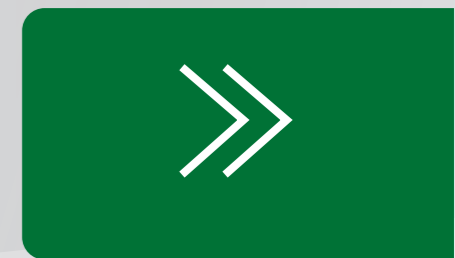
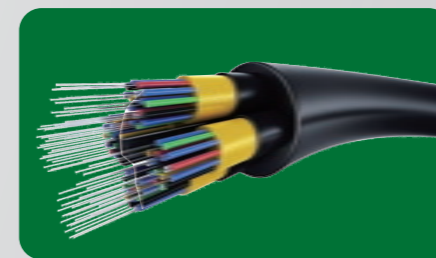
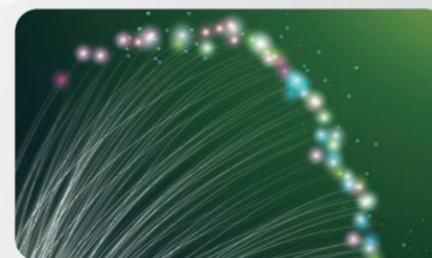


MAIN CATALOGUE



SUMEC WASIN

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TEL: 0086-25-84531722
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SUMEC WASIN

A FORTUNE 500 COMPANY SUMEC GROUP

www.sumec-wasin.com





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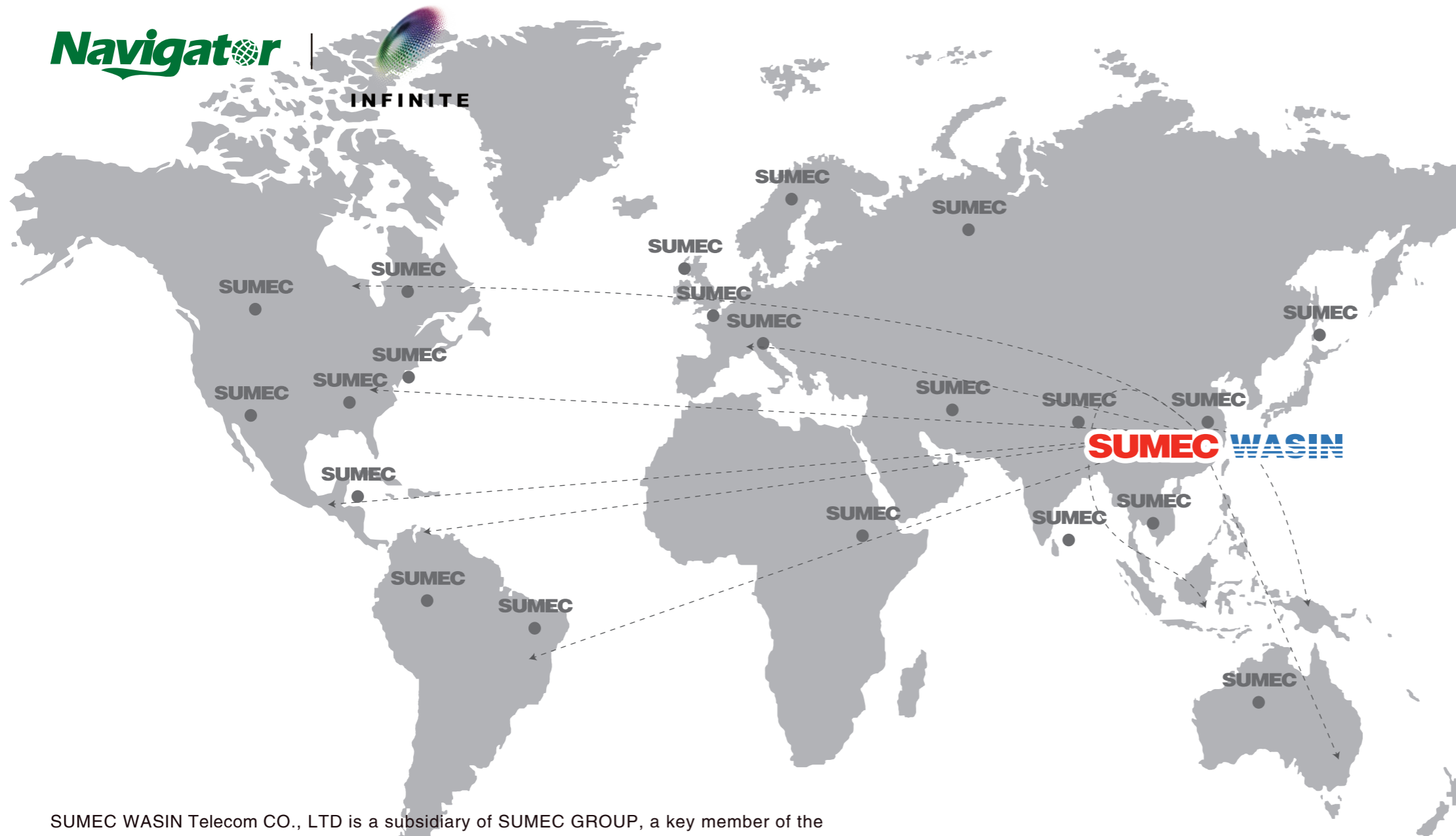
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TRADITION AND HISTORY



