

Optical Fibers & Cables

Optical Fibers




Product Information

Single-mode Optical Fibers







Product Name	PureBand™ PB	PureBand™ PB [LL]	PureBand™- PB Plus	PureBand™- PB -R	PureBand™- PB -R [LL]	PureAccess™ PA	PureAccess™ PAA2 [A2]
Standards Compliance	G.652.D	G.652.D	G.652.D/G.657.A1	G.652.D/G.657.A1	G.652.D/G.657.A1	G.652.D/G.657.A1	G.652.D G.657.A2/B2
Available Coating Diameter	250 μm	250 μm	250 μm 200 μm	250 μm 200 μm	250 μm	250 μm 200 μm 180 μm	250 μm 200 μm 180 μm
Minimum Bending Radius	25 mm	25 mm	10 mm	10 mm	10 mm	10 mm	7.5 mm
Mode Field Diameter at 1310 nm	$9.2 \pm 0.4 \mu\text{m}$	$9.2 \pm 0.4 \mu\text{m}$	$8.9 \pm 0.4 \mu\text{m}$	$9.2 \pm 0.4 \mu\text{m}$	$9.2 \pm 0.4 \mu\text{m}$	$8.6 \pm 0.4 \mu\text{m}$	$8.6 \pm 0.4 \mu\text{m}$
Cable Cut-off Wavelength	$\leq 1260 \text{ nm}$	$\leq 1260 \text{ nm}$	$\leq 1260 \text{ nm}$	$\leq 1260 \text{ nm}$	$\leq 1260 \text{ nm}$	$\leq 1260 \text{ nm}$	$\leq 1260 \text{ nm}$
Attenuation at 1310 nm	$\leq 0.35 \text{ dB/km}$	$\leq 0.32 \text{ dB/km}$	$\leq 0.35 \text{ dB/km}$	$\leq 0.35 \text{ dB/km}$	$\leq 0.32 \text{ dB/km}$	$\leq 0.35 \text{ dB/km}$	$\leq 0.35 \text{ dB/km}$
Attenuation at 1383 nm (After H ₂ aging)	$\leq 0.35 \text{ dB/km}$	$\leq 0.32 \text{ dB/km}$	$\leq 0.35 \text{ dB/km}$	$\leq 0.35 \text{ dB/km}$	$\leq 0.32 \text{ dB/km}$	$\leq 0.35 \text{ dB/km}$	$\leq 0.35 \text{ dB/km}$
Attenuation at 1550 nm	$\leq 0.20 \text{ dB/km}$	$\leq 0.18 \text{ dB/km}$	$\leq 0.20 \text{ dB/km}$	$\leq 0.20 \text{ dB/km}$	$\leq 0.18 \text{ dB/km}$	$\leq 0.21 \text{ dB/km}$	$\leq 0.21 \text{ dB/km}$
Attenuation at 1625 nm	$\leq 0.23 \text{ dB/km}$	$\leq 0.20 \text{ dB/km}$	$\leq 0.23 \text{ dB/km}$	$\leq 0.23 \text{ dB/km}$	$\leq 0.20 \text{ dB/km}$	$\leq 0.22 \text{ dB/km}$	$\leq 0.22 \text{ dB/km}$
Zero Dispersion Wavelength	1300-1324 nm	1300-1324 nm	1300-1324 nm	1300-1324 nm	1300-1324 nm	1300-1324 nm	1300-1324 nm
PMD Link Design Value	$\leq 0.06 \text{ ps}/\sqrt{\text{km}}$	$\leq 0.06 \text{ ps}/\sqrt{\text{km}}$	$\leq 0.06 \text{ ps}/\sqrt{\text{km}}$	$\leq 0.06 \text{ ps}/\sqrt{\text{km}}$	$\leq 0.06 \text{ ps}/\sqrt{\text{km}}$	$\leq 0.06 \text{ ps}/\sqrt{\text{km}}$	$\leq 0.06 \text{ ps}/\sqrt{\text{km}}$

Optical Fibers

Ultra-Low Loss Single-mode Optical Fibers for Terrestrial Application

Product Name	PureAdvance™ -80 	PureAdvance™ -110 	PureAdvance™ -125 
ITU-T Compliance	G.654.C / G.652.B	G.654.E	G.654.E
MFD at 1550 nm	10.5 ± 0.7 μm	11.7 ± 0.7 μm	12.5 ± 0.5 μm
Effective area (Typical) at 1550 nm	85 μm ²	110 μm ²	125 μm ²
Attenuation at 1550 nm	≤ 0.17 dB/km	≤ 0.16 dB/km	≤ 0.16 dB/km
Attenuation (Typical) at 1550 nm	0.160 dB/km	0.156 dB/km	0.156 dB/km
Cable cut-off wavelength (λ _{cc})	≤ 1520 nm (G.654.C) ≤ 1260 nm (G.652.B)	≤ 1520 nm	≤ 1520 nm

Submarine Optical Fibers

Product Name	PureBand™ Submarine 	Z Fiber™ LL 	PureAdvance™ -110 Submarine 	Z-PLUS Fiber™ ULL 	Z-PLUS Fiber™ 130 	Z-PLUS Fiber™ 150 
ITU-T Compliance	G.652.D	G.654.C	G.654.B, G.654.D	G.654.B, G.654.D	G.654.D	G.654.D
Effective area (Typical) at 1550 nm	83 μm ²	85 μm ²	110 μm ²	112 μm ²	130 μm ²	150 μm ²
Attenuation (Typical) at 1550 nm	0.174 dB/km	0.156 dB/km	0.154 dB/km	0.148 dB/km	LL: 0.152 dB/km ULL: 0.148 dB/km	LL: 0.150 dB/km ULL: 0.144 dB/km

