



Communication cable introduction

indoor cable

Simplex , Duplex Zip

Distribution, Breakout

Patch cord / Jumper cord

FTTH cable

Fiber To The Home

High speed internet, network

Round / Figure '8' / Flat type

Hybrid cable

Optical + Electrical

Hybrid for FTTA

Hybrid for Antenna

Optical cable for ships

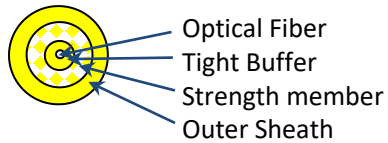
Shipboard/offshore

NEK 606 Type

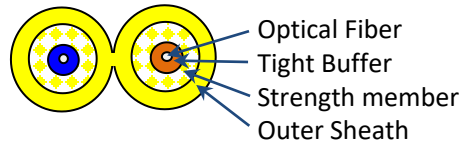
AICI / QFCI / QFCU

Indoor cable

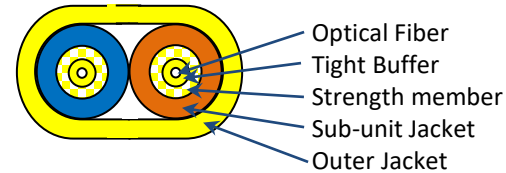
• SIMPLEX



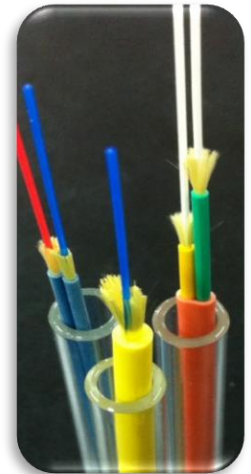
• DUPLEX ZIP



• 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

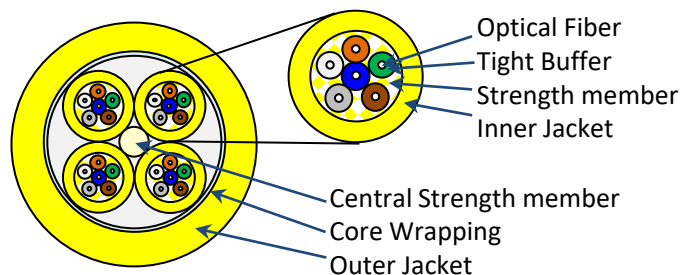


Application & Features

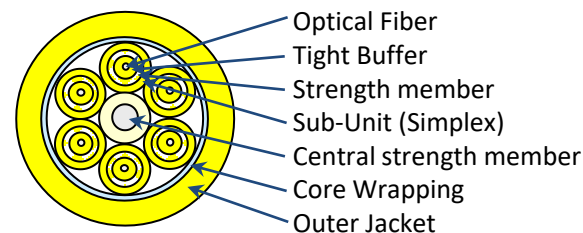
- Jumpers, Pigtails and Interconnected cable
- Single-mode and multi-mode, Tight buffered, Flame retardant
- Alternative jacket material and colors
- UL certified OFN, OFNR



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





The optical jumper code is used by connecting connectors such as LC, SC, FC, and MPO to the end of optical cables designed in single mode and multimode, It is usable for signal transmission between network equipment and maintains excellent performance and quality to implement an effective communication system

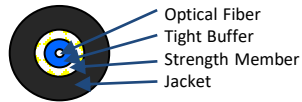
➤ Advantage

- ✓ Using a universal connector that can be installed easily and quickly.
- ✓ Produced/supplied length to meet customer needs
- ✓ Improve communication quality after installation through production with stable quality.

