



光通信ケーブルの紹介

屋内用光ケーブル

Simplex , Duplex Zip

Distribution, Breakout

Patch cord / Jumper cord

FTTHケーブル

Fiber To The Home

High speed internet, network

Round / Figure '8' / Flat type

光電複合ケーブル

Optical + Electrical

Hybrid for FTTA

Hybrid for Antenna

船舶用光ケーブル

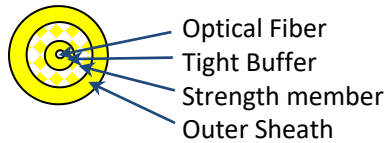
Shipboard/offshore

NEK 606 Type

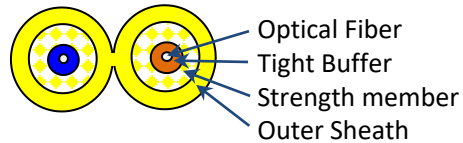
AICI / QFCI / QFCU

屋内用光ケーブル

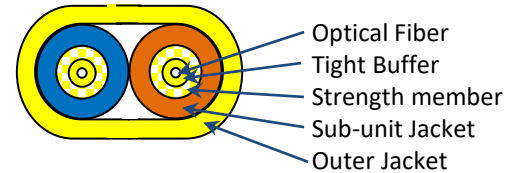
• SIMPLEX



• DUPLEX ZIP



• DUPLEX TWIN FLAT



Type	Number of Fiber	Buffer Diameter (μm)	Cable Diameter (mm)	Cable Weight (kg/km)	Min. Bending Radius (mm)	Tensile Load	
						Installation (N)	Operation (N)
Simplex	1	600±50	1.6	3.0	24	90	50
			1.8	3.5	27	100	60
		900±50	2.0	4.0	30	150	70
			2.4	6.5	36	190	90
			3.0	9.0	45	200	100
Duplex ZIP	2	600±50	1.6*3.2	6.5	24	180	80
			1.8*3.6	7.5	27	200	100
		900±50	2.0*4.0	8.0	30	300	140
			2.4*4.8	12.5	36	380	180
			3.0*6.0	18.5	45	400	200
Duplex Twin	2	900±50	3.0*5.0	17	30	300	140
			3.8*6.6	25	38	400	200

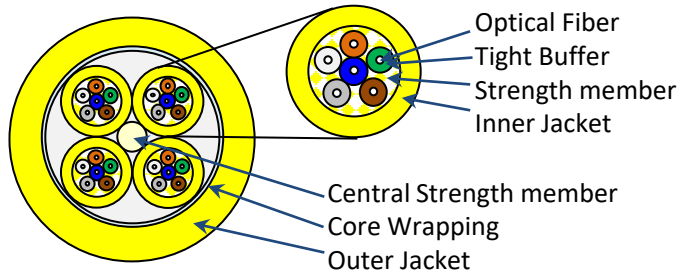


Application & Features

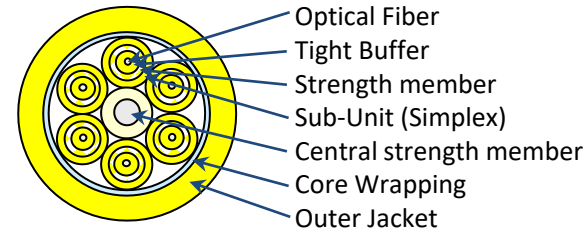
- Jumpers, Pigtails and Interconnected cable
- Single-mode and multi-mode, Tight buffered, Flame retardant
- Alternative jacket material and colors
- UL certified OFN, OFNR



• DISTRIBUTION CABLE



• BREAKOUT CABLE



No. of Fibers	Units	Buffer Diameter (μm)	Cable Diameter (mm)	Approx. Cable Weight (kg/km)	Cable Bending Radius (mm)	Tensile Load	
						Installation (N)	Operation (N)
2	2F x 1U	900±50	4.3	17	65	700	350
4	4F x 1U		4.7	21	70	700	350
6	6F x 1U		5.5	27	82	800	400
8	8F x 1U		6.1	32	92	800	400
12	12F x 1U		6.5	38	98	1000	500
24	24F x 1U	900±50	9.0	67	135	1400	700
24(M)	4F x 6U		14.0	160	210	3000	1500
36(M)	6F x 6U		16.6	210	249	3200	1600
48(M)	8F x 6U		19.0	274	285	3600	1800
48(M)	12F x 4U		16.6	205	249	3200	1600

Application & Features

- SMF and MMF / Bundled Tight buffer / Alternative jacket material and colors
- Flame retardant, UL certified OFN, OFNR



