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# SAMSUNG FIBEROPTICS

## Products Guide



Toward the world  
connected by light  
**SAMSUNG**  
**FIBEROPTICS** stands  
at the forefront

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# A BRIEF HISTORY

## VISION

Establish global prominence in the fiberoptics market through an effective operation with sustainable, reliable, and valuable efforts towards design, purchasing, manufacturing, marketing, and customer service.

## MISSION

Provide cost-effective fiber-optic solutions of the highest quality and reliability to surpass our customers' expectations

2010

New factory in Monterrey, Mexico

2009

Developed Enhanced-BIF (Ultra Bendfree)

2007

New Manufacturing Process of Fiber Developed

2004

Invest New Hainan(China) Factory

2003

LSZH cable/Air Blown Micro Cable, FastBlow™ Launched

2002

UltraPass™ (NZDSF) Launched

2000

In house MCVD Lathe & Draw Tower Developed

1999

Ribbon Cable Launched

1997

New Plant Built in Korea & developed ADSS cable

1994

Developed OPGW for KEPCO Project

1988

Production of Loose Tube Cable Started

1984

Production of Optical Fiber Started

1983

Fiberoptics Division Established





# GLOBAL STANDARD

## QUALITY ASSURANCE POLICY

Provide high-quality products by observing strict, standardized guidelines

- Basic Philosophy "No Specification, No Work"**  
At Samsung Fiberoptics, our basic philosophy for product quality assurance is "No Specification, No Work", and every product we ship out, both domestically and abroad, reflects this standard. Whether we are producing televisions, semiconductors, or fiber optic products, we work to ensure our products are of superior quality and performance that will provide continuous and reliable operation for our customers.
- Standardized and Reliable Process**  
A huge advantage we have over some other fiber optic manufacturers is that production takes place within one factory, from start to finish. We are therefore able to monitor and assess quality throughout all stages of production. From the earliest stages of preform assembly to the end product of a finished cable, we are able to guarantee that our products are of the highest quality within each process.
- Dedication to Process Innovation**  
Because of our devotion to research and development, our state-of-the-art factory, equipment, and products are constantly being updated with new technologies and methods that enable us to remain at the forefront of the market. At Samsung Fiberoptics, we believe the future is now, and anything we can do today to attain our goals for the future, we pursue with a sense of mission and purpose.
- Certified Process and Environment**  
In recent years, our intense drive for superior quality and manufacturing processes for optical fibers, cables, and interconnection products has been recognized by the completion of numerous certifications. They include ISO9001, TL9000 certification for superior quality system from Underwriters Laboratories. It also includes ISO14001 and OHSAS18001 certification from Underwriters Laboratories for its proven Environmental Management System, and Occupational Health and Safety Management System. For information about our quality control procedures, please contact us directly and we will be glad to address any question or comment you may have.

 SAMSUNG FIBEROPTICS REGISTERED TO ISO9001 CERTIFICATE NO.9243	 SAMSUNG FIBEROPTICS REGISTERED TO TL9000 CERTIFICATE NO.9243	 SAMSUNG FIBEROPTICS REGISTERED TO ISO14001 CERTIFICATE NO.9872	 SAMSUNG FIBEROPTICS REGISTERED TO ISO18001 CERTIFICATE NO.9872
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## CUSTOMER SUPPORT POLICY

Provide the highest customer satisfaction through prompt and courteous service

Even after our products have undergone careful scrutiny and examination within our factory, we continue to monitor product quality after shipment by measuring customer satisfaction. If, for some reason a product does not meet expectations, we do whatever is necessary to remedy the situation. When dealing with a customer, our service is prompt and courteous. Customer suggestions, complaints or any other feedback is given the highest consideration. Our numerous customers around the world and our ever-growing market presence continue to confirm an excellent reputation, top-notch quality, and first-rate performance of our products.

# FIBER OPTIC CABLES

In today's fast-changing, knowledge-centric society, the vast amount of information is running across the transmission media at extremely high speeds just as a race car does along the track. Samsung fiber optic cables provide optimum guidance and protection of optical signals to ensure outstanding transmission quality even in the most demanding environments. And now, think Samsung first when it comes to fiber optic cables. We deliver wonderful experiences of communication at the speed of light.

Samsung Fiberoptics products



# Loose Tube Cable - SJAD

## Single Jacket All-Dielectric



Loose Tube Cable - SJAD  
LN10

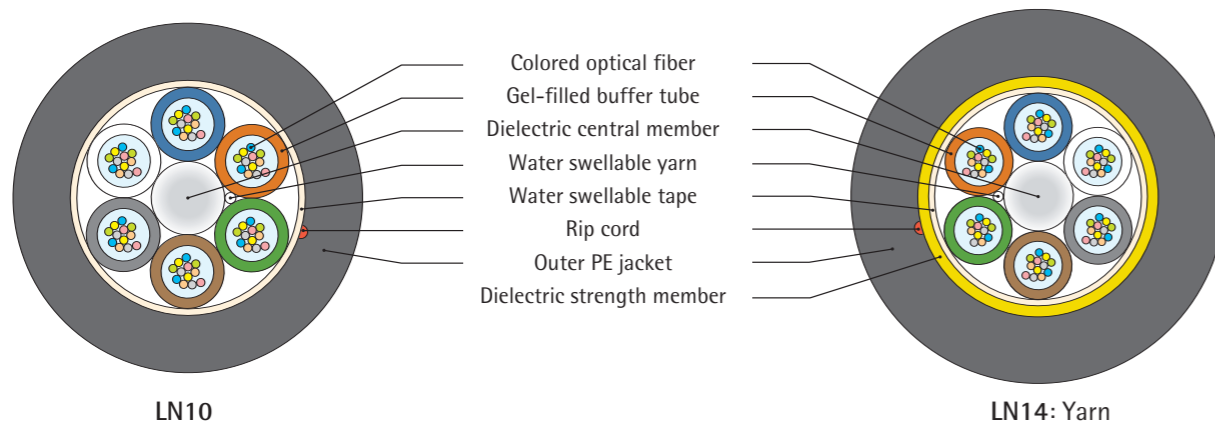
### Description

SAMSUNG Single Jacket All Dielectric cables are lightweight with small diameter and designed for duct and aerial(lashed) installation. The loose tube design provides stable performance over a wide temperature range and is compatible with any telecommunication grade optical fiber.

### Feature / Benefit

- Up to 432 fibers
- Proven loose tube design for performance
- SZ stranding design allows for easy mid-span access and isolates fibers from installation and environmental rigors
- Drycore design for excellent water blocking performance and easier handling
- Small diameter and lightweight
- Polyethylene jacket is easy to strip, rugged and durable
- Designed in accordance with applicable industry technical specifications, standards and references including IEC and EN
- High strength with peripheral dielectric strength members(LN14)

### Cable Drawing



\* Drawings are not to scale

### Mechanical Performance

Crush resistance : 2,000 N/10 cm  
Temperature : - Operation/Storage : -40 ~ +70 °C  
- Installation : -20 ~ +70 °C

LN10 (SJAD)

Characteristics	Unit	Fiber Count						
		2 ~ 36	2 ~ 48	2 ~ 72	96	96	144	288
Tube type (fibers per tube)	-	B(6)	C(8)	D(12)	C(8)	D(12)	D(12)	D(12)
Nominal outer diameter	mm	10.2	10.2	10.2	14.4	11.7	14.6	17.1
Nominal cable weight	kg/km	80	80	80	160	105	165	220
Maximum tensile load	N	1500	1500	1500	2600	2200	2700	2700
Minimum bending radius								
- Short term [Loaded] : 15*OD	mm	153	153	153	216	176	219	257
- Long term [Installed]: 10*OD	mm	102	102	102	144	117	146	171

LN14 (SJAD-Yarn)

Characteristics	Unit	Fiber Count						
		2 ~ 36	2 ~ 48	2 ~ 72	96	96	144	288
Tube type (fibers per tube)	-	B(6)	C(8)	D(12)	C(8)	D(12)	D(12)	D(12)
Nominal outer diameter	mm	10.6	10.6	10.6	14.8	12.1	15.0	17.5
Nominal cable weight	kg/km	85	85	85	168	113	175	230
Maximum tensile load	N	2000	2000	2000	3500	2500	3500	4500
Minimum bending radius								
- Short term [Loaded] : 15*OD	mm	159	159	159	222	182	225	263
- Long term [Installed]: 10*OD	mm	106	106	106	148	121	150	175

