14.1	15.2	13.5	14.2
Max. Sag	Vertical	m(ft)	14.0	10.0	13.6	9.8
	Horizontal	m(ft)	10.0	16.6	9.4	15.6

CT-NJBSME

LS FIBER OPTIC RIBBON CABLE

Single Jacket Single Armor Central Loose Tube Cable

Description / Applications

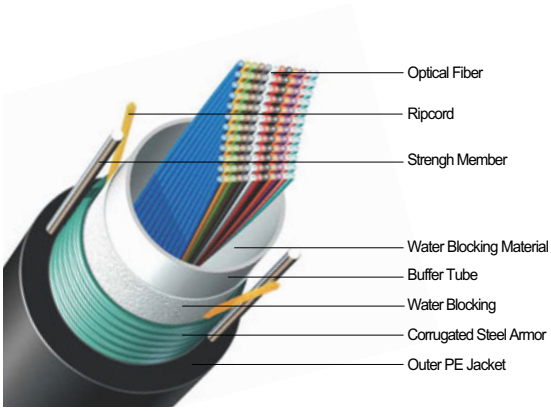
- Easy access to individual fibers
- Excellent mass fusion splicing reduces splicing cost
- High fiber count (Up to 432)
- Compact size and light weight
- Meets or exceeds Telcordia GR-20-CORE and other industry standards
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) Complied

Specification

- Telcordia GR-20-CORE
- IEC 60793 / IEC 60794

Color Identification

01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Pink
04 - Brown	08 - Black	12 - Aqua



Mechanical Characteristics

Storage Temperature : -40 to + 70℃ / Operating Temperature : -40 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
96	CR-NJB□E/B□□-096	13.8	0.54	166	111	2,700	125	1,000	46	440	251	220	125	27.6	10.87	13.8	5.43
216	CR-NJB□E/B□□-216	16.3	0.64	244	164	2,700	125	1,000	46	440	251	220	125	32.6	12.83	16.3	6.42
432	CR-NJB□E/B□□-432	20.0	0.79	333	224	2,700	125	1,000	46	440	251	220	125	40.0	15.75	20.0	7.87

LSC Part No.

CR-NJBE□E / □□ - □□
① ❸ ⑥

Shipping Information

Standard Reel Length	4000m

*Other Cable lengths may be available upon request

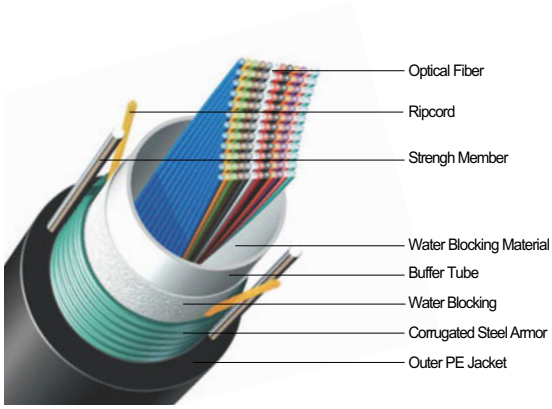
Ez Metro RT ™ Cable

LS FIBER OPTIC RIBBON All DRY CABLE

Single Jacket Single Armor Central Loose Tube Cable

Description / Applications

- All Dry design contains no flooding compounds
- Ribbon cleaning related time & cost saving
- Easy access to individual fibers
- Excellent mass fusion splicing reduces splicing cost
- High fiber count (Up to 216)
- Compact size and light weight
- Meets or exceeds Telcordia GR-20-CORE and other industry standards
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) Complied



Specification

- Telcordia GR-20-CORE
- IEC 60793 / IEC 60794

Color Identification

01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Rose
04 - Brown	08 - Black	12 - Aqua

Mechanical Characteristics

Storage Temperature : -40 to + 70℃ / Operating Temperature : -40 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
144	CR-NBE□E/B□□-144	15.5	0.61	250	168	2,700	125	1,000	46	440	251	220	125	31.0	12.20	15.5	6.10
216	CR-NBE□E/B□□-216	18.0	0.71	305	205	2,700	125	1,000	46	440	251	220	125	36.0	14.17	18.0	7.09

LSC Part No. ····· CR-NBE□E /□□ -□□
① ❸ ⑥

Shipping Information

Standard Reel Length	2000m

*Other Cable lengths may be available upon request

MR-D(M)JPE
LS FIBER OPTIC MULTI RIBBON CABLE
Single Jacket Non Armor Stranded Ribbon Tube Cable