Optical Fibers & Cables

Optical Fibers

Submarine Fibers

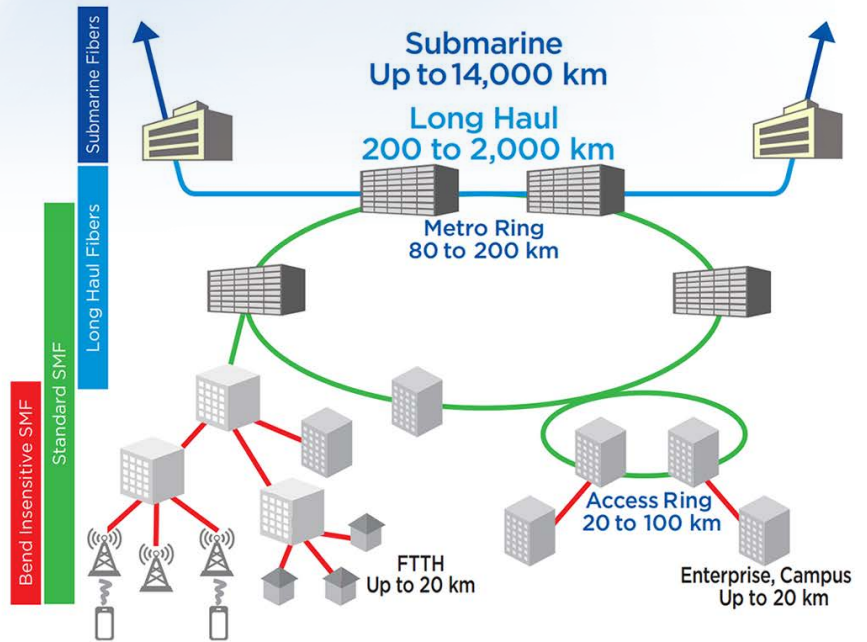
ITU-T	Product Name
G.654.B/C/D	Z Fiber™ Series Z

Long Haul Fibers

ITU-T	Product Name
G.654.E/G.654.C	PureAdvance™ Series PAD

Standard SMF/Bend Insensitive SMF

ITU-T	Product Name
G.652.D	PureBand™ PB
G.652.D	PureBand™ LL PB
G.652.D and G.657.A1	PureBand™-R PB-R
G.652.D and G.657.A1	PureBand™-R LL PB-R
G.652.D and G.657.A1	PureBand™-Plus PB Plus
G.652.D and G.657.A1	PureAccess™ PA
G.652.D and G.657.A2	PureAccess™ [A2] PAA2



Multi-mode optical fibers

	Core diameter: 50 μm			Core diameter: 62.5 μm
	General purpose	Broadband		General purpose
Enhanced flexural characteristic φ30mm(R15mm)				
	PureEther™-Access1G 1G	PureEther™-Access10G 10G	PureEther™-Access10G+ 10G+	EG6 EG6
Optical fiber code	GI(PE-A1G)	GI(PE-A10G)	GI(PE-A10G+)	GI(62.5)
Transmission loss	3.0 dB/km max. (λ=850nm) 1.0 dB/km max. (λ=1300nm)	3.0 dB/km max. (λ=850nm) 1.0 dB/km max. (λ=1300nm)	3.0 dB/km max. (λ=850nm) 1.0 dB/km max. (λ=1300nm)	3.5 dB/km max. (λ=850nm) 1.5 dB/km max. (λ=1300nm)
Transmission band	500 MHz•km min. (λ=850nm) 500 MHz•km min. (λ=1300nm)	1500 MHz•km min. Effective band 2000 MHz•km min. (λ=850nm) 500 MHz•km min. (λ=1300nm)	3500 MHz•km min. Effective band 4700 MHz•km min. (λ=850nm) 500 MHz•km min. (λ=1300nm)	200 MHz•km min. (λ=850nm) 500 MHz•km min. (λ=1300nm)
Min. permissible bending radius ¹	15mm	15mm	15mm	30mm
Standards	IEC60793-2-10 A 1a.1 type OM2'-compliant	IEC60793-2-10 A 1a.2 type OM3'-compliant	Compatible with upper grade of IEC60793-2-10 A 1a.2 type OM4'-compliant	IEC60793-2-10 A 1b type OM1'-compliant
		Can transmit signals to a maximum distance of 300 m at a rate of 10 gigabits	Can transmit signals to a maximum distance of 550 m at a rate of 10 gigabits	

Optical Fibers

Ethernet standards and recommended optical fibers

Standard name		Wavelength	Form Factor	Optical connector	MM:OM2	MM:OM3	MM:OM4	SM:OS1	SM:OS1,OS2			
					1G	10G	10G+	SM	PB	PAPB	PAA2	
100Gigabits Ethernet	IEEE802.3ba	100GBASE-SR10	850nm	CFP/CFP2	MPO	—	100m	150m	—	—		
		100GBASE-SR4	850nm	CFP4/QSFP28	MPO	—	70m	100m	—	—		
		100GBASE-LR4	LAN-WDM	CFP/CFP2/CFP4/QSFP28	LC	—	—	—	—	10,000m		
		100GBASE-ER4	LAN-WDM	CFP/CFP2	LC	—	—	—	—	40,000m		
40Gigabits Ethernet	IEEE802.3ba	40GBASE-SR4	850nm	CFP/QSFP+	MPO	—	100m	150m	—	—		
		40GBASE-LR4	CWDM	CFP/QSFP+	LC	—	—	—	10,000m	10,000m		
	IEEE802.3bg	40GBASE-FR	1550nm	CFP	LC	—	—	—	2,000m	2,000m		
10Gigabits Ethernet	IEEE802.3ae	10GBASE-SR	850nm	SFP+	LC	82m	300m	550m	—	—		
		10GBASE-LR	1310nm	SFP+	LC	—	—	—	10,000m	10,000m		
		10GBASE-ER	1550nm	SFP+	LC	—	—	—	40,000m	40,000m		
Gigabits Ethernet	IEEE802.3z	1000BASE-SX	850nm	SFP	LC	550m	550m	550m	—	—		
		—	850nm	SFP	LC	—	1000m'	1000m'	—	—		
		1000BASE-LX	1300nm	SFP	LC	550m	550m	550m	—	—		
			1310nm	SFP	LC	—	—	—	5,000m	5,000m		