\* Tested in accordance with IEC 60794-1

### Note

- Fiber colors by IEC 60304: Blue/Orange/Green/Brown/Grey/White/Red/Black/Yellow/Violet/Pink/Aqua
- Diameter represents a nominal value and may vary by ± 5%.
- Sheath marking legend: hot foil stamp  
Ex) Manufacturing year (ex. 2003) SAMSUNG SJAD SM 24 = length marking =

### Ordering

LN10 -  -  -   
LN14

<input type="text"/>	Fiber count	002~432
<input type="text"/>	Tube type	A 4 fibers B 6 fibers C 8 fibers D 12 fibers
<input type="text"/>	Fiber type	S Single mode: Max. 0.38/0.25 dB/km @ 1310/1550 nm M 50/125 μm: Max. 3.0/1.0 dB/km, 500/500 Mhz-km @ 850/1300 nm L 62.5/125 μm: Max. 3.5/1.5 dB/km, 200/500 Mhz-km @ 850/1300 nm U NZ-DSF: Max. 0.25 dB/km @ 1550 nm

# Loose Tube Cable - SJNA

## Single Jacket Non-Armored



Loose Tube Cable - SJNA  
LN30

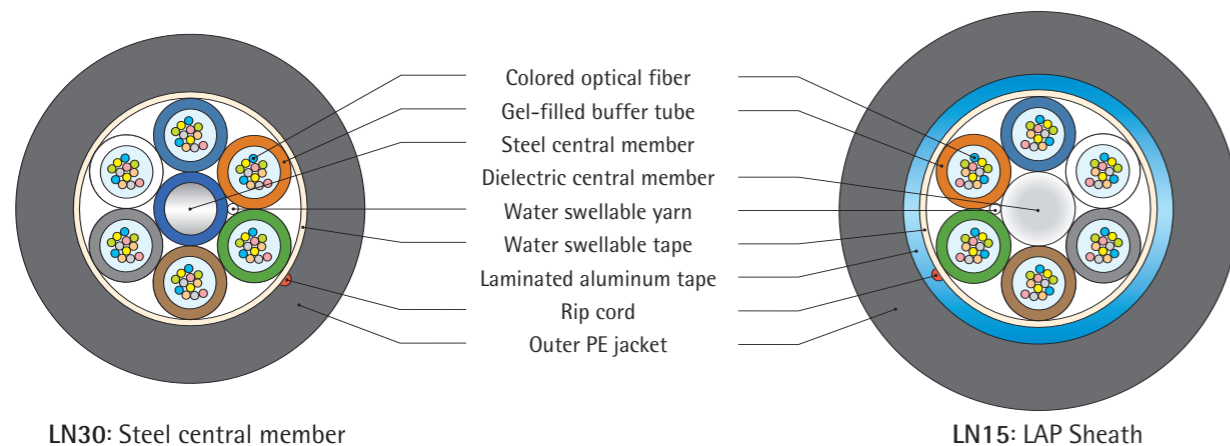
### Description

SAMSUNG Single Jacket Non-Armored cables are lightweight with small diameter and designed for duct and aerial installation with lashing method. The loose tube design with a metallic strength member for LN30 or an aluminum tape for LN15 provides stable performance over a wide temperature range and is compatible with any telecommunication grade optical fiber.

### Feature / Benefit

- Up to 432 fibers
- Proven loose tube design for performance
- SZ stranding design allows for easy mid-span access and isolates fibers from installation and environmental rigors
- Drycore design for excellent water blocking performance and easier handling
- Small diameter and lightweight
- Polyethylene jacket is easy to strip, rugged and durable
- Designed in accordance with applicable industry technical specifications, standards and references including IEC and EN
- Moisture barrier with aluminum/polymer laminated tape (LN15)

### Cable Drawing



LN30: Steel central member

LN15: LAP Sheath

\* Drawings are not to scale

### Mechanical Performance

Crush resistance : 2,000 N/10 cm  
Temperature : - Operation/Storage : -40 ~ +70 °C  
- Installation : -20 ~ +70 °C

LN30

Characteristics	Unit	Fiber Count						
		2 ~ 36	2 ~ 48	2 ~ 72	96	96	144	288
Tube type (fibers per tube)	-	B(6)	C(8)	D(12)	C(8)	D(12)	D(12)	D(12)
Nominal outer diameter	mm	10.4	10.4	10.4	14.4	11.7	14.6	17.1
Nominal cable weight	kg/km	98	98	99	173	120	182	237
Maximum tensile load	N	2700	2700	2700	3400	2700	3600	4000
<b>Minimum bending radius</b>								
- Short term [Loaded] : 15*OD	mm	156	156	156	216	176	219	257
- Long term [Installed]: 10*OD	mm	104	104	104	144	117	146	171

LN15

Characteristics	Unit	Fiber Count						
		2 ~ 36	2 ~ 48	2 ~ 72	96	96	144	288
Tube type (fibers per tube)	-	B(6)	C(8)	D(12)	C(8)	D(12)	D(12)	D(12)
Nominal outer diameter	mm	10.8	10.8	10.8	15.0	12.3	15.2	17.7
Nominal cable weight	kg/km	99	99	99	185	128	195	253
Maximum tensile load	N	1500	1500	1500	2700	2000	3000	3500
<b>Minimum bending radius</b>								
- Short term [Loaded] : 15*OD	mm	162	162	162	225	185	228	266
- Long term [Installed]: 10*OD	mm	108	108	108	150	123	152	177

\* Tested in accordance with IEC 60794-1

### Note

- Fiber colors by IEC60304: Blue/Orange/Green/Brown/Grey/White/Red/Black/Yellow/Violet/Pink/Aqua
- Diameter represents a nominal value and may vary by ± 5%.
- Sheath marking legend: hot foil stamp(indented)  
Ex) Manufacturing year (ex. 2003) SAMSUNG SJNA SM 24 = length marking =

### Ordering

LN30 - 1 - 2 - 3  
LN15

1	Fiber count	002~432
2	Tube type	A 4 fibers B 6 fibers C 8 fibers D 12 fibers
3	Fiber type	S Single mode: Max. 0.38/0.25 dB/km @ 1310/1550 nm M 50/125 μm: Max. 3.0/1.0 dB/km, 500/500 Mhz*km @850/1300 nm L 62.5/125 μm: Max. 3.5/1.5 dB/km, 200/500 Mhz*km @850/1300 nm U NZ-DSF: Max. 0.25 dB/km @ 1550 nm

# Loose Tube Cable - DJAD

## Double Jacket All-Dielectric



Loose Tube Cable - DJAD  
LN24

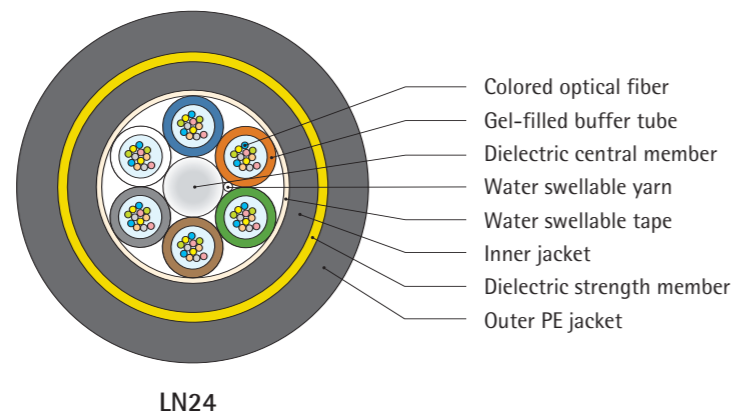
### Description

SAMSUNG Double Jacket All-Dielectric cables are designed for direct burial and aerial installation with lashing method. The loose tube design with double sheath has a dielectric strength member between the sheaths and provides stable performance over a wide temperature range and has high strength properties.