Description / Applications

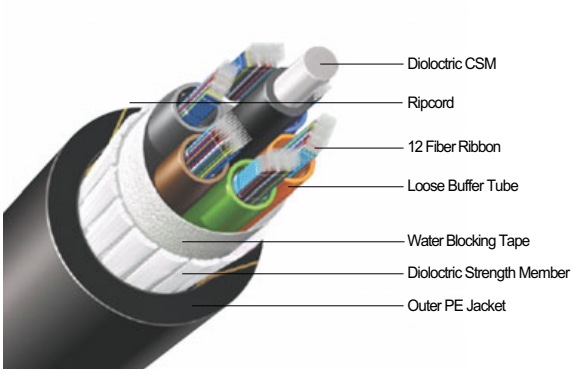
- Easy access to individual fibers
- Excellent mass fusion splicing reduces splicing cost
- High fiber count (Up to 864)
- Reverse Oscillation Lay (ROL) buffer tube stranding technique facilitates mid-span fiber access and splicing
- Meets or exceeds Telcordia GR-20-CORE and other industry standards
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) Complied

Specification

- Telcordia GR-20-CORE
- IEC 60793 / IEC 60794

Color Identification

01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Pink
04 - Brown	08 - Black	12 - Aqua



Mechanical Characteristics

Storage Temperature : -40 to + 70℃ / Operating Temperature : -40 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
432	MR-□JPGE/□□-432	23.6	0.93	388	260	4,500	208	1,000	46	220	125	110	63	47.2	18.58	35.4	13.94
864	MR-□JPGE/□□-864	27.4	1.08	539	362	4,500	208	1,000	46	220	125	110	63	54.8	21.57	41.1	16.18

LSC Part No. ····· MR-□JPGE/□□-□□

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*① D : Non-metallic Strength Member / M : Metallic Strenth Member.

Shipping Information

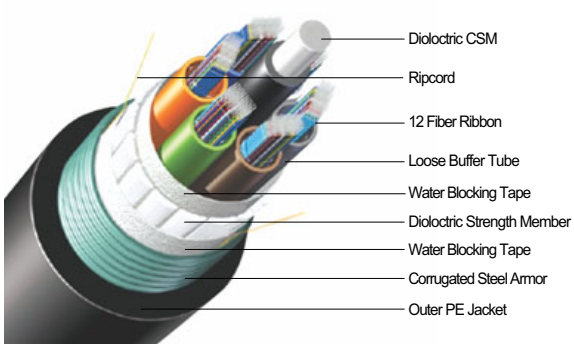
Standard Reel Length	2000m

*Other Cable lengths may be available upon request

MR-D(M)JPGSE
LS FIBER OPTIC MULTI RIBBON CABLE
Single Jacket Single Armor Stranded Ribbon Tube Cable

Description / Applications

- Easy access to individual fibers
- Excellent mass fusion splicing reduces splicing cost
- High fiber count (Up to 864)
- Reverse Oscillation Lay (ROL) buffer tube stranding technique facilitates mid-span fiber access and splicing
- Durable and reliable for applications requiring added compressive strength and rodent resistance
- Meets or exceeds Telcordia GR-20-CORE and other industry standards
- RoHS (Restriction of the use of Certain Hazardous Substances Directive) Complied



Specification

- Telcordia GR-20-CORE
- IEC 60793 / IEC 60794

Color Identification

01 - Blue	05 - Slate	09 - Yellow
02 - Orange	06 - White	10 - Violet
03 - Green	07 - Red	11 - Pink
04 - Brown	08 - Black	12 - Aqua

Mechanical Characteristics

Storage Temperature : -40 to + 70℃ / Operating Temperature : -40 to + 70℃

Fiber Count	LSC Part Number	Nominal* Outer diameter		Nominal* Weight		Maximum Tensile Load Short Term		Maximum Tensile Load Long Term		Crush Load Short Term		Crush Load Long Term		Minimum Bend Radius Loaded		Minimum Bend Radius Installed	
		[mm]	[inch]	[kg/km]	[lb/1000 ft]	[N]	[lb]	[N]	[lb]	[N/cm]	[lb/inch]	[N/cm]	[lb/inch]	[cm]	[inch]	[cm]	[inch]
432	CR-NBE□E/B□□-144	26.2	1.03	553	371	4,500	208	1,000	46	440	251	220	125	52.4	20.63	39.3	15.47
864	CR-NBE□E/B□□-216	31.0	1.22	740	497	4,500	208	1,000	46	440	251	220	125	62.0	24.41	46.5	18.31

LSC Part No. ····· MR-□JPGSE/□□-□□

*① D : Non-metallic Strength Member / M : Metallic Strenth Member.