No. of Fibers	Buffer Diameter (μm)	Sub-unit Diameter (mm)	Cable Diameter (mm)	Approx. Cable Weight (kg/km)	Min. Bending Radius (mm)	Tensile Load	
						Installation (N)	Operation (N)
2	600±50 or 900±50	2.0	6.5	43	90	400	200
4			7.2	50	100	700	400
6			8.2	72	120	900	600
8			10.0	95	150	1500	700
12			12.0	150	170	1500	900
16			17.0	170	250	1400	800
24			15.3	218	230	1800	900

Application & Features

- SMF and MMF / Individual Tight buffer / Ruggedized Simplex unit
- Alternative jacket material and colors
- UL certified OFN, OFNR





光ジャンパコードはシングルモードとマルチモードに設計された光ケーブルにLC、SC、FC及びMPOといったコネクタを連結して使用し、ネットワーク機器間の信号伝送に使用可能であり、優れた性能および品質を維持し、効果的な通信システムを実現する。

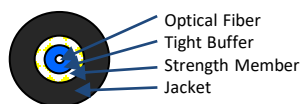
➤ Advantage

- ✓ 簡単に素早くインストール可能な普遍化したコネクタを使用
- ✓ 顧客のニーズに合った長さで製作/供給
- ✓ 安定的な品質が確保された生産で、設置後の通信品質向上

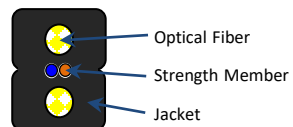
Parameter		Sing-Mode	Multi-Mode
Insertion Loss	LC, SC, FC	$\leq 0.3\text{dB @ } 1310/1550\text{nm, Typical}$	$\leq 0.3\text{dB @ } 850/1310\text{nm, Typical}$
	MPO	$\leq 0.75\text{dB @ } 1310/1550\text{nm, Typical}$	$\leq 0.75\text{dB @ } 850/1310\text{nm, Typical}$
Return Loss	UPC	$\geq 50\text{dB @ } 1310/1550\text{nm, Typical}$	-
	APC	$\geq 60\text{dB @ } 1310/1550\text{nm, Typical}$	-
End Face Geometry		Telcordia GR 326 Core	
Operating Temperature		$-40 \sim +70\text{C}^{\circ}$	

FTTHケーブル

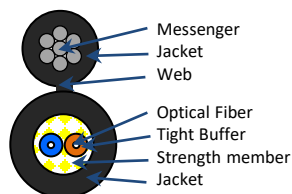
• Round type



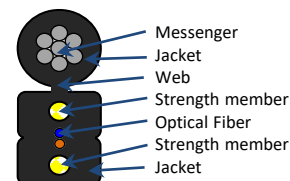
• Flat type



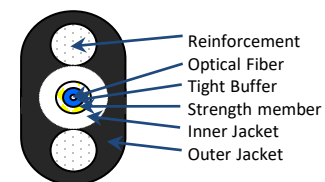
• Round(Fig.8)



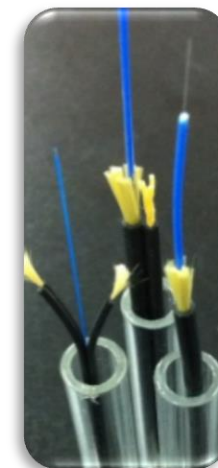
• Flat(Fig.8)



• Round Flat



Type	Number of Fiber	Buffer Diameter (μm)	Cable Diameter (mm)	Jacket Material	Strength member Material	Messenger Material
Round	1, 2, 4	600±50, 900±50	3.0, 4.8	LSZH, TPU	Aramid yarn	N/A
Flat	1 ~ 12	N/A	2.0 x 2.4, 2.0 x 6.0	LSZH	FRP, ARP, Steel wire	FRP or ARP, Steel wire
Round(Fig.8)	2, 4	600±50, 900±50	2.0 x 4.8	LSZH, TPU	Aramid yarn	FRP or ARP, Steel wire Aramid yarn
Flat(Fig.8)	1 ~ 12	N/A	2.0 x 4.8, 3.8 x 6.5	LSZH	FRP, ARP, Steel wire	FRP or ARP, Steel wire, Aramid yarn
Round Flat	1, 2	600±50, 900±50	4.5 x 8.2	HDPE	FRP, ARP, Steel wire	N/A