### Feature / Benefit

- Up to 432 fibers
- High strength with peripheral dielectric strength members
- Reduced bending sensitivity, flexible, kink resistant
- Proven loose tube design for performance
- SZ stranding design allows for easy mid-span access and isolate fibers from installation and environmental rigors
- Drycore design for excellent water blocking performance and easier handling
- Polyethylene jacket is easy to strip, rugged and durable
- Designed in accordance with applicable industry technical specifications, standards and references including IEC and EN

### Cable Drawing



LN24

\* Drawing is not to scale

### Mechanical Performance

Crush resistance : 2,000 N/10 cm  
 Temperature : - Operation/Storage : -40 ~ +70 °C  
 - Installation : -20 ~ +70 °C

Characteristics	Unit	Fiber Count						
		2 ~ 36	2 ~ 48	2 ~ 72	96	96	144	288
Tube type (fibers per tube)	-	B(6)	C(8)	D(12)	C(8)	D(12)	D(12)	D(12)
Nominal outer diameter	mm	13.0	13.0	13.0	16.8	14.0	16.9	19.4
Nominal cable weight	kg/km	130	130	130	214	152	224	287
Maximum tensile load	N	2500	2500	2500	3500	3000	3500	4000
<b>Minimum bending radius</b>								
- Short term [Loaded] : 15•OD	mm	188	188	188	245	210	254	291
- Long term [Installed]: 10•OD	mm	125	125	125	163	140	169	194

\* Tested in accordance with IEC 60794-1

### Note

- Fiber colors by IEC60304: Blue/Orange/Green/Brown/Grey/White/Red/Black/Yellow/Violet/Pink/Aqua
- Diameter represents a nominal value and may vary by ± 5%.
- Sheath marking legend: Maximum 80 characters by hot foil stamp  
 Ex) Manufacturing year (ex. 2003) SAMSUNG DJAD SM 24 = length marking =

### Ordering

LN24 -  -  -

<input type="text"/>	Fiber count	002~432
<input type="text"/>	Tube type	A 4 fibers B 6 fibers C 8 fibers D 12 fibers
<input type="text"/>	Fiber type	S Single mode: Max. 0.38/0.25 dB/km @ 1310/1550 nm M 50/125 μm: Max. 3.0/1.0 dB/km, 500/500 Mhz•km @850/1300 nm L 62.5/125 μm: Max. 3.5/1.5 dB/km, 200/500 Mhz•km @850/1300 nm U NZ-DSF: Max. 0.25 dB/km @ 1550 nm



# Loose Tube Cable - SJSA

## Single Jacket Single Armored

### Description

SAMSUNG Single Jacket Single Armored cables are lightweight, small diameter and designed for direct burial, duct and aerial installation with lashing method. The loose tube design with a steel tape armoring provides rigid protection, rodent resistance, stable performance over a wide temperature range and is compatible with any telecommunication grade optical fiber.

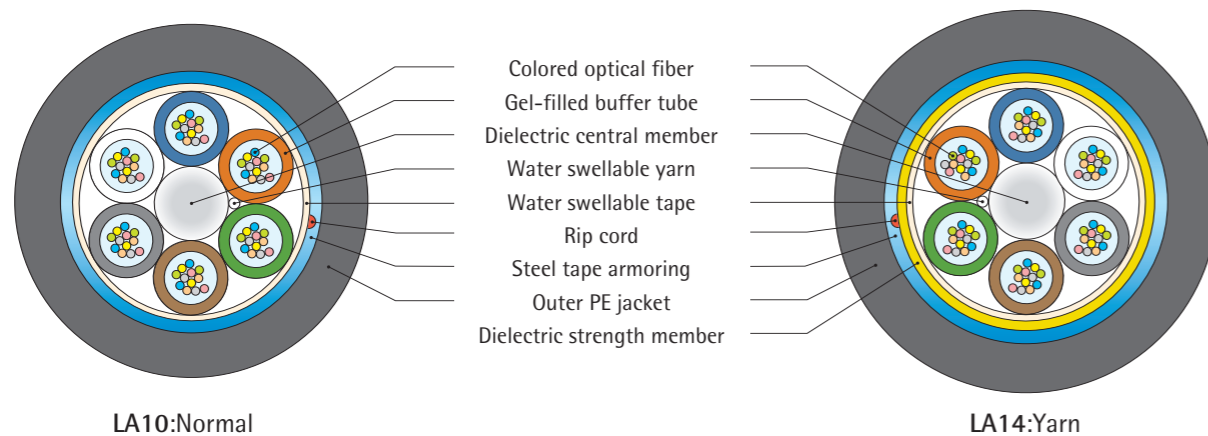
### Feature / Benefit

- Up to 432 fibers
- Proven loose tube design for performance
- SZ stranding design allows for easy mid-span access and isolate fibers from installation and environmental rigors
- Drycore design for excellent water blocking performance and easier handling
- Rodent resistance
- Small diameter and lightweight
- Designed in accordance with applicable industry technical specifications, standards and references including IEC and EN
- High strength with peripheral dielectric strength members (LA14)



Loose Tube Cable - SJSA  
LA10

### Cable Drawing



\* Drawings are not to scale

### Mechanical Performance

Crush resistance : 3,000 N/10 cm  
Temperature : - Operation/Storage : -40 ~ +70 °C  
- Installation : -20 ~ +70 °C

Characteristics	Unit	Fiber Count						
		2 ~ 36	2 ~ 48	2 ~ 72	96	96	144	288
Tube type (fibers per tube)	-	B(6)	C(8)	D(12)	C(8)	D(12)	D(12)	D(12)
Nominal outer diameter	mm	11.2	11.2	11.2	15.4	12.7	15.6	18.1
Nominal cable weight	kg/km	127	128	128	228	160	234	300
Maximum tensile load	N	1800	1800	1800	3000	2400	3200	4000
Minimum bending radius								
- Short term [Loaded] : 15*OD	mm	168	168	168	231	191	234	272
- Long term [Installed]: 10*OD	mm	112	112	112	154	127	156	181

Characteristics	Unit	Fiber Count						
		2 ~ 36	2 ~ 48	2 ~ 72	96	96	144	288
Tube type (fibers per tube)	-	B(6)	C(8)	D(12)	C(8)	D(12)	D(12)	D(12)
Nominal outer diameter	mm	11.6	11.6	11.6	15.8	13.1	16.0	18.5
Nominal cable weight	kg/km	136	136	136	237	170	247	315
Maximum tensile load	N	2200	2200	2200	3600	3000	4200	4500
Minimum bending radius								
- Short term [Loaded] : 15*OD	mm	174	174	174	237	197	240	278
- Long term [Installed]: 10*OD	mm	116	116	116	158	131	160	185

\* Tested in accordance with IEC 60794-1

### Note

- Fiber colors by IEC60304: Blue/Orange/Green/Brown/Grey/White/Red/Black/Yellow/Violet/Pink/Aqua
- Diameter represents a nominal value and may vary by ± 5%.
- Sheath marking legend: hot foil stamp(indented)  
Ex) Manufacturing year (ex. 2003)    SAMSUNG    SJSA    SM 24    = length marking =

### Ordering

LA10 - [1] - [2] - [3]  
LA14

[1] Fiber count	002~432
[2] Tube type	A 4 fibers    B 6 fibers    C 8 fibers    D 12 fibers
[3] Fiber type	S Single mode: Max. 0.38/0.25 dB/km @1310/1550 nm M 50/125 μm: Max. 3.0/1.0 dB/km, 500/500 Mhz·km @850/1300 nm L 62.5/125 μm: Max. 3.5/1.5 dB/km, 200/500 Mhz·km @850/1300 nm U NZ-DSF: Max. 0.25 dB/km @1550 nm

# Loose Tube Cable - DJSA

## Double Jacket Single Armored



Loose Tube Cable - DJSA  
LA20

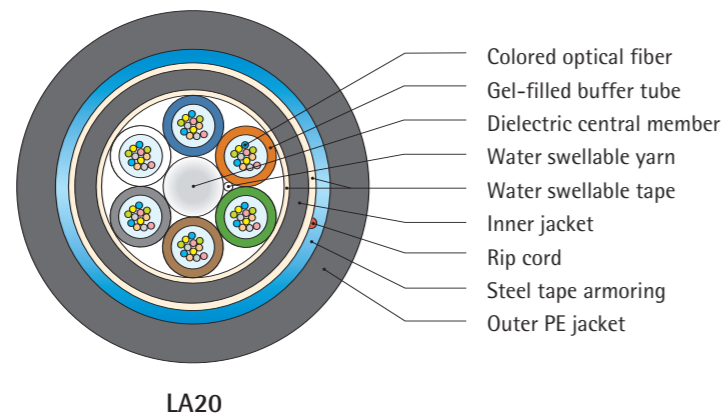
### Description

SAMSUNG Double Jacket Single Armored cables are designed for direct burial and aerial installation with lashing method. The loose tube design provides additional crush and mechanical protection. The design provides rodent resistance with corrugated steel tape for direct burial, stable performance over a wide temperature range and is compatible with any telecommunication grade optical fiber.