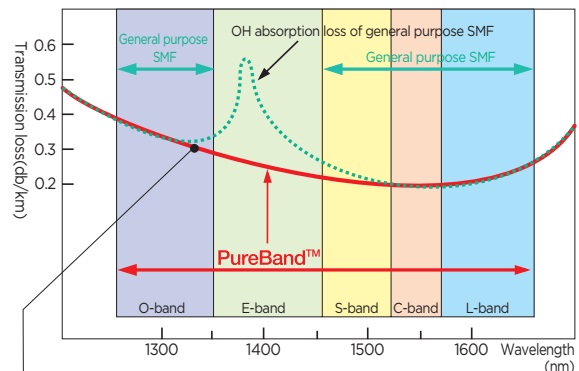
*: The table above shows the values actually measured by Sumitomo Electric. Different values may be measured if different cabling and network equipment and devices are used.

The world's industry leading G.652.D and G.657.A1 PureBand™ and PureAccess™

These optical fibers will meet the future need for a substantial increase in the transmission capacity of trunk lines that link local bases.

These fibers comply with ITU-T G.652.D and are usable over a wide wavelength range from 1260 nm to 1625 nm.

Fully compatible with general purpose SM fibers, PureBand™ and PureAccess™-PB fibers have been widely used to construct local community informatization infrastructures.



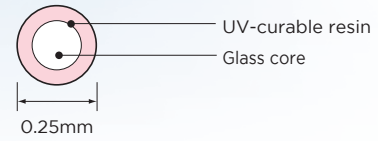
Significant reduction of OH absorption loss in 1383 nm waveband

Optical Fibers & Cables

Primary Coated Fiber/Secondary Jacketed Fibers/Fiber Ribbons

0.25 mm (UV) Primary Coated Fiber

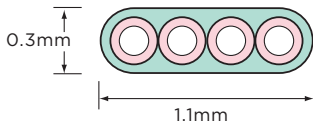
An optical fiber made by cladding a glass core with UV curable resin to form a diameter of 0.25 mm



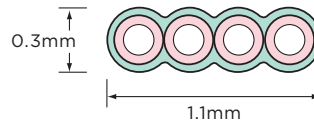
Fiber Ribbons

A fiber ribbon made by laying a group of primary coated fibers in parallel and cladding them with UV-curable resin. Since each fiber ribbon can be fusion-spliced as a unit, fiber ribbon splice time is saved substantially compared with single fiber.

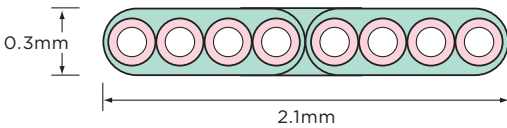
4-fiber ribbon [fiber ribbon code: 4]



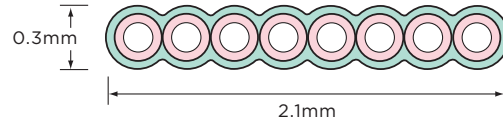
4-fiber EZbranch™ ribbon [fiber ribbon code: 4/(EZB)]



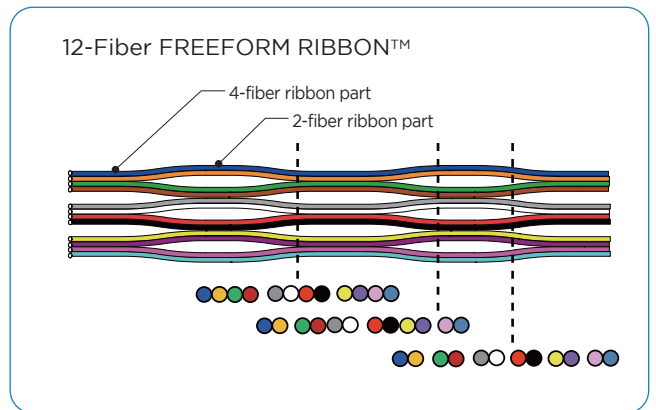
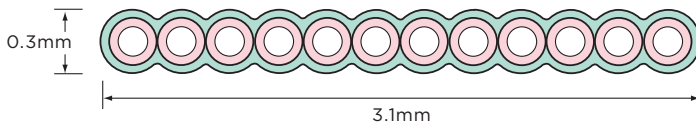
Split type 8-fiber ribbon [fiber ribbon code: 8]



8-fiber EZbranch™ ribbon [fiber ribbon code: 8/(EZB)]



12-fiber FREEFORM RIBBON™ [fiber ribbon code:12/(FFR)]



Primary Coated Fibers/Secondary Jacketed Fibers/Fiber Ribbons

Fiber Ribbon for Mid-Span Entry (EZbranch™)

EZbranch™; optical fiber ribbon that can be split for breakout and branching after cable installation

If you try removing the ribbon matrix of the optical fiber ribbon in the midst of its length, the probability is that you could break the fiber or damage the coating of the fiber. Or should you succeed taking individual fibers successfully, it would take several minutes accompanied by the unbearable uneasiness during the process.