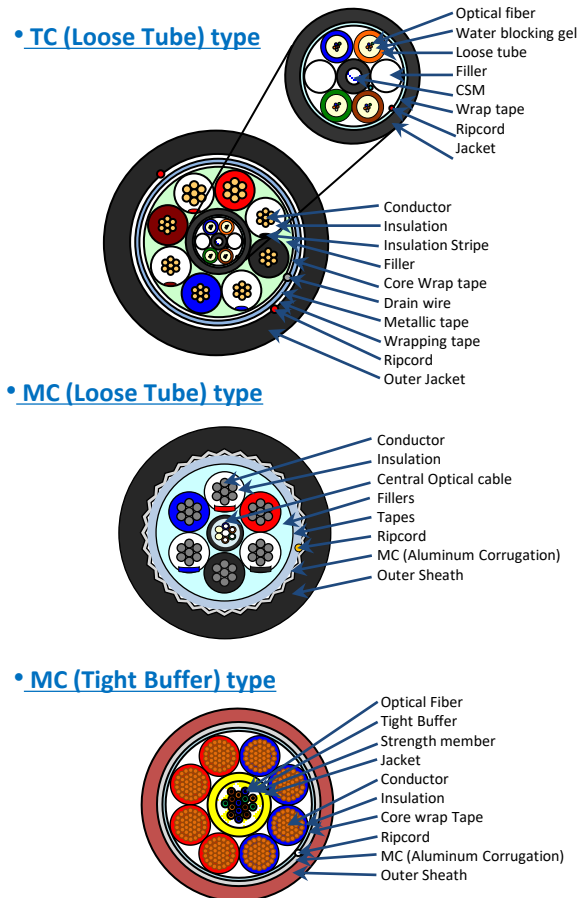


Application & Features

- SMF and MMF / Indoor or Indoor/Outdoor dwelling unit
- Light weight and compact size and easy handling

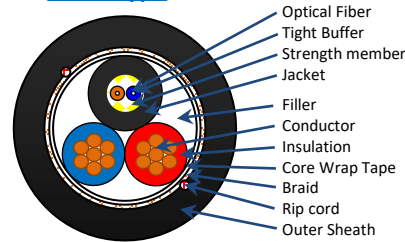
光電複合ケーブル

• HYBRID FEEDER CABLE

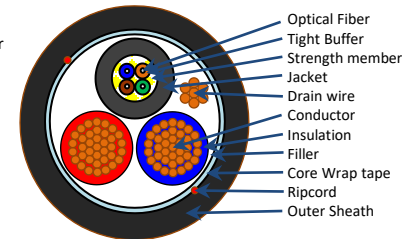


• HYBRID JUMPER CABLE

• Braid type

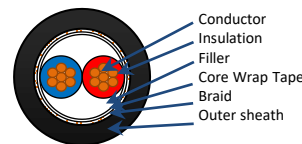


• Drain wire type

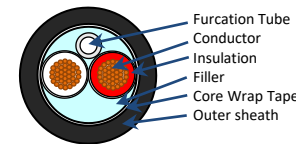


• POWER JUMPER CABLE

• Braid type

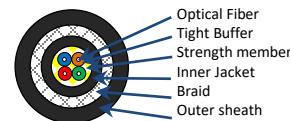


• Furcation tube type

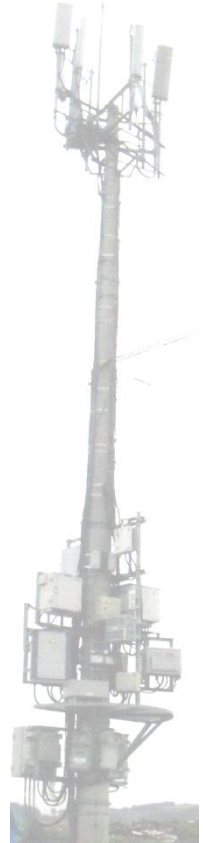
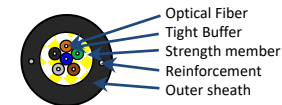