### Feature / Benefit

- Up to 432 fibers
- Additional crush and mechanical protection
- Rodent resistance with corrugated steel tape for direct burial
- Proven loose tube design for performance
- SZ stranding design allows for easy mid-span access and isolate fibers from installation and environmental rigors
- Drycore design for excellent water blocking performance and easier handling
- Polyethylene jacket is easy to strip, rugged and durable
- Designed in accordance with applicable industry technical specifications, standards and references including IEC and EN

### Cable Drawing



- Colored optical fiber
- Gel-filled buffer tube
- Dielectric central member
- Water swellable yarn
- Water swellable tape
- Inner jacket
- Rip cord
- Steel tape armoring
- Outer PE jacket

\* Drawing is not to scale

### Mechanical Performance

Crush resistance : 3,000 N/10 cm  
 Temperature : - Operation/Storage : -40 ~ +70 °C  
 - Installation : -20 ~ +70 °C

LA20

Characteristics	Unit	Fiber Count						
		2 ~ 36	2 ~ 48	2 ~ 72	96	96	144	288
Tube type (fibers per tube)	-	B(6)	C(8)	D(12)	C(8)	D(12)	D(12)	D(12)
Nominal outer diameter	mm	13.7	13.7	13.7	17.9	15.2	18.1	20.6
Nominal cable weight	kg/km	177	177	177	291	215	300	374
Maximum tensile load	N	1800	1800	1800	3000	2500	3500	4000
Minimum bending radius								
- Short term [Loaded] : 15*OD	mm	206	206	206	269	228	272	309
- Long term [Installed]: 10*OD	mm	137	137	137	179	152	181	206

\* Tested in accordance with IEC 60794-1

### Note

- Fiber colors by IEC60304: Blue/Orange/Green/Brown/Grey/White/Red/Black/Yellow/Violet/Pink/Aqua
  - Diameter represents a nominal value and may vary by ± 5%.
  - Sheath marking legend: hot foil stamp(indent)
- Ex) Manufacturing year (ex. 2003) SAMSUNG DJSA SM 24 = length marking =

### Ordering

LA20 -  -  -

<input type="text"/>	Fiber count	002~432
<input type="text"/>	Tube type	A 4 fibers B 6 fibers C 8 fibers D 12 fibers
<input type="text"/>	Fiber type	S Single mode: Max. 0.38/0.25 dB/km @ 1310/1550 nm M 50/125 μm: Max. 3.0/1.0 dB/km, 500/500 Mhz*km @850/1300 nm L 62.5/125 μm: Max. 3.5/1.5 dB/km, 200/500 Mhz*km @850/1300 nm U NZ-DSF: Max. 0.25 dB/km @ 1550 nm

# Loose Tube Cable - Figure-8



Loose Tube Cable - Figure-8  
8F22

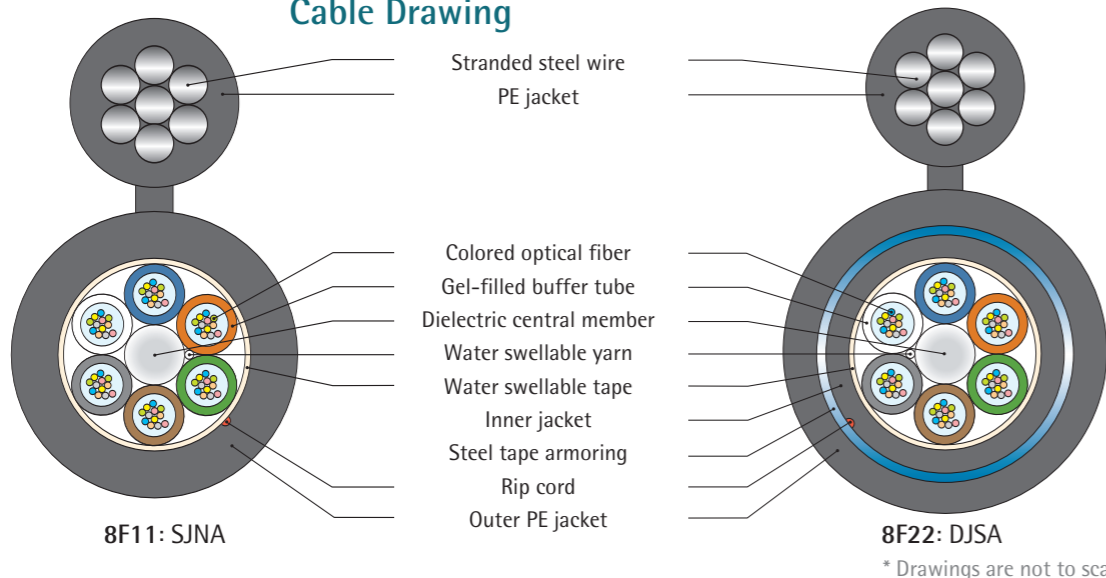
## Description

SAMSUNG Figure-8 cables are self-supporting cable designed for aerial installation. The cable design provides easy and economical one-step installation and stable performance over a wide temperature range and is compatible with any telecommunication grade optical fiber.

## Feature / Benefit

- Up to 288 fibers
- Small diameter and lightweight (8F11)
- Double jacket single armor construction provides additional crush and mechanical protection for aerial (8F22)
- Proven loose tube design for performance
- SZ stranding design allows for easy mid-span access and isolates fibers from installation and environmental rigors
- Drycore design for excellent water blocking performance and easier handling
- As a self-supporting design, easy and one-step installation, using standard hardware and working methods
- Polyethylene jacket is easy to strip, rugged and durable
- Designed in accordance with applicable industry technical specifications, standards and references including IEC and EN

## Cable Drawing



\* Drawings are not to scale

## Mechanical Performance

Maximum tensile load : 6,000 N

Temperature : - Operation/Storage : -40 ~ +70 °C

- Installation : -20 ~ +70 °C

Crush resistance : 8F11 : 2,000 N/10 cm

8F22 : 3,000 N/10 cm

Characteristics	Unit	Fiber Count							
		2 ~ 36	2 ~ 48	2 ~ 72	96	96	144	288	
Tube type (fibers per tube)	-	B(6)	C(8)	D(12)	C(8)	D(12)	D(12)	D(12)	
Nominal outer diameter	mm	10.2	10.2	10.2	14.4	11.7	14.6	17.1	
Nominal cable height	mm	19.4	19.4	19.4	23.6	20.9	23.8	26.3	
Nominal cable weight	kg/km	193	194	195	273	220	280	335	
Minimum bending radius									
- Short term [Loaded] : 15*OD	mm	153	153	153	216	176	219	257	
- Long term [Installed]: 10*OD	mm	102	102	102	144	117	146	171	

Characteristics	Unit	Fiber Count							
		2 ~ 36	2 ~ 48	2 ~ 72	96	96	144	288	
Tube type (fibers per tube)	-	B(6)	C(8)	D(12)	C(8)	D(12)	D(12)	D(12)	
Nominal outer diameter	mm	13.7	13.7	13.7	17.9	15.2	18.1	20.6	
Nominal cable height	mm	22.9	22.9	22.9	27.1	24.4	27.3	29.8	
Nominal cable weight	kg/km	290	290	292	405	329	414	488	
Minimum bending radius									
- Short term [Loaded] : 15*OD	mm	206	206	206	269	228	272	309	
- Long term [Installed]: 10*OD	mm	137	137	137	179	152	181	206	

\* Tested in accordance with IEC 60794-1

## Note

- Fiber colors by IEC60304: Blue/Orange/Green/Brown/Grey/White/Red/Black/Yellow/Violet/Pink/Aqua
- Diameter represents a nominal value and may vary by ± 5%.
- Sheath marking legend: hot foil stamp(indented)  
Ex) Manufacturing year (ex. 2003) SAMSUNG Figure-8 SM 24 = length marking =

## Ordering

8F11 - [1] - [2] - [3]  
8F22

[1] Fiber count	002~288
[2] Tube type	A 4 fibers B 6 fibers C 8 fibers D 12 fibers
[3] Fiber type	S Single mode: Max. 0.38/0.25 dB/km @ 1310/1550 nm M 50/125 μm: Max. 3.0/1.0 dB/km, 500/500 Mhz/km @ 850/1300 nm L 62.5/125 μm: Max. 3.5/1.5 dB/km, 200/500 Mhz/km @ 850/1300 nm U NZ-DSF: Max. 0.25 dB/km @ 1550 nm

# Loose Tube Ribbon Cable

## Multi-tube

### Description

SAMSUNG Loose Tube Ribbon cables are excellent for metro applications or other high-density environments. The ribbon technology and improved mass-splicing properties reduce the cost of installation. The design provides the All-Dielectric Construction(ADC) suitable for duct application and the Single Jacket Single Armored (SJSA) suitable for direct-buried application.