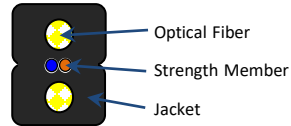
Parameter		Sing-Mode	Multi-Mode
Insertion Loss	LC, SC, FC	$\leq 0.3\text{dB @ } 1310/1550\text{nm, Typical}$	$\leq 0.3\text{dB @ } 850/1310\text{nm, Typical}$
	MPO	$\leq 0.75\text{dB @ } 1310/1550\text{nm, Typical}$	$\leq 0.75\text{dB @ } 850/1310\text{nm, Typical}$
Return Loss	UPC	$\geq 50\text{dB @ } 1310/1550\text{nm, Typical}$	-
	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 cable

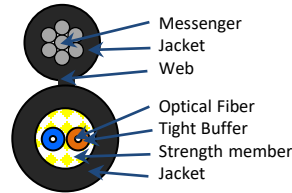
• Round type



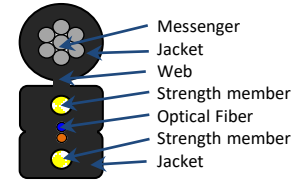
• Flat type



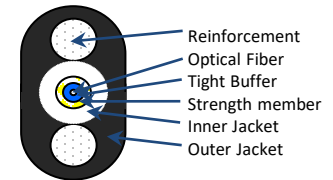
• Round(Fig.8)