• OPTICAL JUMPER CABLE

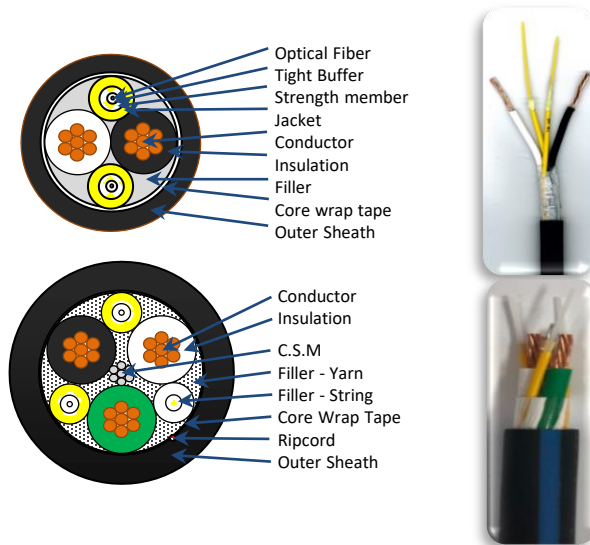
• Braid type



• Reinforced wire type



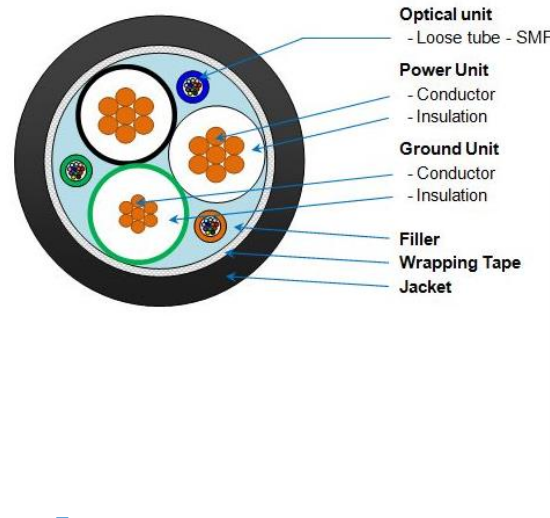
Tight Buffered type



Application & Features

- Small cell or In-building cellular area
- Light weight and compact size and easy handling
- Extend able construction of optical fiber

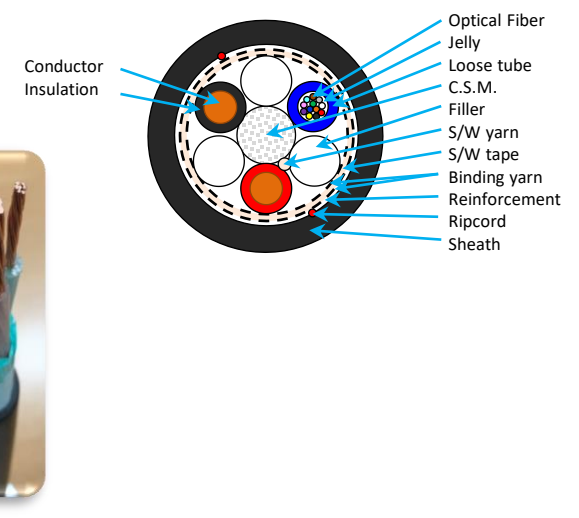
Loose tube type



Application & Features

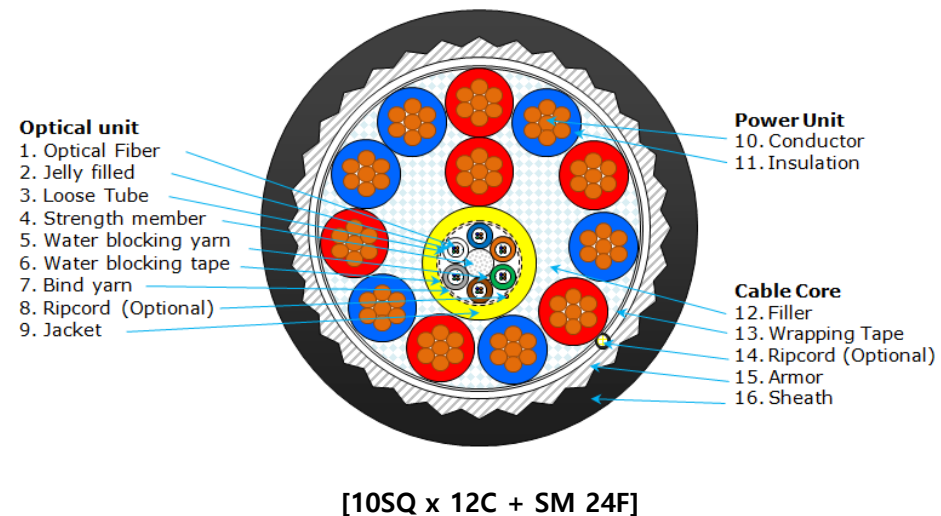
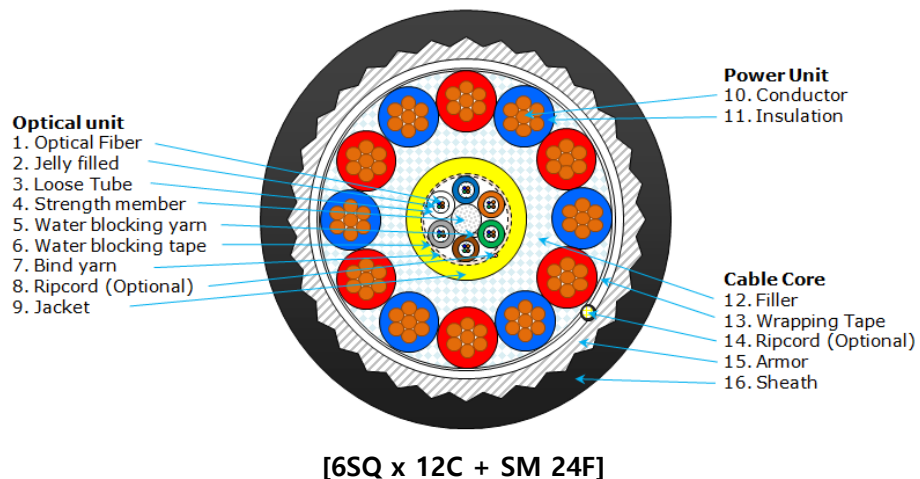
- Meet with IEC 60502-1 0.6/1kV
- Indoor/Outdoor
- Duct, Tunnel, Subway