However, with our EZbranch™ optical ribbon, a single fiber of optical fiber ribbon can be easily separated by gently snapping and pulling on the optical fiber ribbon using our exclusive tool due to its unique structure with deliberately designed depressions between fibers. The separation can be done in 30 to 40 seconds with no danger of open circuits.

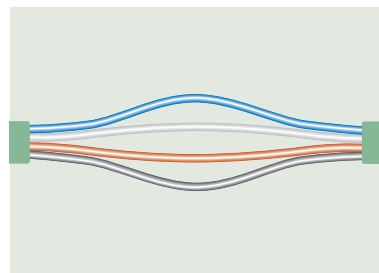
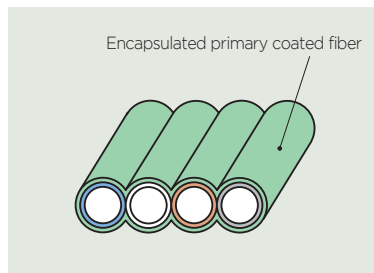


Fig.1
Construction of EZbranch™

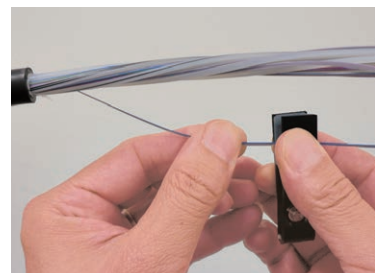


Fig.2
Mid-span entry with tool and the separation of fibers

EZbranch™ optical fiber ribbon conforms to standard specifications for optical fiber ribbon, and connection is compatible with conventional optical fiber ribbon; wiring parts such as cabinets and closures for conventional optical fiber ribbon can be used as is.

Intermediate single core branching is possible, greatly increasing the utilization efficiency of the fiber

Any unused fiber in the optical fiber ribbon can be separated and connected to form an intermediate single core branch for a new subscriber, without cutting any passing single fiber ribbon, eliminating any waste of the fiber.

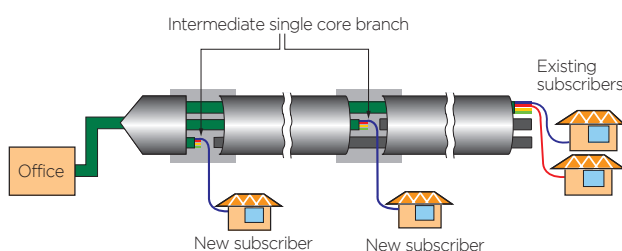
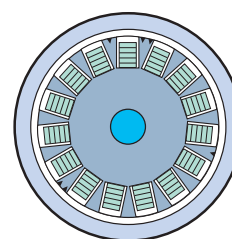


Fig.3
Taking separate fiber out of the identical ribbon fiber can increase the efficiency.

EZbranch™ ribbon can be used in many kinds of fiber ribbon cables

We have the cable product range with EZbranch™ ribbon fiber as we have them with the conventional fiber ribbon. And thanks to the thin ribbon matrix, the fiber ribbon experience lower PMD in EZbranch™ statistically than that of the conventional ribbon.



SZ standard ribbon slotted cable
24-fiber, 60-fiber, 100-fiber, 200-fiber,
300-fiber, 400-fiber, 640-fiber

Fig.4
Variety of EZbranch™ applications with cables

EZbranch™ exercise its performance best with the bending insensitive fiber PureAccess™ in FTTx applications. Drop/Indoor cable with PureAccess™ EZbranch™ ribbon will give you new opportunities of wiring the optical fiber into the premises.

Optical Fibers & Cables

Optical Cable Selection Guide

Optical Cable Applications

Long haul

Applicable optical cable

- FREEFORM RIBBON™ slot cable ➔ p.10
- SZ slotted core ribbon cable ➔ p.10
- Microduct Cable ➔ p.11

Stage Area Network

Applicable optical cable

- PureFlex™-slim cable ➔ p.29

FTTH (branch line)

Applicable optical cable

- SZ slotted core ribbon cable ➔ p.10
- Slackly-suspended distribution aerial cable ➔ p.13
- Microduct Cable ➔ p.11

FTTH (trunk line)

Applicable optical cable

- FREEFORM RIBBON™ slot cable ➔ p.10
- SZ slotted core ribbon cable ➔ p.10
- Microduct Cable ➔ p.11

FTTH (Subscriber line)