• 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

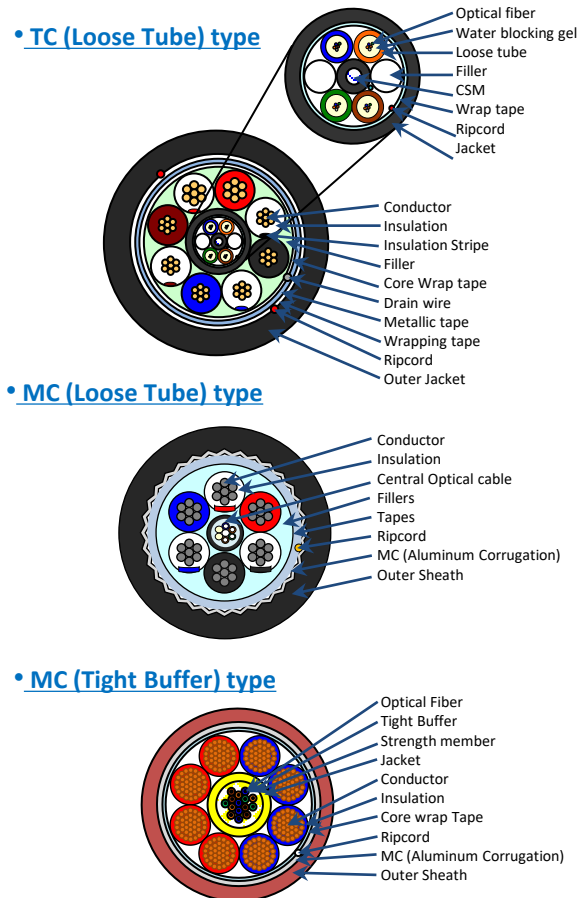


Application & Features

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

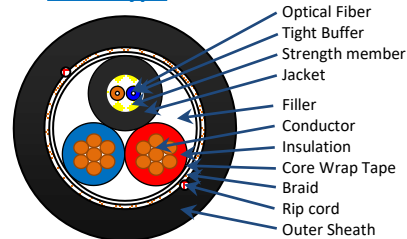
Hybrid cable

• HYBRID FEEDER CABLE

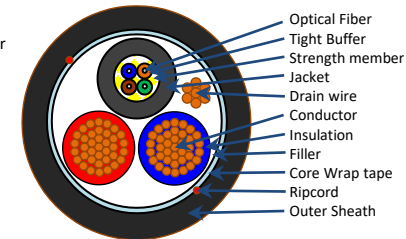


• HYBRID JUMPER CABLE

• Braid type

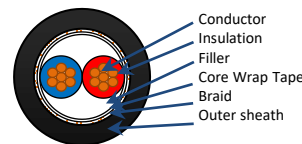


• Drain wire type

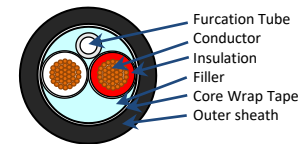


• POWER JUMPER CABLE

• Braid type

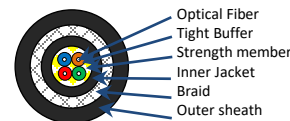


• Furcation tube type

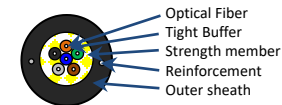


• OPTICAL JUMPER CABLE

• Braid type

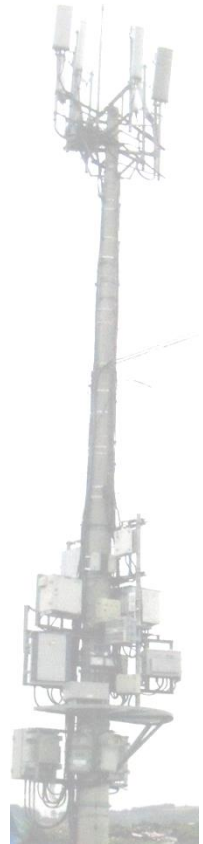


• Reinforced wire type

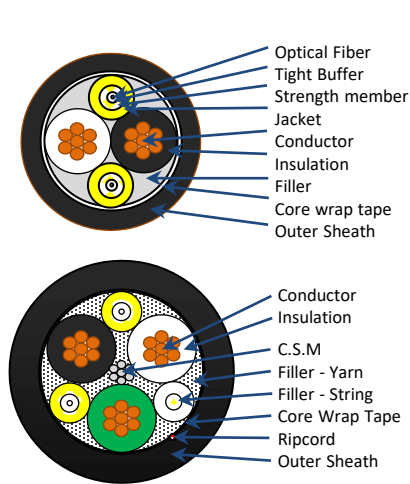


■ Application & Features

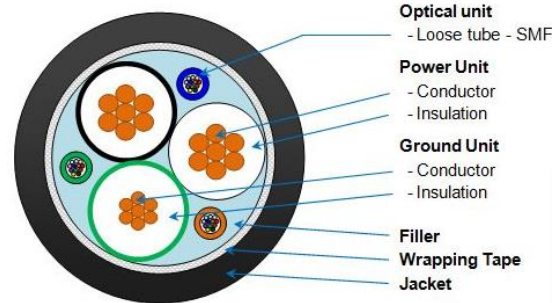
- Cable for FTTA and PTTA (Fiber and Power to the Antenna) solution
- Indoor/Outdoor
- Customized design