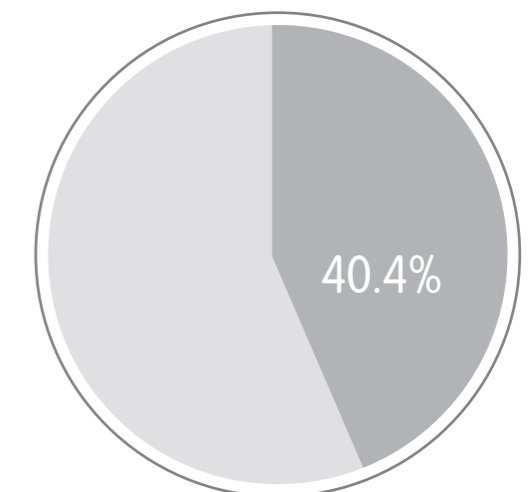
Sumec has over 20 years manufacturing fiber optic cables. We import FUJIKURA glass-preforms from Japan, draw fibers and create a full range fiber optical cables in our factory.

- A top 5 fiber optic cable manufacturer in China.
- 45 million fiber kilometers capacity per year.
- Range from 1 core drop cable up to 1728 cores ribbon cable dielectric or armored.
- Duct cable, direct buried, ADSS and submarine cables.
- A tier 1 fiber optic cable supplier of China Telecom, China Mobile and China Unicom.
- Supplying customized cable to major carriers and operators in EU and USA.
- Certified to be compatible with worldwide major brands: Corning, Prysmian / Draka, OFS/ FURUKAWA .

SUMEC WASIN Telecom CO., LTD is a subsidiary of SUMEC GROUP, a key member of the FORTUNE 500 Enterprise – SINOMACH.

With nearly 40 years of development and the process of global economic integration, SUMEC has become a modern global manufacturing service group, focusing on three fields: trade and service, engineering contracting, investment and development. We have warehouses and technology centers in Europe and North America, and companies in other countries and regions. Our goal is to provide professional products and quality fullservice delivery services to customers around the world.

Production Capacity Percentage of China 2018



world: 594million KMF
china: 240million KMF

Remarks and Comments from testing personnel

“ As good or better than Corning and OFS ”

Splicing Comments for the 96 Ct. non armored Fiber Cable Samples:

Corning: semi-medium thick Jacket easy prep, 1 Pull Cord breaks multiple times before completing, semi rigid Buffer, tubes wrapped very tight makes cable very durable, but sometimes tubes form a memory to each other a little more difficult to work with in an enclosure.

OFS: semi-medium thick jacket easy prep, 2 durable pull cords, easy prep, rigid Buffer Tubes a bit more difficult to work with, but ok to work with, flooding compound in the Buffer Tubes always a joy to work with.

Navigator: Thicker jacket than the other samples, a bit more difficult to work with, but a few preparations to get the feel for it ok, however provides maximum protection for the Buffer Tubes, almost emulates an armor jacket but better because under stress the armor will kink and have a permanent memory., this is the reason that it survived the Break Test a bit better than the other Samples, rigid tightly wrapped Buffer Tubes a little more difficult to work with but not much, Buffer Tubes do not form a memory of the tube adjacent to it, two very durable pull cords that don't break.

Cochran Communications
 Palm Springs, California, USA

INFINITE

All-dry dielectric Cable

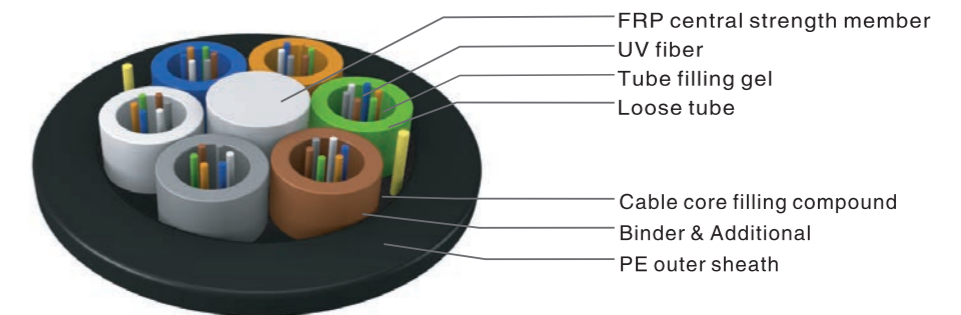
- 2-432 colored fibers
- Loose tube gel-free construction
- Fiber Reinforce Plastic wire central strength member.

Applications:

- Inter-building voice and data communication backbones
- Installed in ducts, underground conduit and aerial.

Features:

- Loose tube construction for good moisture-resistant and water prevention
- Nonconductive sheath and central strength member providing excellent electric isolation.