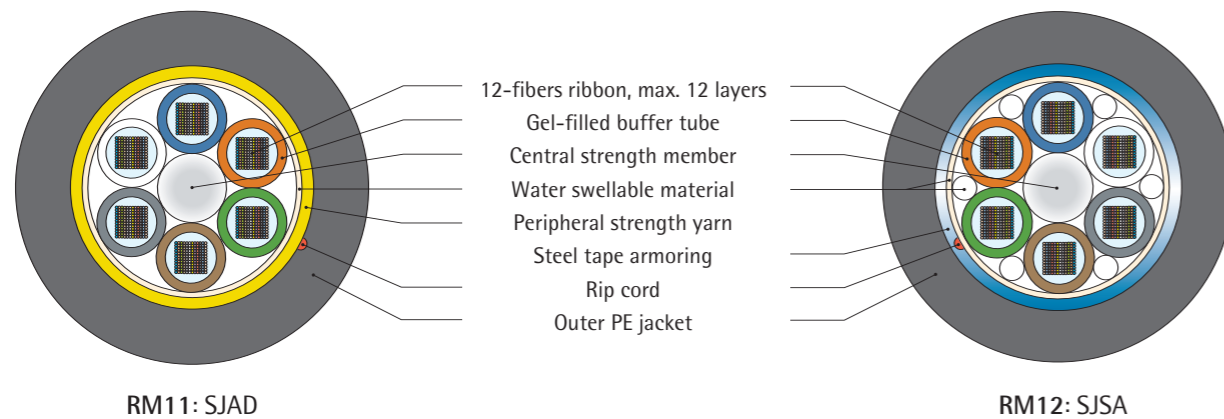
### Feature / Benefit

- Up to 864 fibers
- Small diameter and lightweight
- With high fiber density, reduces installation costs
- 12-fiber ribbons with readily identifiable ribbon IDs and easily accessible individual fiber colors
- Drycore design allows an easier handling, quicker cable preparation and termination
- Excellent mass fusion splicing yields with precise fiber and ribbon geometries



Loose Tube Ribbon Cable  
RM11

### Cable Drawing



\* Drawing is not to scale

### Mechanical Performance

Temperature : - Operation/Storage : -40 ~ +70 °C  
- Installation : -20 ~ +70 °C

RM11 | RM12

Characteristics	Unit	Cable Type	
		RM11	RM12
Fiber count	-	228 ~ 864	228 ~ 864
Nominal outer diameter	mm	27.5	28.0
Nominal cable weight	kg/km	530	640
Maximum tensile load	N	2700	2700
Minimum bending radius			
- Short term [Loaded] : 15*OD	mm	413	420
- Long term [Installed]: 10*OD	mm	275	280
Crush resistance	N/10 cm	2000	4000

\* Tested in accordance with IEC 60794-1

### Note

- Fiber colors by IEC60304: Blue/Orange/Green/Brown/Grey/White/Red/Black/Yellow/Violet/Pink/Aqua
- Diameter represents a nominal value and may vary by ± 5%.
- Sheath marking legend: Maximum 80 characters by hot foil stamp  
Ex) Manufacturing year (ex. 2003) SAMSUNG SM864 = length marking =

### Ordering

RM11 -  -   
RM12

<input type="text"/>	Fiber count	228~864
<input type="text"/>	Fiber type	S Single mode: Max. 0.38/0.25 dB/km @1310/1550 nm

# MiniLite™ Cable



MiniLite™ Cable  
ML95

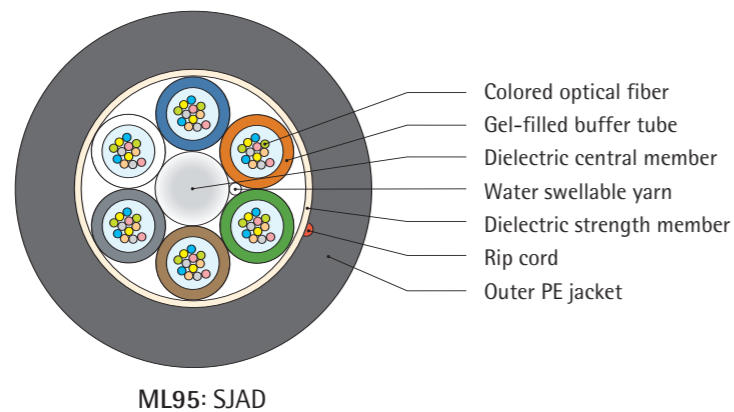
## Description

SAMSUNG MiniLite™ cables are single jacket all-dielectric design, lightweight with small diameter and designed for duct and aerial installation with lashing method. The cables are suitable for long haul, metro feeder and access network and installed by conventional or air-blown installation method. The loose tube design provides stable performance over a wide temperature range and is compatible with any telecommunication grade optical fiber.

## Feature / Benefit

- Up to 288 fibers
- Proven loose tube design for performance
- Small diameter and lightweight
- Drycore design for excellent water blocking performance and easier handling
- High strength with peripheral dielectric strength members
- SZ stranding design allows for easy mid-span access and isolates fibers from installation and environmental rigors
- Polyethylene jacket is easy to strip, rugged and durable
- Designed in accordance with applicable industry technical specifications, standards and references including IEC and EN

## Cable Drawing



\* Drawing is not to scale

## Mechanical Performance

Crush resistance : 1,500 N/10 cm  
Temperature : - Operation/Storage : -40 ~ +70 °C  
- Installation : -20 ~ +70 °C

Characteristics	Unit	Fiber Count			
		4 ~ 72	96	144	288
Tube type (fibers per tube)	-	D(12)	D(12)	D(12)	D(12)
Nominal outer diameter	mm	9.7	11.0	13.6	15.8
Nominal cable weight	kg/km	72	97	150	190
Maximum tensile load	N	1400	2000	2700	3600
<b>Minimum bending radius</b>					
- Short term [Loaded] : 15•OD	mm	146	165	204	237
- Long term [Installed]: 10•OD	mm	97	110	136	158

\* Tested in accordance with IEC 60794-1

## Note

- Fiber colors by IEC60304: Blue/Orange/Green/Brown/Grey/White/Red/Black/Yellow/Violet/Pink/Aqua
- Diameter represents a nominal value and may vary by ± 5%.
- Sheath marking legend: hot foil stamp(indented)  
Ex) Manufacturing year (ex. 2003) SAMSUNG MiniLite SM 24 = length marking =

## Ordering

ML95 -  -

- |                      |             |   |
|----------------------|-------------|---|
| <input type="text"/> | Fiber count | 002~288   |
| <input type="text"/> | Fiber type  | S Single mode: Max. 0.38/0.25 dB/km @1310/1550 nm<br>M 50/125 μm: Max. 3.0/1.0 dB/km, 500/500 Mhz•km @850/1300 nm<br>L 62.5/125 μm: Max. 3.5/1.5 dB/km, 200/500 Mhz•km @850/1300 nm<br>U NZ-DSF: Max. 0.25 dB/km @1550 nm |

# Air Blown Micro Cable

## Description

SAMSUNG Air Blown Micro Cables are ultra lightweight with and small diameter and designed for metro feeder or access network to be blown into a micro duct by air-blown installation. As the cable allows the deployment of currently required fiber count, the Micro cable provides a lower initial investment and the flexibility to install and upgrade to the latest fiber technologies after the initial installation.