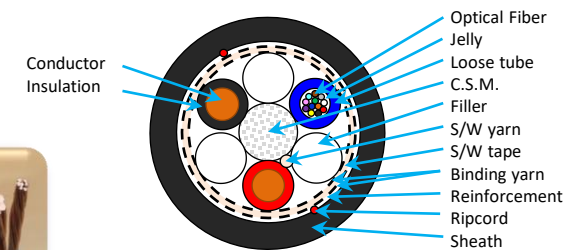
Tight Buffered type



Loose tube type



Loose tube type



Application & Features

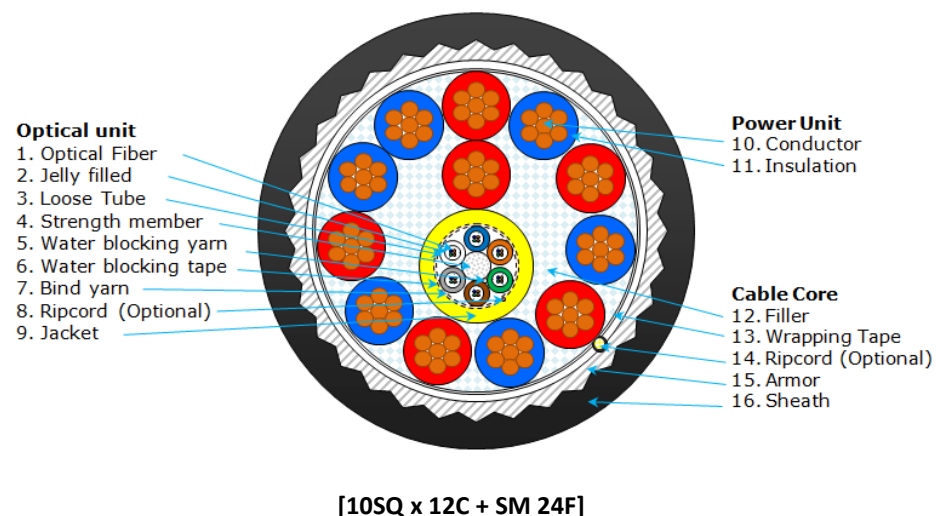
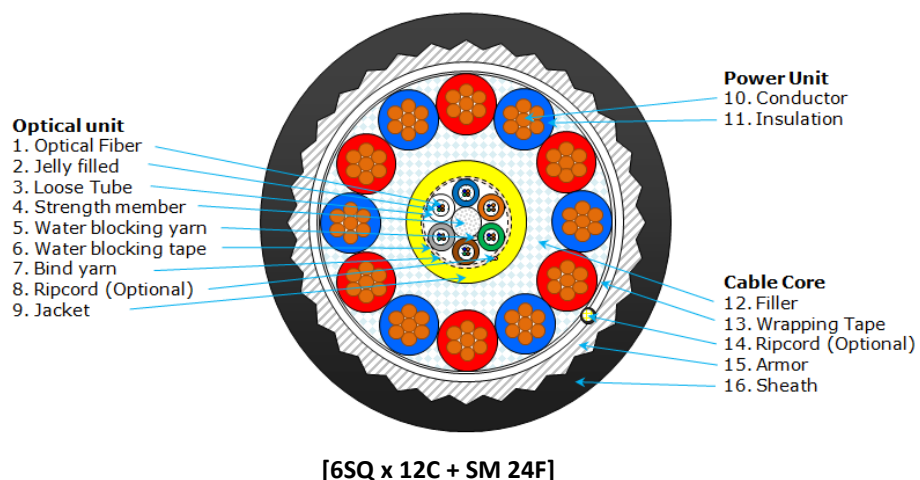
- Small cell or In-building cellular area
- Light weight and compact size and easy handling
- Extend able construction of optical fiber

Application & Features

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

Hybrid Cable (0.6/1kV)

➤ 6-RRHs Feeder Cable (6mm² & 10mm²)