Loose tube type



■ Hybrid Cable (0.6/1kV)

➤ 6-RRHs Feeder Cable (6mm2 & 10mm2)

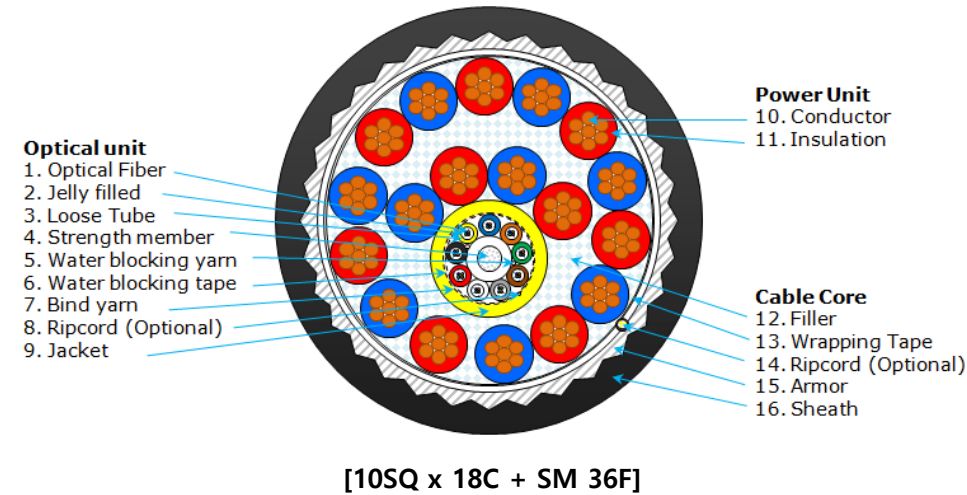
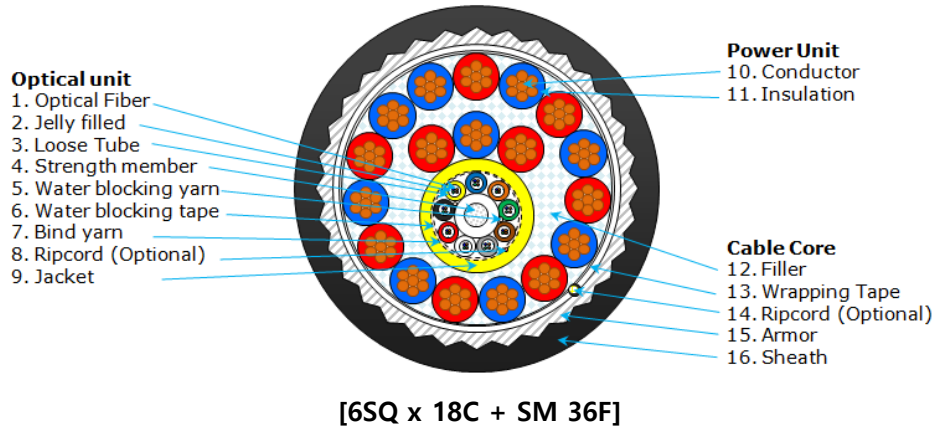


➤ Specification

Parameter	6mm2	10mm2
Number of Optical Tube	4 fiber x 6 Tube (SM G.657_B3 or G.657_A2)	
Optical Unit Jacket Dimension	Nom. 9.0mm (LSZH PO / Yellow)	
Armor	Corrugation (UL 1569) / Aluminum	
Outer Sheath	FRPE (ST8 of IEC 60502-1) / Black color	
Outer Dimension	Nom. 30.6mm	Nom. 34.5mm
Approximate Net weight	1,230kg / km	1,770kg / km

■ Hybrid Cable (0.6/1kV)