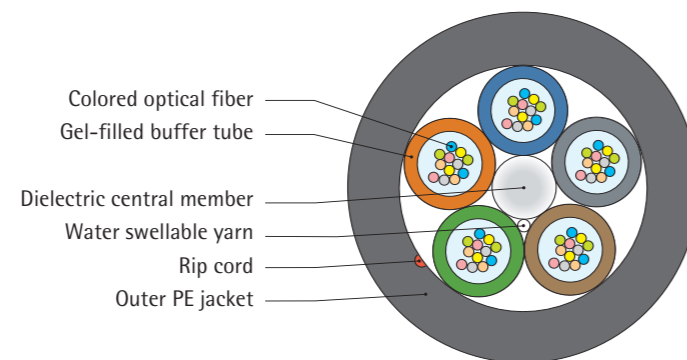
## Feature / Benefit

- Up to 96 fibers (LC)
- Proven loose tube design for performance
- Small diameter, lightweight and low friction sheath design
  - Excellent blowing length and fast, safe and cost effective installation
- Drycore design for excellent water blocking performance and easier handling
- SZ stranding design allows for easy mid-span access and isolates fibers from installation and environmental rigors
- Easy installation and removal when necessary
- Designed in accordance with applicable industry technical specifications, standards and references including IEC and EN



Air Blown Micro Cable  
LC

## Cable Drawing



\* Drawing is not to scale

## Mechanical Performance

Characteristics	Type	
	Unit	LC
Fiber count	-	60
Ribbon or fiber in tube	-	12 fibers
Nominal outer diameter	mm	5.8
Nominal cable weight	kg/km	27
Maximum tensile load	N	500
<b>Temperature</b>		
- Operation/Storage	°C	-40 ~ +70
- Installation		-20 ~ +70

\* Tested in accordance with IEC 60794-1

## Note

- Fiber colors by IEC60304: Blue/Orange/Green/Brown/Grey/White/Red/Black/Yellow/Violet/Pink/Aqua
- Diameter represents a nominal value and may vary by  $\pm 5\%$ .
- Sheath marking legend: ink jet printing.  
Ex) Manufacturing year (ex. 2008) SAMSUNG SM 24 = length marking =

## Ordering

LC -

<input type="text"/>	Fiber count	002~096
<input type="text"/>	Fiber type	<b>S</b> Single mode: Max. 0.38/0.25 dB/km @ 1310/1550 nm <b>M</b> 50/125 $\mu$ m: Max. 3.0/1.0 dB/km, 500/500 Mhz:km @ 850/1300 nm <b>L</b> 62.5/125 $\mu$ m: Max. 3.5/1.5 dB/km, 200/500 Mhz:km @ 850/1300 nm

# ADSS Cable

## All-Dielectric Self-Supporting

### Description

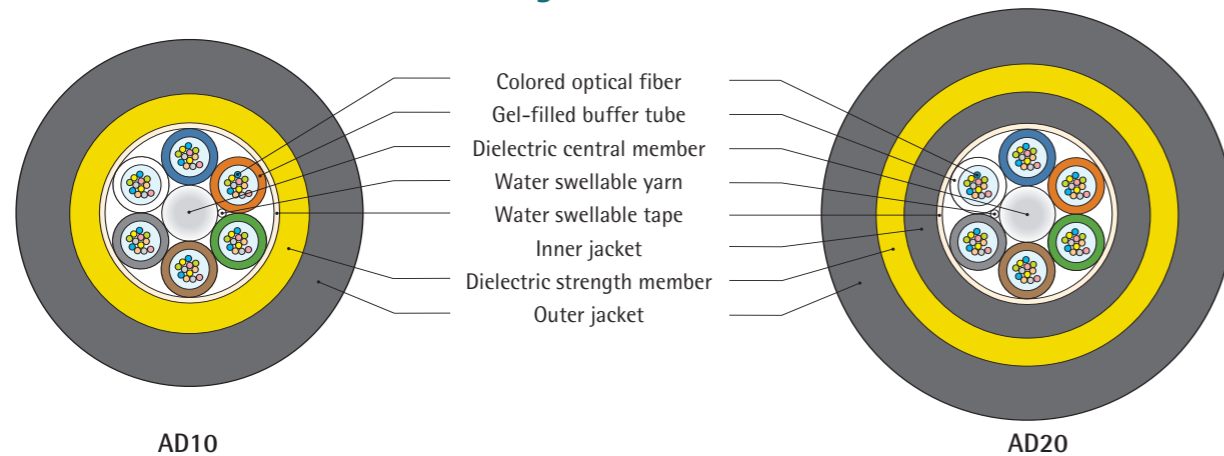
SAMSUNG ADSS cables are designed for installation on wooden poles, concrete poles or lattice towers along power lines, railways or telecommunication links. As the cable does not contain any metallic elements, it is to be installed on medium and high voltage lines, to prevent dry-band arcing. Track resistant sheath material and software to calculate optimum placement on the towers make this cable usable for line voltages of up to 400 KV.

### Feature / Benefit

- Up to 96 fibers (AD10), Up to 144 fibers (AD20)
- High resistance to tracking effect provides long operating lifetime
- SZ stranding design allows for easy mid-span access and isolates fibers from installation and environmental rigors
- Drycore design for excellent water blocking performance and easier handling
- Minimized additional loads due to small diameter and lightweight with the high strength aramid yarns
- Custom designs available \*
- Complies with IEEE P-1222, the recognized standard for ADSS cable

\* Note: The sheath material (MDPE or TRPE) and the location of the cable on structures that support 110KV or higher circuits should be reviewed prior to installation.

### Cable Drawing



AD10

AD20

\* Drawings are not to scale

### Mechanical Performance

AD10

Characteristics	Cable Type (For 2 ~ 96 fibers cable)			
	Fiber count	2 ~ 36	2 ~ 72	74 ~ 96
Nominal outer diameter	mm	11.4	12.2	13.9
Nominal cable weight				
- MDPE	kg/km	100	114	147
- TRPE	-	107	122	156
Maximum stringing tension	kN	2.1	2.2	2.2
Maximum operating load	kN	4	4	4
Maximum breaking load	kN	13.0	13.6	14.0
Minimum bending radius				
- Short term [Loaded] : 15•OD	mm	171	183	209
- Long term [Installed]: 10•OD	mm	114	122	139

AD20

Characteristics	Cable Type (For 2 ~ 36 fibers cable)							
	Type	04kN	08kN	12kN	16kN	20kN	24kN	28kN
Nominal outer diameter	mm	12.9	13.5	14.1	14.7	15.3	15.7	16.2
Nominal cable weight								
- MDPE	kg/km	128	139	151	163	176	187	199
- TRPE		137	148	161	173	186	197	210
Maximum stringing tension	kN	2.1	3.8	5.7	7.6	9.6	11.3	13.2
Maximum operating load	kN	4	8	12	16	20	24	28
Maximum breaking load	kN	13.4	23.7	35.7	47.8	59.9	70.8	82.8
Minimum bending radius								
- Short term [Loaded] : 15•OD	mm	194	203	212	221	230	236	243
- Long term [Installed]: 10•OD	mm	129	135	141	147	153	157	162

AD20

Characteristics	Cable Type (For 38 ~ 72 fibers cable)							
	Type	04kN	08kN	12kN	16kN	20kN	24kN	28kN
Nominal outer diameter	mm	13.8	14.3	14.8	15.4	15.8	16.3	16.8
Nominal cable weight								
- MDPE	kg/km	144	155	166	178	189	201	212
- TRPE		154	165	176	189	200	213	224
Maximum stringing tension	kN	2.2	3.9	5.6	7.5	9.3	11.2	13.0
Maximum operating load	kN	4	8	12	16	20	24	28
Maximum breaking load	kN	14.0	24.1	35.1	47.1	58.1	70.1	81.0
Minimum bending radius								
- Short term [Loaded] : 15•OD	mm	207	215	222	231	237	245	252
- Long term [Installed]: 10•OD	mm	138	143	148	154	158	163	168

\* Tested in accordance with IEC 60794-1

## OUTDOOR CABLE AD10 | AD20

AD20

Characteristics	Cable Type (For 74 ~ 96 fibers cable)							
	Type	04kN	08kN	12kN	16kN	20kN	24kN	28kN
Nominal outer diameter	mm	15.4	15.8	16.3	16.8	17.3	17.7	18.1
Nominal cable weight								
- MDPE	kg/km	180	190	202	214	225	236	247
- TRPE		190	201	213	226	237	249	260
Maximum stringing tension	kN	2.1	3.8	5.7	7.6	9.4	11.3	13.0
Maximum operating load	kN	4	8	12	16	20	24	28
Maximum breaking load	kN	13.2	23.4	35.5	47.5	58.5	70.5	81.5
Minimum bending radius								
- Short term [Loaded] : 15*OD	mm	231	231	245	252	260	266	272
- Long term [Installed]: 10*OD	mm	154	154	163	168	173	177	181