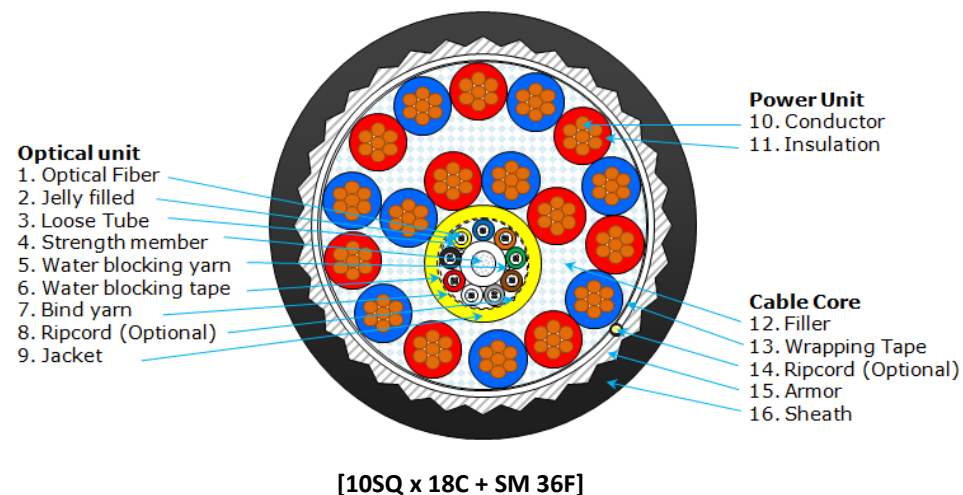
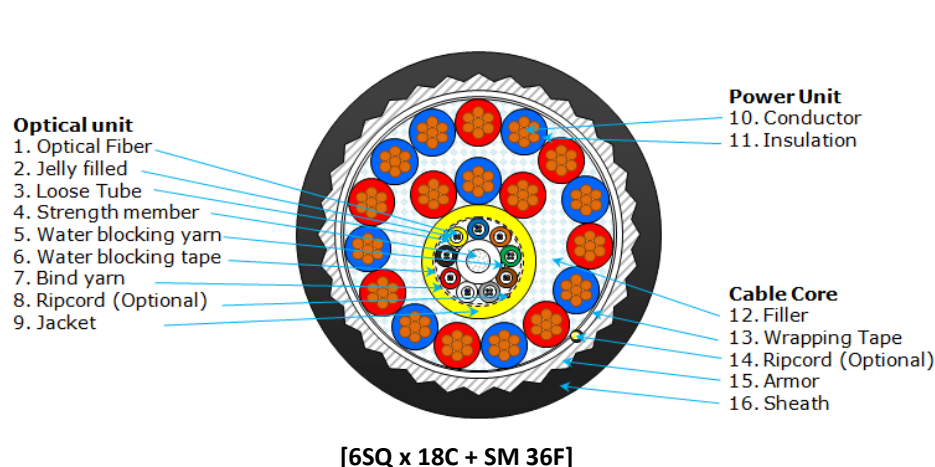


➤ Specification

Parameter	6mm ²	10mm ²
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)