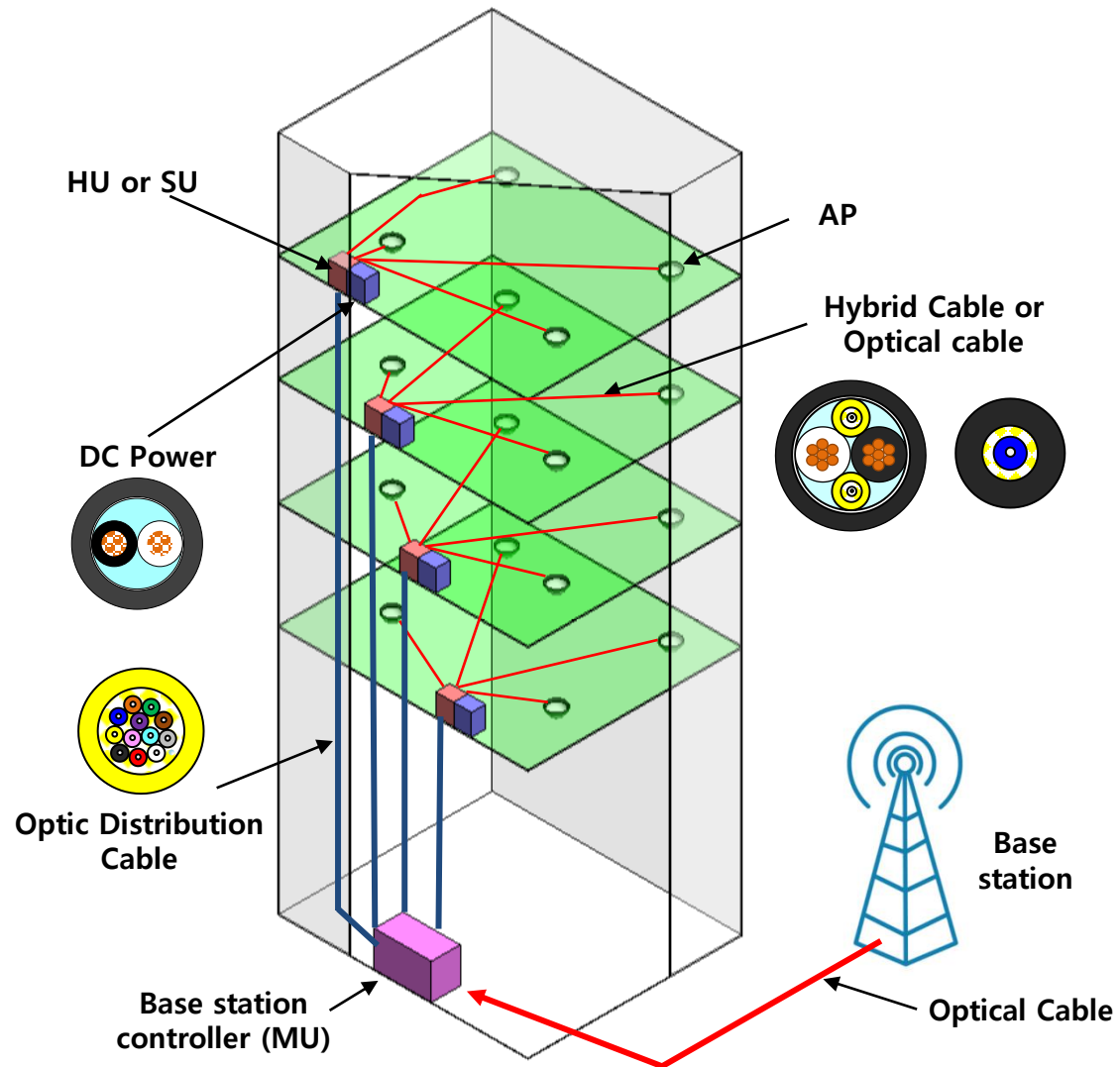
➤ 9-RRHs Feeder Cable (6mm² / 10mm²)