AD20

Characteristics	Cable Type (For 98 ~ 144 fibers cable)							
	Type	08kN	12kN	16kN	20kN	24kN	28kN	32kN
Nominal outer diameter	mm	19.2	19.6	19.9	20.3	20.7	21.0	21.4
Nominal cable weight								
- MDPE	kg/km	280	291	302	313	323	335	345
- TRPE		293	304	316	327	338	349	360
Maximum stringing tension	kN	3.7	5.6	7.4	9.4	11.1	13.0	14.8
Maximum operating load	kN	8	12	16	20	24	28	32
Maximum breaking load	kN	23.1	34.9	46.5	58.6	69.5	81.6	92.6
Minimum bending radius								
- Short term [Loaded] : 15*OD	mm	288	294	299	305	311	315	321
- Long term [Installed]: 10*OD	mm	192	196	199	203	207	210	214

\* Tested in accordance with IEC 60794-1

# INDOOR/OUTDOOR CABLE

### Note

- Fiber colors by IEC60304: Blue/Orange/Green/Brown/Grey/White/Red/Black/Yellow/Violet/Pink/Aqua
- Diameter represents a nominal value and may vary by  $\pm 5\%$ .
- Sheath marking legend: hot foil stamp(indented)  
Ex) Manufacturing year (ex. 2003) SAMSUNG ADSS SM 24 = length marking =

### Ordering

AD10 -  -

- Fiber count 002~096
- Fiber type S Single mode: Max. 0.38/0.25 dB/km @ 1310/1550 nm  
U NZ-DSF: Max. 0.25 dB/km @ 1550 nm

AD20 -  -  kN -

- Fiber count 002~144
- Max.tensile load choose a value in the above table
- Fiber type S Single mode: Max. 0.38/0.25 dB/km @ 1310/1550 nm  
U NZ-DSF: Max. 0.25 dB/km @ 1550 nm



# Simplex Cable



Simplex Cable  
TSM

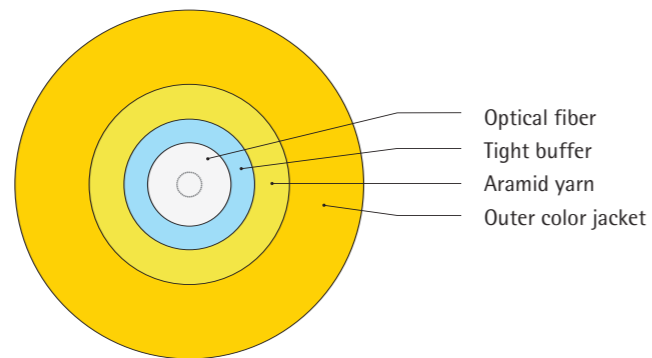
## Description

SAMSUNG Simplex cables have up to 900 μm tight-buffered fiber surrounded by an aramid yarn strength member with a flame retardant outer jacket. The cables allow for flexibility and reliability for use in interconnect and patch panel applications as a jumper or a pigtail. The cable is optimized for today's premise wiring system.

## Feature / Benefit

- Available both in single mode fiber type and multi-mode fiber type
- Highly flexible and lightweight for easy handling
- Flame retardant tight buffer
- Flame retardant outer jacket

## Cable Drawing



TSM

\* Drawing is not to scale

## Mechanical Performance

- Temperature : - Operation: -20 ~ +70 °C  
 - Installation : -20 ~ +70 °C  
 - Storage: -40 ~ +75 °C

Characteristics	Unit	Cable Type					
		A	B	C	D	E	F
Buffer diameter	μm	650	900	900	900	900	900
Nominal outer diameter	mm	1.6	2.0	2.4	2.8	2.9	3.0
Nominal cable weight	kg/km	2.4	3.6	5.3	6.9	8.2	8.6
<b>Maximum tensile load</b>							
- Short term [Loaded]	N	80	180	220	220	220	320
- Long term [Installed]	N	40	90	100	100	100	160
<b>Minimum bending radius</b>							
- Short term [Loaded]	mm	40	50	50	50	50	50
- Long term [Installed]	mm	20	30	30	30	30	30

\* Tested in accordance with IEC 60794-1

## Note

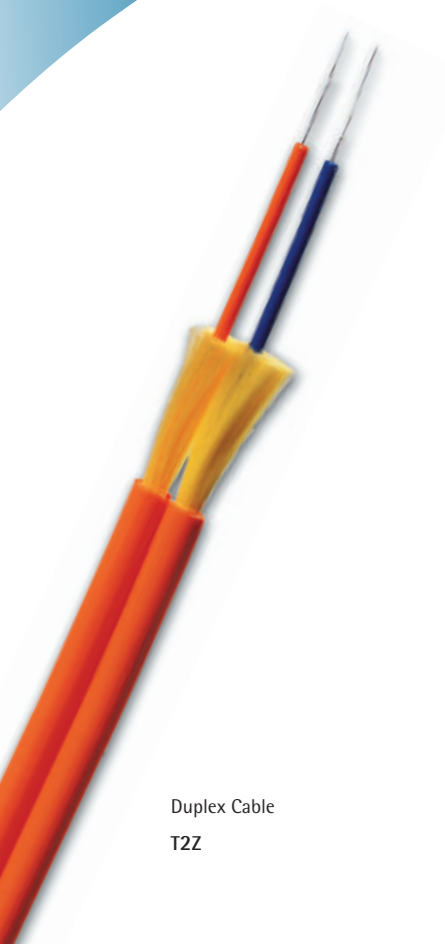
- Buffer colors by IEC60304: Yellow for SMF, Orange for MM50/125, Grey for MM62.5/125
- Sheath marking legend would be adopted upon request.

## Ordering

TSM -  -

- Cable type A ~ F
- Fiber type S Single mode: Max. 0.4/0.3 dB/km @ 1310/1550 nm  
M 50/125 μm: Max. 3.5/1.5 dB/km, 500/500 Mhz·km @ 850/1300 nm  
L 62.5/125 μm: Max. 3.5/1.5 dB/km, 200/500 Mhz·km @ 850/1300 nm

# Duplex Cable - ZIP



Duplex Cable  
T2Z

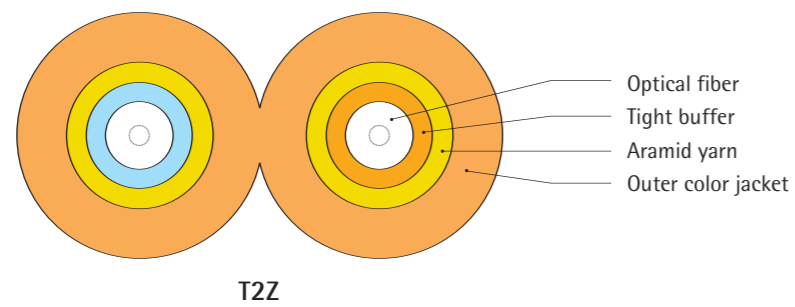
## Description

SAMSUNG Duplex(ZIP) cables have two tight-buffered, up to 900 μm, fibers surrounded by an aramid yarn strength member with a flame retardant outer jacket. The cable allows for flexibility and reliability for use in interconnect. The cable is designed to meet or to exceed the requirements of today's premise wiring systems.

## Feature / Benefit

- Two tight-buffered(up to 900 μm) fibers in a small package
- Available both in single mode fiber type and multi-mode fiber type
- Highly flexible and lightweight for easy handling
- Interconnect cable for riser and general purpose indoor applications
- Flame retardant tight buffer
- Flame retardant outer jacket

## Cable Drawing



\* Drawing is not to scale

## Mechanical Performance

Temperature : - Operation: -20 ~ +70 °C  
- Installation : -20 ~ +70 °C  
- Storage: -40 ~ +75 °C

T2Z

Characteristics	Unit	Cable Type					
		A	B	C	D	E	F
Buffer diameter	μm	650	900	900	900	900	900
Nominal outer diameter	mm	1.6*3.4	2.0*4.1	2.4*4.9	2.8*5.7	2.9*5.9	3.0*6.1
Nominal cable weight	kg/km	4.8	7.2	10.6	12.8	15.4	16.2
<b>Maximum tensile load</b>							
- Short term [Loaded]	N	160	360	440	440	440	640
- Long term [Installed]	N	80	160	200	200	200	320
<b>Minimum bending radius</b>							
- Short term [Loaded]	mm	40	50	50	50	50	50
- Long term [Installed]	mm	20	30	30	30	30	30

\* Tested in accordance with IEC 60794-1

## Note

- Sheath marking legend would be adopted upon request.