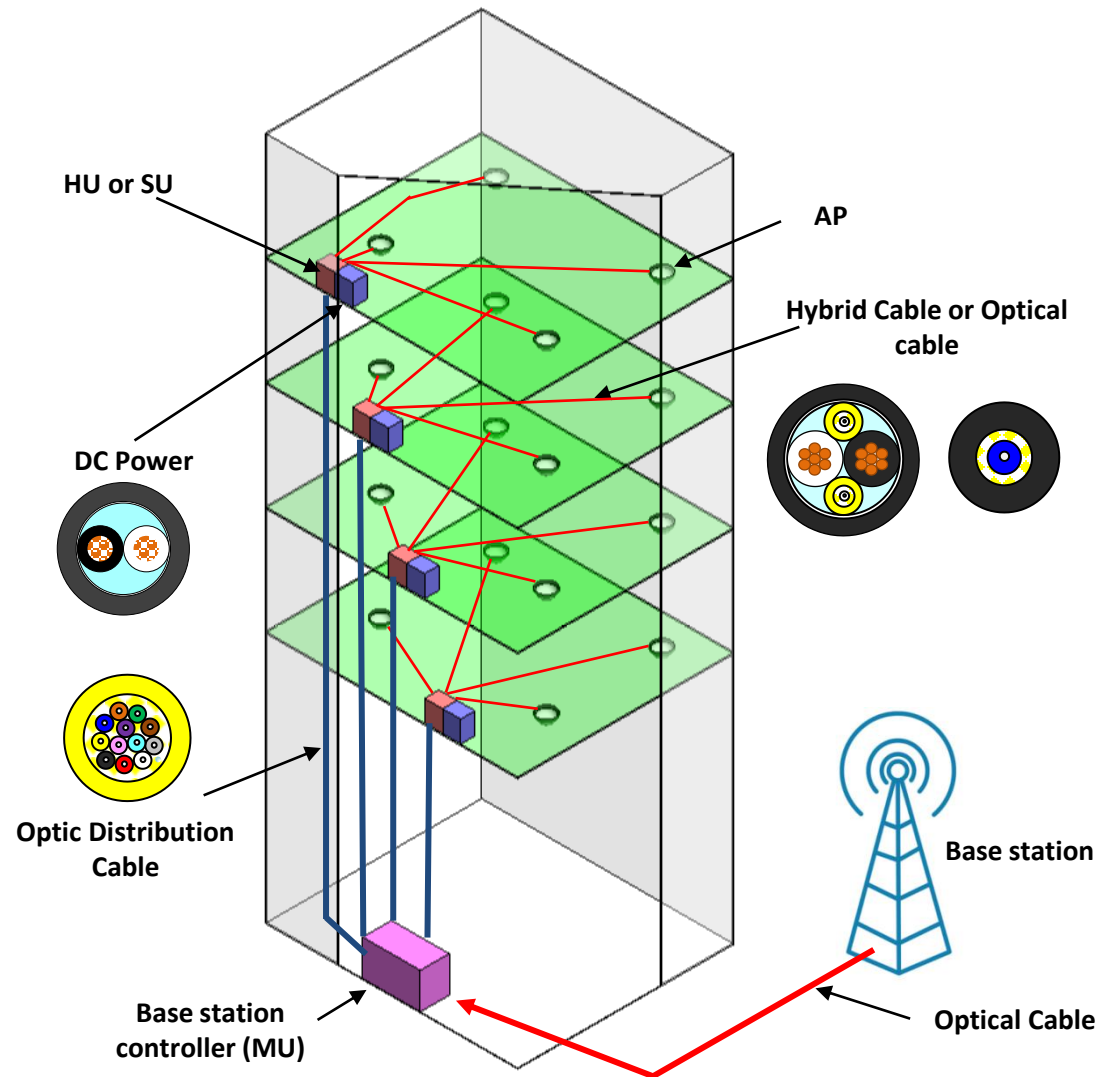
➤ 9-RRHs Feeder Cable (6mm² / 10mm²)