Applicable optical cable

- Drop cable ➔ p.12

Local Area Network

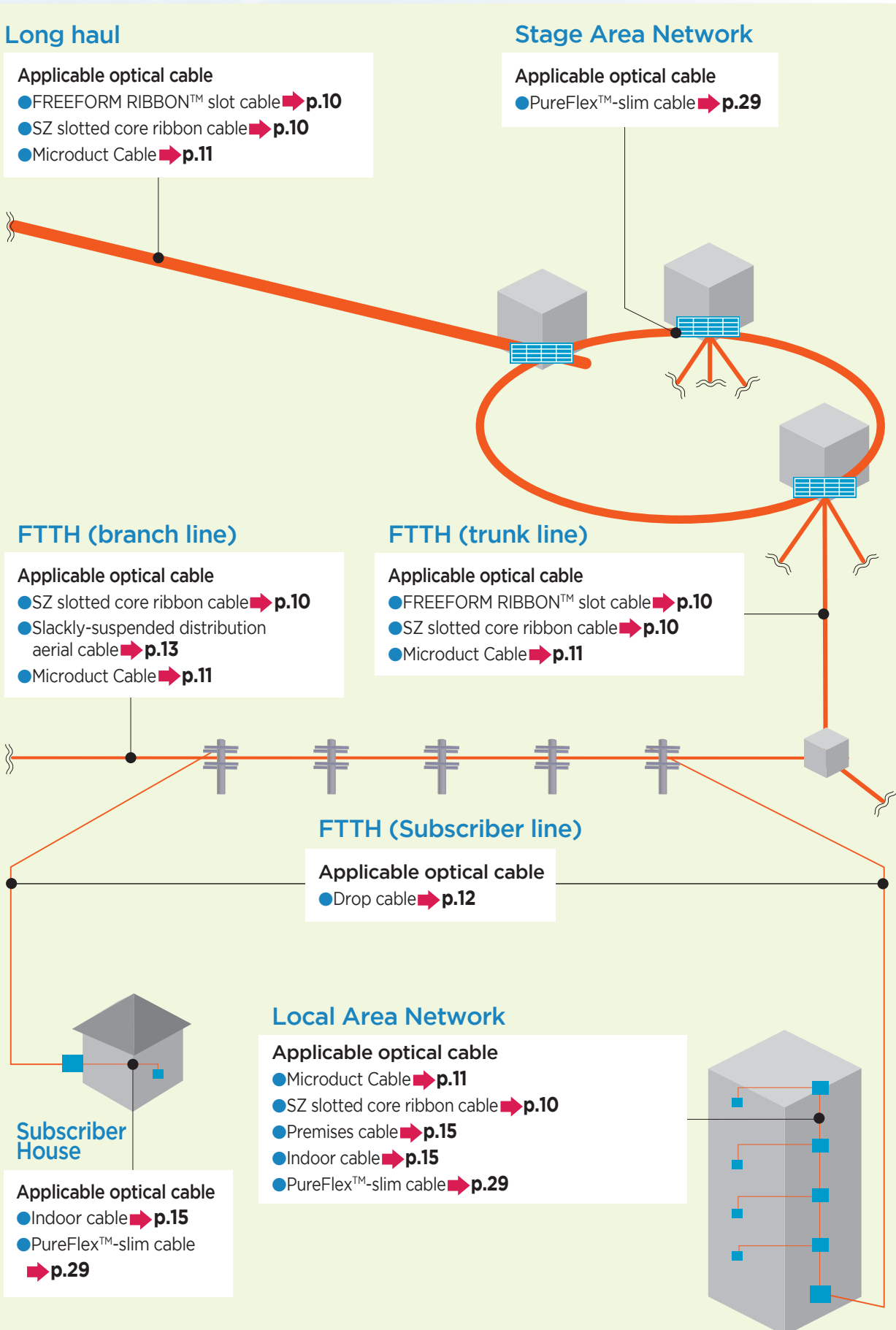
Applicable optical cable

- Microduct Cable ➔ p.11
- SZ slotted core ribbon cable ➔ p.10
- Premises cable ➔ p.15
- Indoor cable ➔ p.15
- PureFlex™-slim cable ➔ p.29

Subscriber House

Applicable optical cable

- Indoor cable ➔ p.15
- PureFlex™-slim cable ➔ p.29



Optical Cable Selection Guide

Cable Line Up





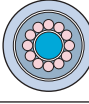
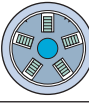
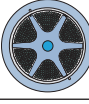

Wide range of cable Line UP from back born, metropolitan network and FTTH application

FTTH Cables

Tight buffered drop and indoor cables enable you quick and smooth installing in MDU and houses. They also suitable for additional installation into a duct already occupied with other cables, owing to small cable size, ultra low friction jacket and preferable rigidity. All our FTTH cable is RoHS compliant and most of them are halogen free.

Distribution and Trunk cables

Sumitomo offers two types of cable to match to your network, one is loose tube cables which widely used in the world and the other is ribbon slotted cables which achieve high fiber density and excellent mechanical performance.

Cable Type	Application	Product	Construction	Features	Fiber Count	Page
FTTx cable	Access	Indoor cable (Tight jacketed)		Very compact tightly-jacketed cable for indoor application	1 - 12	→ p.15
		Drop cable (Tight jacketed)		Very compact aerial drop cable with easy handling	1 - 8	→ p.12
		Slackly-suspended distribution aerial cable		Very compact and easy mid-span access. Ribbon can be separated easily with pliable structure.	24	→ p.13
	Interconnection	PureFlex™-slim/ PureFlex™		Practically robust preconnectorized cord Easy and safe	1 or 2	→ p.29
Premises cable	Break-out	Premises		Conventional layer structure with Laminated Aluminum Polyethylene sheath	2 - 16	→ p.15
Ribbon slotted core cable	Distribution	SZ slotted core ribbon cable		Ribbon cable with easy mid-span access	24 - 800	→ p.10
	Long haul/ Distribution	FREEFORM RIBBON™ slotted core cable		High fiber count & compact size with pliable EZbranch™	864 - 6912	→ p.10
Microduct cable	Long haul / Distribution	Microduct Cable with FREEFORM RIBBON™		High-packing density cable for air blown installation	144 - 864	→ p.11

Optical Fibers & Cables

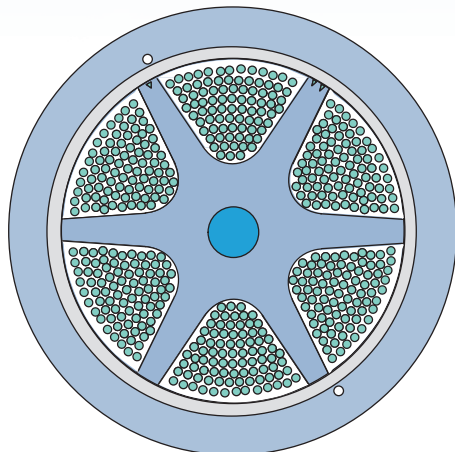
General Purpose Optical Cables

FREEFORM RIBBON™ Slot Cable for High Fiber Count & Compact size NEW

12-fiber FREEFORM RIBBON™ can realize so compact cable by packing many fibers at high density.