➤ Specification

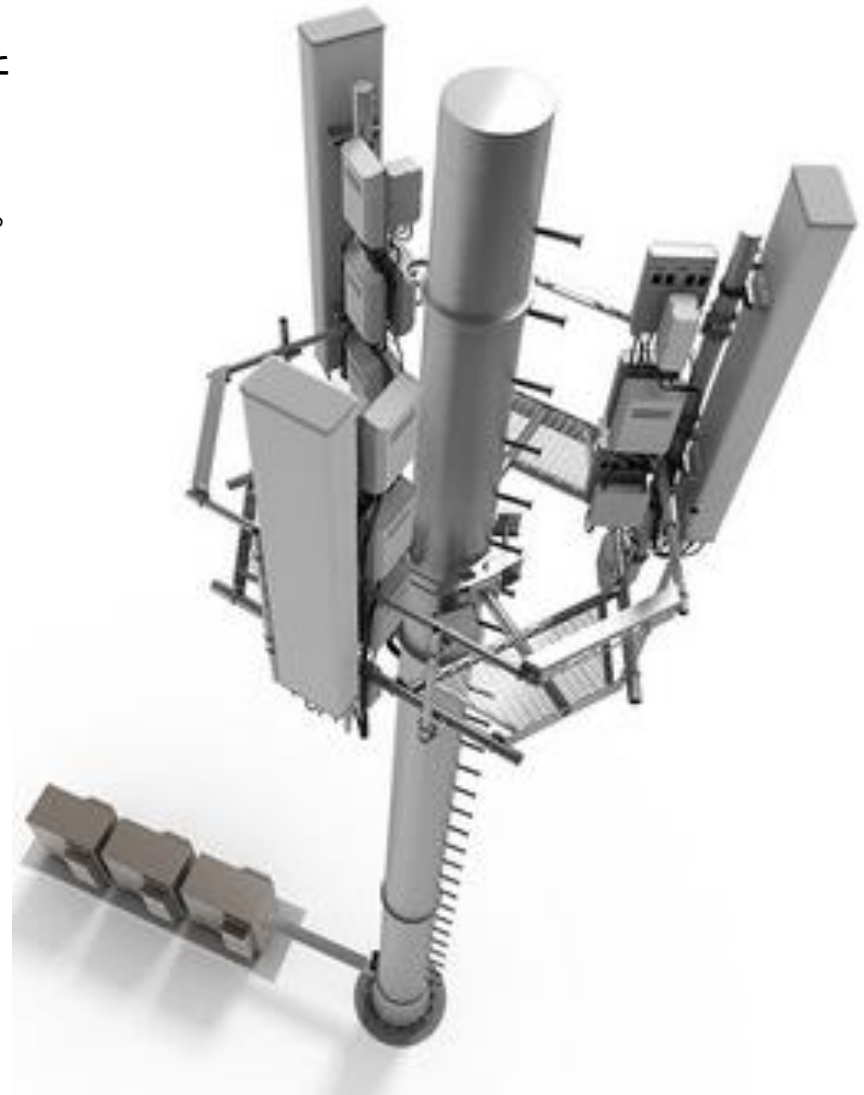
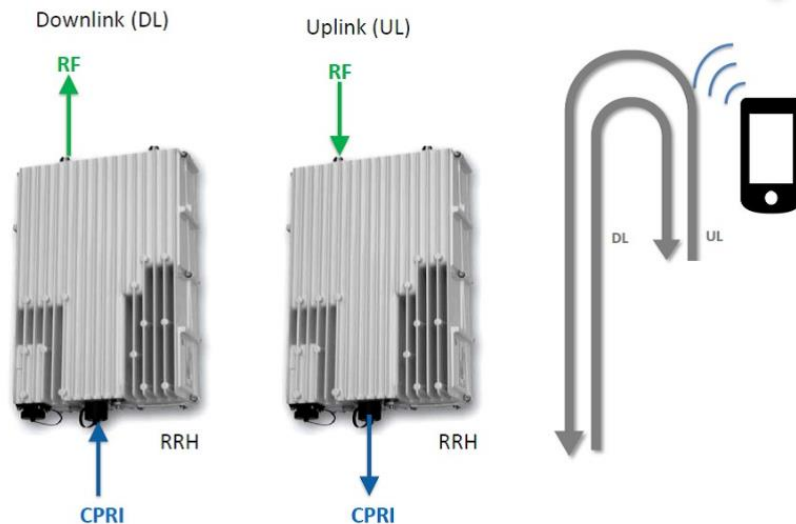
Parameter	6mm ²	10mm ²
Number of Optical Tube	4 fiber x 9 Tube (SM G.657_B3 or G.657_A2)	
Optical Unit Jacket Dimension	Nom. 11.0mm (LSZH PO / Yellow)	
Aarmor	Corrugation (UL 1569) / Aluminum	
Outer Sheath	FRPE (ST8 of IEC 60502-1) / Black color	
Outer Dimension	Nom. 35.3mm	Nom. 40.3mm
Approximate Net weight	1,730kg / km	2,510kg / km

設置例



5G siteおよび無線通信基地局に設置時間および性能向上のためにコネクターが接続されたPre-Connected Ass'yを供給し、ユーザが容易かつ便利に設置できるソリューションを提供する。

- ✓ CPRI Optic & Power cable Assembly
- ✓ Perfect Outdoor Connectors for RRH system
- ✓ Hybrid Connector Solutions