➤ Specification

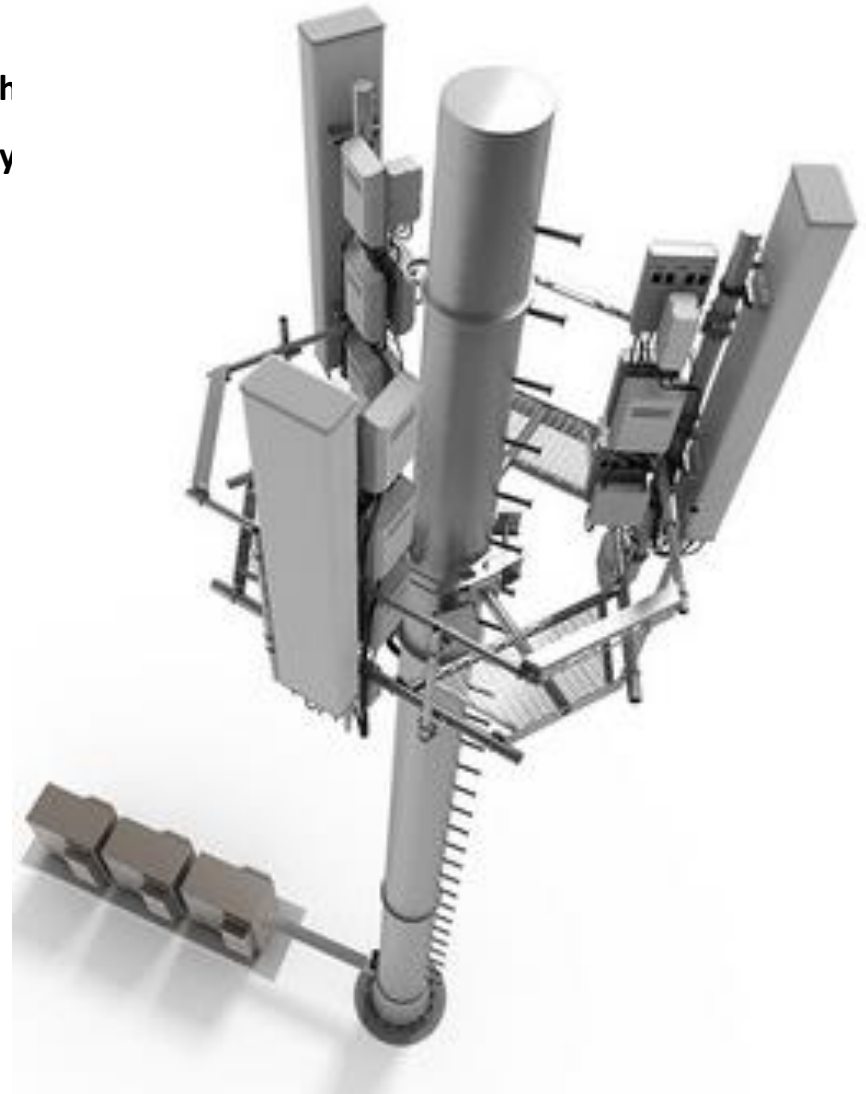
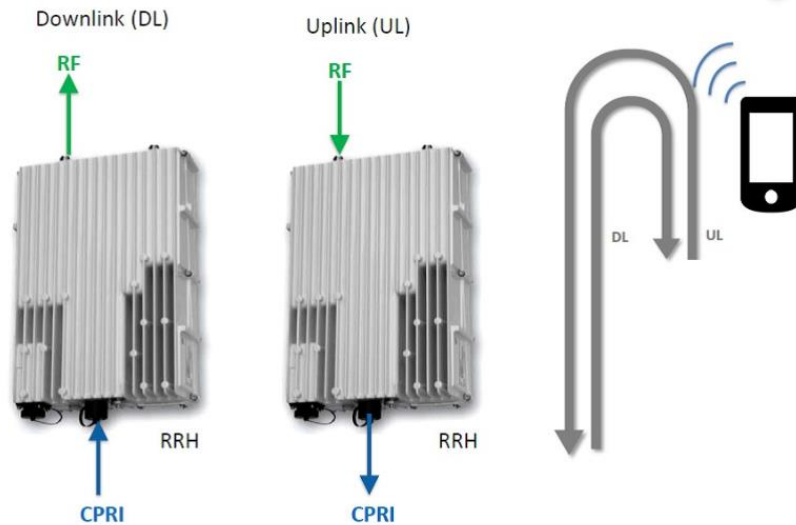
Parameter	6mm ²	10mm ²
Number of Optical Tube	4 fiber x 9 Tube (SM G.657_B3 or G.657_A2)	
Optical Unit Jacket Dimension	Nom. 11.0mm (LSZH PO / Yellow)	
Armor	Corrugation (UL 1569) / Aluminum	
Outer Sheath	FRPE (ST8 of IEC 60502-1) / Black color	
Outer Dimension	Nom. 35.3mm	Nom. 40.3mm
Approximate Net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

Installation case



To improve installation time and performance at 5G sites and wireless communication base stations, pre-connected Ass'y with connectors is supplied to provide a solution that users can easily and conveniently install.

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



■ Hybrid Jumper Cable Solution

Antenna Solution applies and assembles one-touch connectors or commercialized connectors, and is designed to shorten installation time in the field.