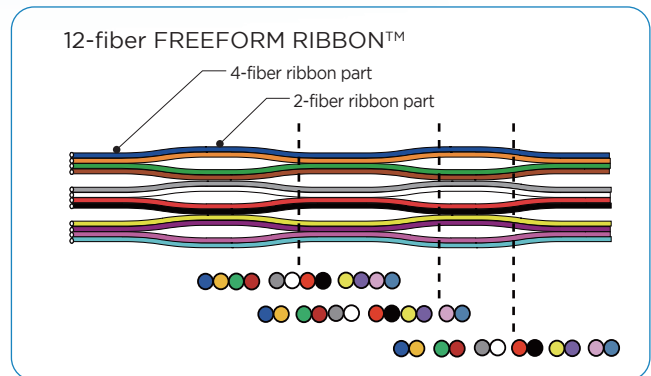
Optional PE sheath, Water blocking, Flame retardant, Metal free

RoHS compliant, FTTH (trunk line), FTTH (branch line), LAN (vertical)



1152 fiber type

12-fiber FREEFORM RIBBON™



12-fiber FREEFORM RIBBON™

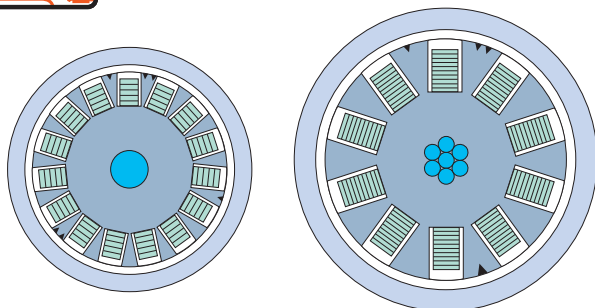
Fiber count	432	576	864	1152	1728	3456	6912
Cable Diameter (mm)	200um	15.5	15.5	19	-	25	30
	250um	18.5	18.5	21	25	26	32
Reccomended Duct size	200um	1.25 inch			1.5inch		2.0inch
	250um	1.25 inch			1.5inch	2.0inch	-
Tensile strength	200um	2670N					
	250um	2670N					
Min. Bending radius After installation (mm)	200um	300		-	350		420
	250um	300				350	-
Min. Bending radius during installation (mm)	200um	310	380	-	500	560	740
	250um	370	420	500	520	640	-

Available optical fibers for this cable PA

SZ slotted core ribbon cable

- Water blocking by dry water swellable tape
- EZbranch™ available as well as usual 4 and 8-fiber ribbon
- Easy accessibility to fibers in the midst of the cable because of SZ stranding groove configuration.
- Easy to remove outer sheath and water-swelable tape over the slot rod manually without special tool.
- Suitable for mass-fusion splice

Fiber ribbon available for this cable: EZbranch



300 fiber type

4-fiber ribbon type

800 fiber type

8-fiber ribbon type

Available optical fibers for this cable PA

*1: 400-, 640-, and 800-fiber cables are excluded.

Optional PE sheath, Water blocking, Flame retardant, Metal free

RoHS compliant, FTTH (trunk line), FTTH (branch line), LAN (vertical)

4-fiber ribbon type/4-fiber EZbranch™ type

Fiber count	24	60	100	144	200	300	
Fiber diameter [mm]	0.25						
Cable diameter [mm]	8.5	9.5	11.5	14	15.5	20.5	
Cable weight [kg/km]	65	75	110	140	180	320	
Strength member [mm]	1.4	1.6	2.0		2.3	2.6	
Maximum load [N]	900	1180	1850		2440	3120	
Bending radius [mm]	After installation	85	95	115	140	155	205
	During installation	170	190	230	280	310	410

8-fiber ribbon type/8-fiber EZbranch™ type

Fiber count	288	400	576	640	800	
Fiber diameter [mm]	0.25					
Cable diameter [mm]	16.5	20	22		28.5	
Cable weight [kg/km]	210	290	410	420	600	
Strength member [mm]	2.3	2.6	7/1.4			
Maximum load [N]	2440	3120	5700			
Bending radius [mm]	After installation	165	200	220		285
	During installation	330	400	440		570

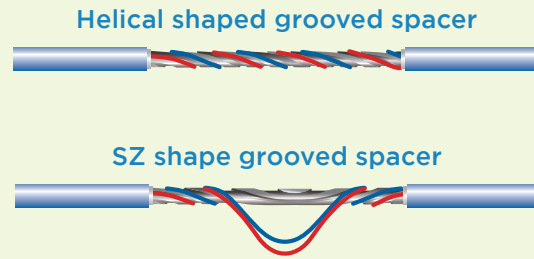
*: Values for cables with polyethylene sheath

Note: Please note that the values for some types of ribbon cables may differ from those given in the table above. For your specific inquiry, contact Sumitomo Electric.

General Purpose Optical Cables

Fiber Ribbon in SZ-grooved spacer-the solution for mid- span access

- Conventional helical grooved spacer has a merit of high fiber density in a cable, but it takes time and labor to take out fiber ribbon out of the groove in the mid-span. Probability is that you are forced to place the branching point at the jointing box.
- With SZ-shape grooved spacer all you have to do to take the fiber of the groove is removing the jacket. You can access to the fiber anywhere you want and it gives you a flexible design for the network, especially in aerial distribution cable.