■ Hybrid Jumper Cable Solution

Antenna Solutionはワンタッチコネクタまたは商用化されたコネクタを適用・組立てて供給し、現場での設置時間短縮に効果的に設計される。

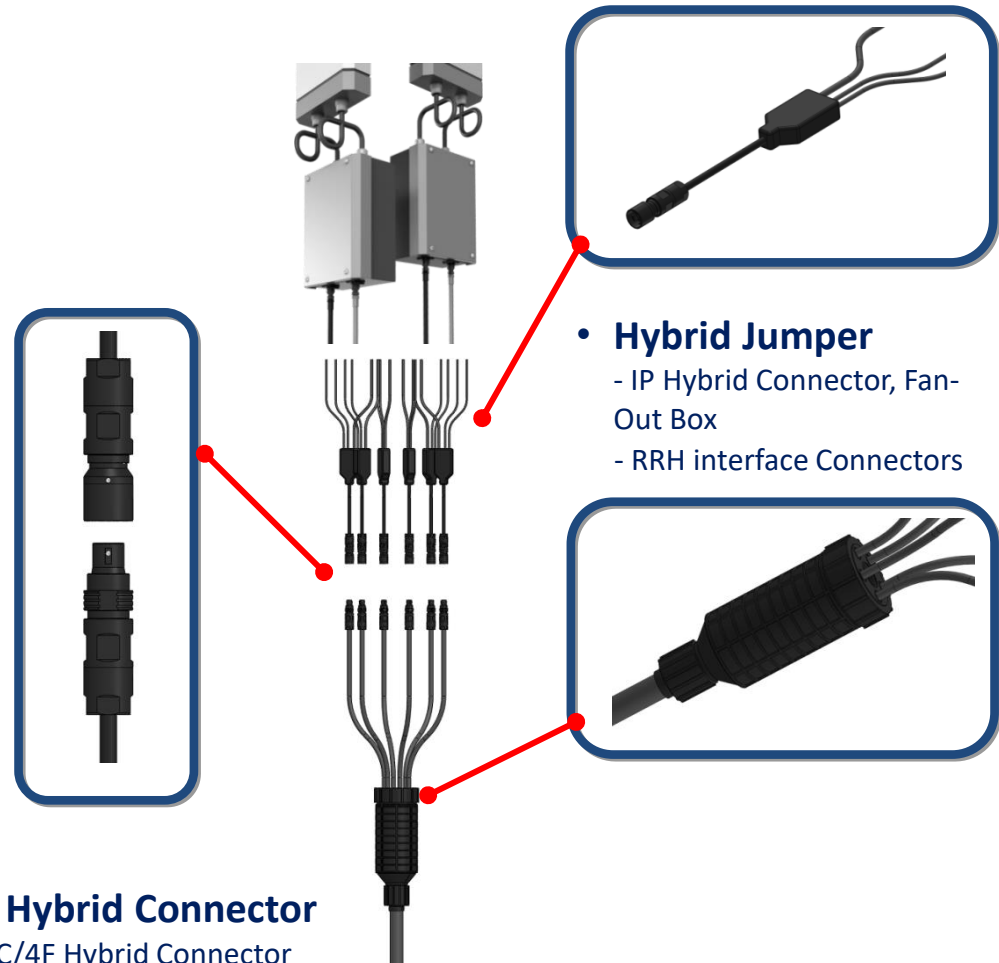
- ✓ 現場設置時に容易に施設が可能な

Connected Hybrid cable

- ✓ 専用ツールが不要.
- ✓ 設置時間を効果的に短縮し、安定的.

- ✓ Push-Pullまたは商用化されたコネクタを使用することで、設置が容易

- **IP Hybrid Connector**
 - 2C/4F Hybrid Connector
 - IP-68 / Push-Pull Type



供給実績

区分	顧客	供給製品	供給期間	備考
アメリカ	Sprint	アンテナ用 Hybrid Ass'y cable	2013 ~ 2018	
	Verizon	FTTH用 Drop cable	2010 ~ 現在	
	Corning	メディア向け Hybrid cable	2017 ~ 現在	
	Dist	FTTH用 Drop cable	2020 ~ 現在	
オーストラリア	Telstra	アンテナ用 Hybrid cable	2013 ~ 2019	
ヨーロッパ	Dist	FTTH用 Optical cable	2019 ~ 現在	
	Dist	Data center用 Optical cable	2019 ~ 現在	
日本	Softbank	Hybrid cable	2011 ~ 2014	
韓国	KT	FTTH用 Optical cable	2000 ~ 現在	
	SK	アンテナ用 Hybrid cable	2018 ~ 現在	