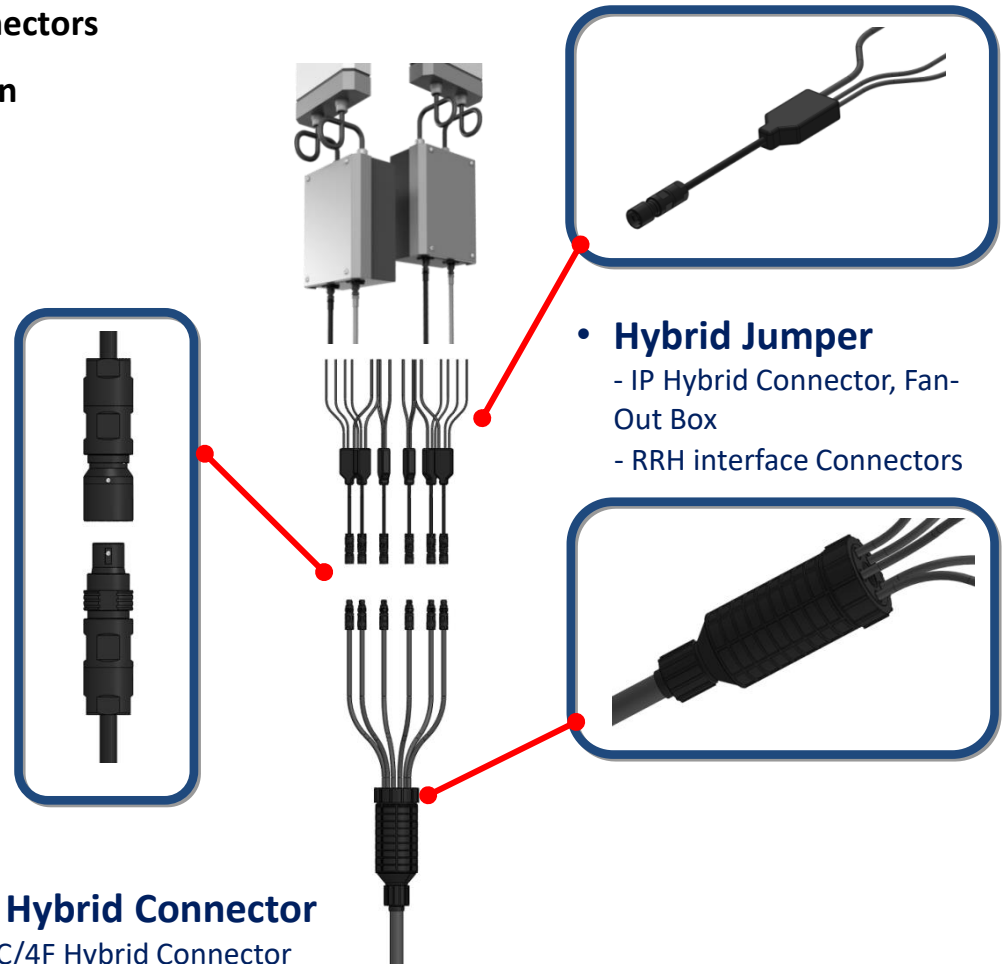
✓ Connected Hybrid cable that can be easily installed on site.

✓ No dedicated tool required.

✓ Installation time is effectively shortened and stable.

✓ Easy understanding of the installer using Push-Pull or commercialized connectors.

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



Supply performance

Nation	Customer	Supplied products	Supply period	Remarks
USA	Sprint	Hybrid Ass'y cable for antennas	2013 ~ 2018	
	Verizon	Drop cable for FTTH	2010 ~	
	Corning	Hybrid cable for media.	2017 ~	
	Dist	Drop cable for FTTH	2020 ~	
Australia	Telstra	Hybrid cable for antennas	2013 ~ 2019	
EU	Dist	Optical cable for FTTH	2019 ~	
	Dist	Optical cable for Data center	2019 ~	
JAPAN	Softbank	Hybrid cable	2011~2014	
KOREA	KT	Optical cable for FTTH	2000 ~	
	SK	Hybrid cable for antennas	2018 ~	