Microduct Cable with FREEFORM RIBBON™ for Air blown installation NEW

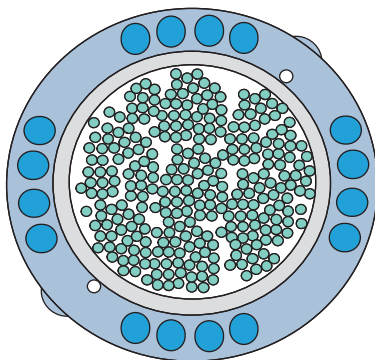
- High fiber density
- Water blocking by dry water swellable tape
- 12-fiber FREEFORM RIBBON™
- Suitable for mass fusion splice

Optional

PE sheath	Water blocking	Metal free	Flame retardant
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RoHS compliant

FTTH (trunk line)	FTTH (branch line)	LAN (vertical)
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12-fiber FREEFORM RIBBON™

Fiber count		144	192	288	432	864
Cable Diameter (mm)	200um	7.2	7.6	9.5	10.5	13.5
	250um	8.0	8.7	10.5	12.5	14.9
Min. Duct size (mm)	200um	10	12	13	14	18
	250um	12	13	14	18	20
Tensile strength (N)	200um	500				1000
	250um	500				1000
Min. Bending radius After installation (mm)	200um	150				200
	250um	150				300
Min. Bending radius during installation (mm)	200um	150	155	190	210	270
	250um	160	180	210	250	300

Available optical fibers for this cable

PA

Optical Fibers & Cables

General Purpose Optical Cables

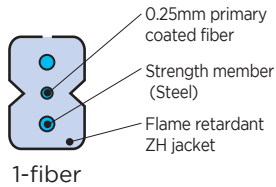
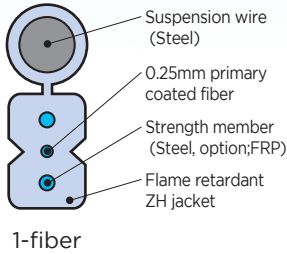
Drop Cable (0.25mm primary coated fiber)

- Easy access to the fiber in the midst of the cable with proper tool
- Suitable for introducing the fiber into the premises
- Suitable for additional installation into the duct occupied with other cables

Flame retardant

RoHS compliant

FTTH (subscriber line)



Fiber count	1	2	8
Fiber diameter [mm]	0.25		
Cable diameter [mm]	2×4.5 (including messenger wire)		2.5×6.5
Cable weight [kg/km]	20		25
Suspension wire	1.2		
Maximum load [N]	660		
Bending radius [mm]	30 (After installation)		50
	60 (During installation with tension)		100

These figures are nominal value.

Available optical fibers for this cable	PA PAA2
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Fiber count	1	2
Fiber diameter [mm]	0.25	
Cable diameter [mm]	2×1.6	2.1×1.6
Cable weight [kg/km]	6	
Strength Member	0.4×2	
Maximum load [N]	150	
Bending radius [mm]	15 (After installation)	
	30 (During installation with tension)	

These figures are nominal value.

Available optical fibers for this cable	PA PAA2
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Drop Cable (4-fiber ribbon)

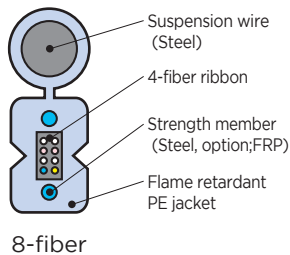
- Easy access to the fiber in the midst of the cable with proper tool
- Suitable for introducing fiber into the building
- Suitable for additional installation into the duct occupied with other cables
- Single fibers accessible in the mid-span

Flame retardant

RoHS compliant

FTTH (branch line)

FTTH (subscriber line)



Fiber count	4	8
Fiber diameter [mm]	0.25	
Cable diameter [mm]	2×6 (including messenger wire)	
Cable weight [kg/km]	2.5	
Suspension wire	1.2	
Maximum load [N]	660	
Bending radius [mm]	30 (After installation)	
	60 (During installation with tension)	

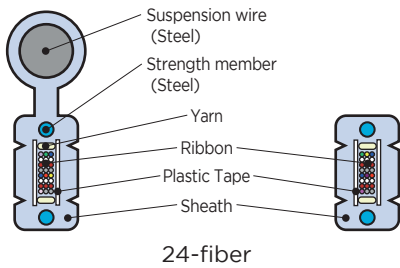
These figures are nominal value.

Available optical fibers for this cable	PA PAA2
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General Purpose Optical Cables

Slackly-suspended distribution aerial cable

- Easy access to the fiber in the midst of the cable with proper tool
- Suitable for introducing the fiber into the premises
- FREEFORM RIBBON™ contains 4 fibers and easy to branch to single fiber



RoHS compliant

FTTH (subscriber line)

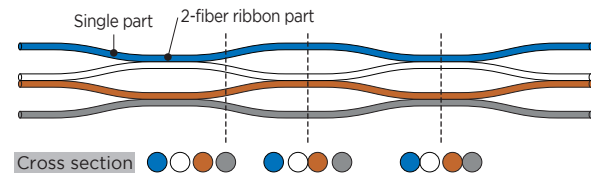
	With Messenger wire	Without Messenger wire
Fiber Count		24
Fiber Diameter [mm]		0.25
Cable Weight [kg/km]	70	25
Suspension wire	2.6	—
Maximum load [N]	3,120	450
Bending radius [mm]		40

These figures are nominal value.

Available optical fibers for this cable

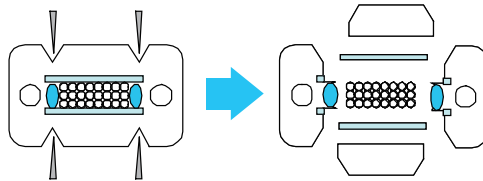
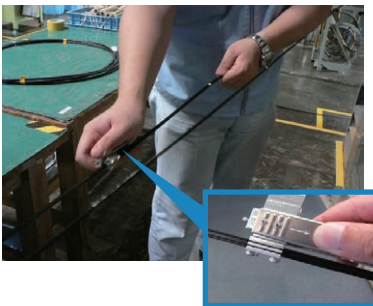
PA PAA2

FREEFORM RIBBON™

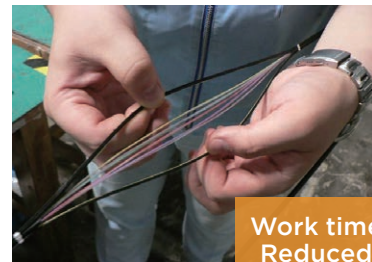


Uniquely designed jacket structure for easy access to fibers in the midst of the cable with a specialized tool.