① ❸ ⑥

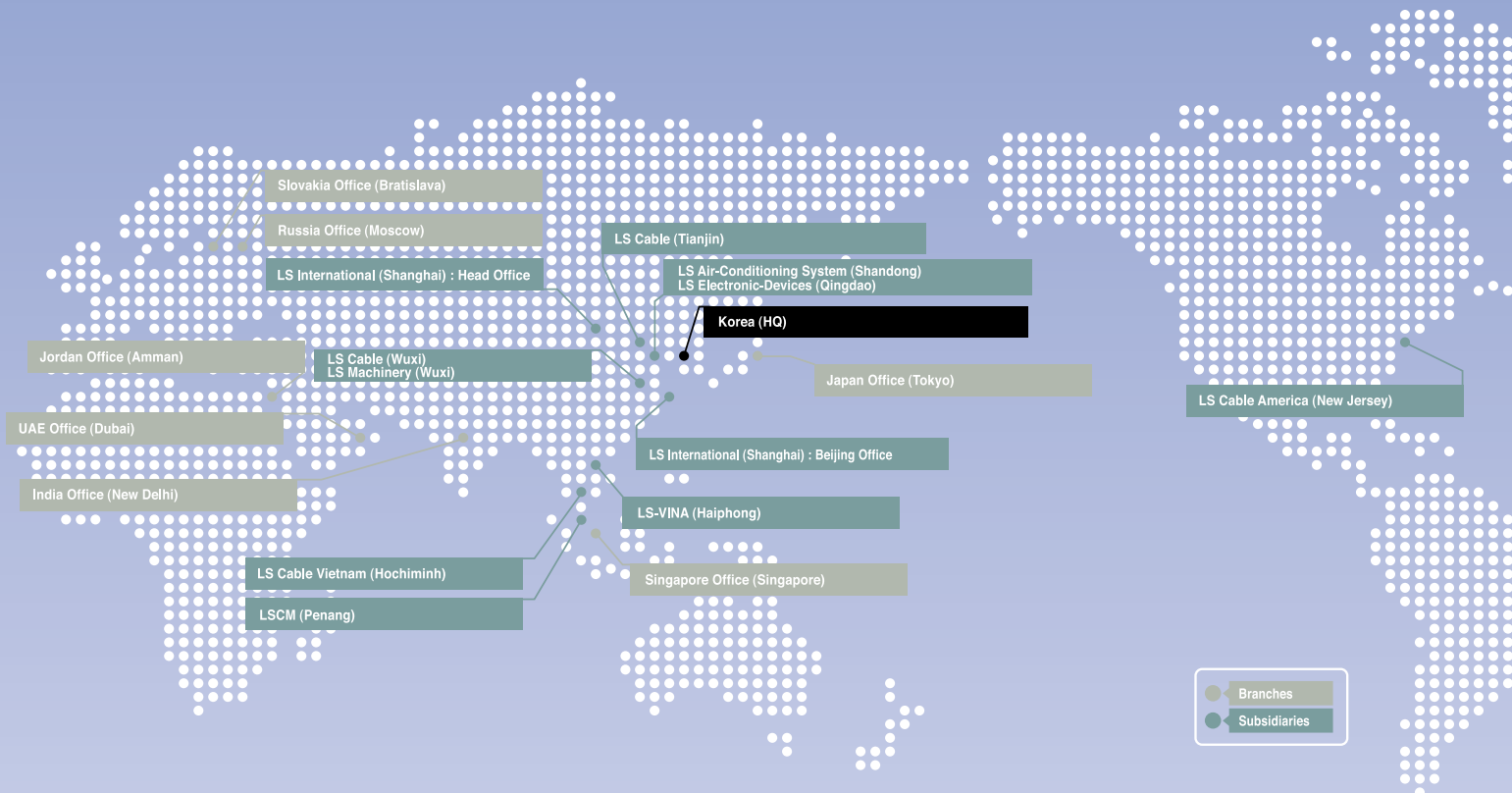
Shipping Information

Standard Reel Length	2000m

*Other Cable lengths may be available upon request

The Global Network of LS Cable reaching all over the world

LS Cable compete with global top corporations with high profit value products and doing area marketing to create distinctive market value.



LS Cable

Leading Solution

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