## Ordering

T2Z -  -

Cable type A ~ F

Fiber type S Single mode: Max. 0.4/0.3 dB/km @1310/1550 nm

M 50/125 μm: Max. 3.5/1.5 dB/km, 500/500 Mhz·km @850/1300 nm

L 62.5/125 μm: Max. 3.5/1.5 dB/km, 200/500 Mhz·km @850/1300 nm

# Distribution Cable



Distribution Cable  
TD

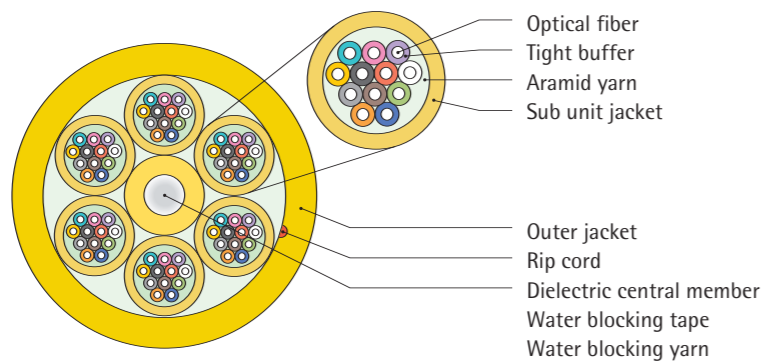
## Description

SAMSUNG Distribution cables offer maximum 72 fibers count with single or multi unit cable with 900 μm tight-buffered fibers. These cables provide flame retardant characteristics. The cables are suitable for indoor application.

## Feature / Benefit

- Available both in single mode fiber type and multi-mode fiber type
- Highly flexible and lightweight for easy handling
- Sub-unit identification by number print on sheath
- Available max. 12 fibers with single unit & 16 ~ 72 fibers with multi unit design
- All sheath components are flame retardant material

## Cable Drawing



DR: Riser

\* Drawings are not to scale

## Mechanical Performance

Characteristics	Unit	Cable Type								
		2	4	6	8	12	24	36	48	72
Fibers per subunit	ea	-	-	-	-	-	6	6	6	12
Nominal outer diameter	mm	4.5	4.8	5.3	5.5	6.5	12.6	15.1	17.8	18.2
Nominal cable weight	kg/km	17	22	27	32	40	128	195	272	265
Maximum tensile load	N	440	440	660	660	660	1320	1320	1320	1320
<b>Minimum bending radius</b>										
- Short term [Loaded] : 15*OD	mm	68	72	80	83	98	189	227	267	273
- Long term [Installed]: 10*OD	mm	45	48	53	55	65	126	151	178	182
<b>Temperature</b>										
- Operation						-20 ~ +50				
- Installation	°C					-40 ~ +65				
- Storage						-20 ~ +50				

## Note

- Buffer colors by IEC60304: Blue/Orange/Green/Brown/Grey/White/Red/Black/Yellow/Violet/Pink/Aqua
- Sheath marking legend: ink jet printing  
Ex) Manufacturing year (ex. 2003)    SAMSUNG    SM 24    = length marking =

## Ordering

TD - [1] - [2]

- [1] Fiber count    002~072
- [2] Fiber type    S Single mode: Max. 0.4/0.3 dB/km @1310/1550 nm  
M 50/125 μm: Max. 3.5/1.5 dB/km, 500/500 Mhz·km @850/1300 nm  
L 62.5/125 μm: Max. 3.5/1.5 dB/km, 200/500 Mhz·km @850/1300 nm

# Loose Tube Cable

## LSZH/Flame Retardant for Indoor/Outdoor

### Description

SAMSUNG LSZH cables have small diameter and are designed for indoor and outdoor use. Containing up to 12 colored fibers, the loose tubes are SZ-stranded around a dielectric central member. The outer jacket uses a flame-retardant or Low Smoke Zero-Halogen material. The loose tube design provides stable performance over a wide temperature range and is compatible with any telecommunication grade optical fiber.

### Feature / Benefit

- Up to 144 fibers(IN14), 288 fibers(IA10)
- Proven loose tube design for performance
- SZ stranding design allows for easy mid-span access and isolates fibers from installation and environmental rigors
- Drycore design for excellent water blocking performance and easier handling
- Compliant with IEC 60332-3C and IEEE 383

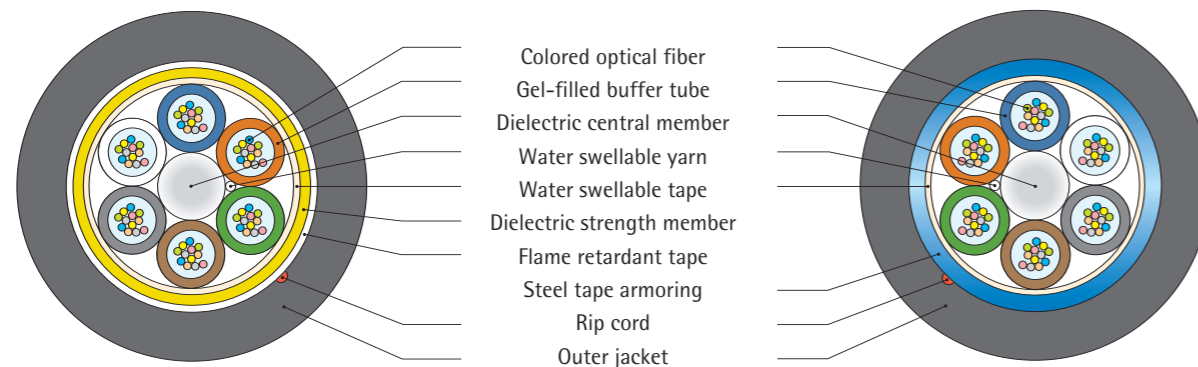
#### IN14 model

- High strength with peripheral dielectric strength members
  - Special black, UV-resistant, flame-retardant outer jacket
- Low smoke and zero halogen for indoor use
- Designed for OFNR

#### IA10 model

- Small diameter and lightweight
- Flame retardant and UV-resistant sheath permit to use in indoor and outdoor applications

### Cable Drawing



IN14: LSZH

IA10: Flame retardant

\* Drawings are not to scale

### Mechanical Performance

Temperature : - Operation/Storage : -40 ~ +70 °C  
- Installation : -20 ~ +70 °C

Characteristics	Unit	Fiber Count					
		2 ~ 36	2 ~ 48	2 ~ 72	96	96	144
Tube type (fibers per tube)	-	B(6)	C(8)	D(12)	C(8)	D(12)	D(12)
Norminal outer diameter	mm	14.9	14.9	15.8	18.5	17.4	18.8
Norminal cable weight	kg/km	255	260	280	370	345	385
Maximum tensile load	N	2700	2700	2700	3500	3500	4000
Minimum bending radius							
- Short term [Loaded] : 15*OD	mm	22.4	22.4	23.7	27.8	26.1	28.2
- Long term [Installed]: 10*OD	mm	14.9	14.9	15.8	18.5	17.4	18.8
Crush resistance	N/10cm	2000					

Characteristics	Unit	Fiber Count					
		2 ~ 36	2 ~ 48	2 ~ 72	96	96	144
Tube type (fibers per tube)	-	B(6)	C(8)	D(12)	C(8)	D(12)	D(12)
Norminal outer diameter	mm	11.4	11.4	11.4	15.6	12.7	15.6
Norminal cable weight	kg/km	145	150	150	260	185	265
Maximum tensile load	N	1800	1800	1800	3000	2400	3200
Minimum bending radius							
- Short term [Loaded] : 15*OD	mm	17.1	17.1	17.1	23.4	19.1	23.4
- Long term [Installed]: 10*OD	mm	11.4	11.4	11.4	15.6	12.7	15.6
Crush resistance	N/10cm	3000					

\* Tested in accordance with IEC 60794-1

### Note

- Fiber and tube colors by IEC60304: Blue/Orange/Green/Brown/Grey/White/Red/Black/Yellow/Violet/Pink/Aqua
- Sheath marking legend: hot foil stamp (indented)  
Ex) Manufacturing year (ex. 2003) SAMSUNG SM 12 = length marking =

### Ordering

IN14 -  -  -   
IA10

<input type="text"/>	Fiber count	IN14: 002~144 IA10: 002~288
<input type="text"/>	Tube type	A 4 fibers B 6 fibers C 8 fibers D 12 fibers
<input type="text"/>	Fiber type	S Single mode: Max. 0.38/0.25 dB/km @ 1310/1550 nm M 50/125 μm: Max. 3.0/1.0 dB/km, 500/500 Mhz·km @ 850/1300 nm L 62.5/125 μm: Max. 3.5/1.5 dB/km, 200/500 Mhz·km @ 850/1300 nm