1. Divide jackets



2. Take out fibers



Work time Reduced by 90%

Optical Fibers & Cables

General Purpose Optical Cables

Low Friction Indoor Cable

PureAccess™ allows you quick and easy installation and higher cable density in conduit



50% Size down

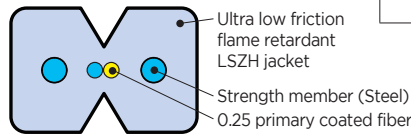
80% Dynamic friction down

*(Compared with Sumitomo conventional type)

Low Smoke characteristic

- Suitable for additional installation into a duct already occupied other cables, owing to small cable size and ultra low friction jacket.
- Easy access to the fiber in the middle of the cable with proper tool
- Suitable for in-building wiring
- Field assembly connector available directly (1-fiber)

RoHS, LSZH, FR



Cable type	Flexible		Rigid	
	1	2	1	2
Fiber count	1	2	1	2
Fiber diameter [mm]	0.25			
Cable diameter [mm]	1.6×2.0		1.6×2.1	
Cable weight [kg/km]	6		7	
Strength member [mm]	0.4		0.5	
Maximum load [N]	150			
Bending radius [mm]	30 (After installation)			
	60 (During installation with tension)			

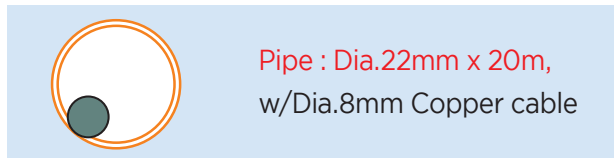
These figures are nominal value.

Available optical fibers for this cable

PA

PAA2

How many indoor cables can we install into a common pile?



Low Friction type w/ PureAccess™

1.6mm
2.0mm

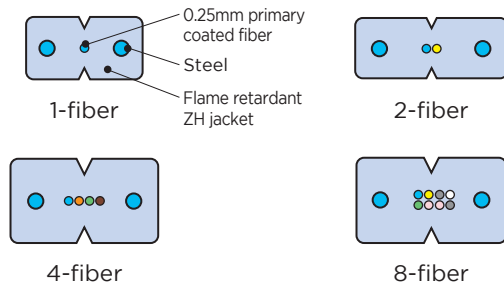
Conventional type w/ Standard SMF

2.0mm
3.1mm

30 cables inserted **6 cables inserted**
5 times as much cables can be installed into a same pipe!

Indoor Cable (0.25mm primary coated fiber)

- Easy access to the fiber in the midst of the cable with proper tool
- Suitable for in-building wiring
- Suitable for additional installation into the duct occupied with other cables
- Field assembly connector available directly (1 or 2-Fiber)



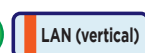
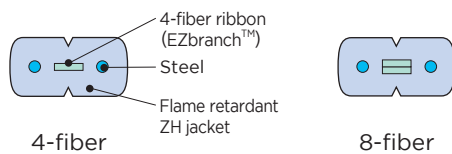
Fiber count	1	2	4	8
Fiber diameter [mm]	0.25			
Cable diameter [mm]	2.0×3.0	2.0×4.0	2.5×4.0	
Cable weight [kg/km]	10		15	
Strength member [mm]	0.4×2			
Maximum load [N]	150			
Bending radius [mm]	30 (After installation)			
	60 (During installation with tension)			

These figures are nominal value.

Available optical fibers for this cable	PA PAA2
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Indoor Cable (4-fiber ribbon)

- Easy access to the fiber in the midst of the cable with proper tool
- Suitable for in-building wiring
- Suitable for additional installation into the duct occupied with other cables



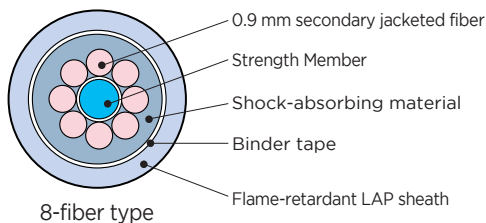
Fiber count	4	8
Fiber diameter [mm]	0.25	
Cable diameter [mm]	2.0×4.0	
Cable weight [kg/km]	15	
Strength member [mm]	0.4×2	
Maximum load [N]	150	
Bending radius [mm]	30 (After installation)	
	60 (During installation with tension)	

These figures are nominal value.

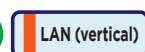
Available optical fibers for this cable	PA PAA2
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Premises Cable (0.9mm tight buffered fiber)

- LAP sheath blocks the penetration of moisture
- Suitable for introducing fibers into the building as well as outside installation



Available optical fibers for this cable	SM PB PA DSF 1G 10G 10G+ EG6
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Fiber count	2	4	6	8	10	12	16
Fiber diameter [mm]	0.9						
Cable diameter [mm]	9		12		13		
Cable weight [kg/km]	85		140		170		
Strength member [mm]	1.6		2.3		2.6		
Maximum load [N]	1180		1570		2060		
Bending radius [mm]	After installation		90		120		135
	During installation		180		240		270

*: Values for cables with a flame-retardant LAP sheath

Cable type designation	(Number of fibers)NH(optical fiber code) - L - LAP - FR
Example:	8NHGI (PE-A1G) - L - LAP - FR