Performance:

Temperature	Minimum Bend Radius	Allowable Crush Resistance	Allowable Tensile Resistance
Storage -40°C to 75°C Installation -30°C to 60°C Operating -40°C to 70°C	20 × ND—Installation 10 × ND—In-service	Short term 1000 N/100mm Long term 300 N/100mm	Short term 1500 N Long term 600 N
Options	Flame-retardant sheath like Low Smoke Zero Halogen material available upon request.		

Fiber Count	No. of Loose Tubes	Normal Cable Diameter mm	Normal Cable Weight Kg/Km
2-36	6	9.6	78
38-72	6	10.6	97
74-96	8	12.1	126
96-120	10	13.5	155
122-144	12	15.2	200
146-216	18	15.6	201
216-288	24	17.7	266
432	36	20.5	347

All-Dry Armored Cable

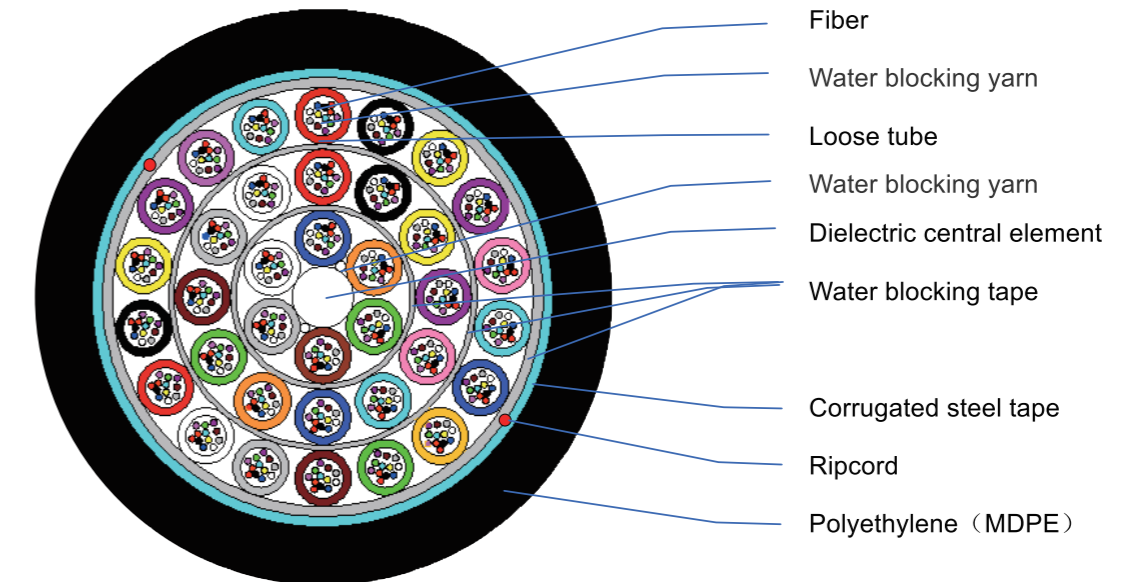
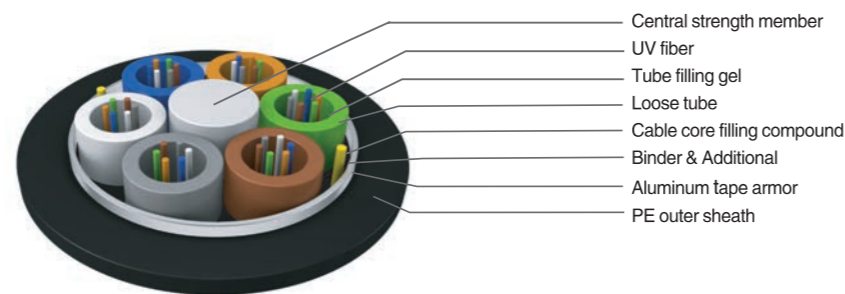
- 2-432 colored fibers
- Loose tube gel-free construction
- Fiber Reinforced Plastic wire central strength member
- Corrugated tape armor.

Applications:

- Inter-building voice and data communication backbones
- Installed in ducts, underground conduit and aerial.

Features:

- Loose tube construction for superior moisture-resistant and water prevention
- Single armor providing fiber protection
- Fiber Reinforce Plastic providing excellent tensile resistance.



(432core)

Performance:

Temperature	Minimum Bend Radius	Allowable Crush Resistance
Storage -40°C to 70°C	20 × ND—Installation 10 × ND—In-service	Short term 1000 N/100mm Long term 300 N/100mm
Installation -30°C to 60°C		
Operating -40°C to 70°C		
Options	Flame-retardant material sheath like Low Smoke Zero Halogen sheath available upon request; Phosphating steel wire strength member available upon request.	

Dimension of the cable:

Amount of fiber	Max. no. of the Fiber per Tube	Number of Tube Positions	Number of Active Tubes	Diameter (Appr.) mm	Weight (Appr.) Kg/km
2-36	6	6	1-6	11.0	117
38-72	12	6	4-6	12.0	140
74-96	12	8	7-8	13.5	175
98-120	12	10	9-10	14.5	209
122-144	12	12	11-12	16.6	260
146-216	12	18	13-18	17.0	262
218-288	12	24	19-24	19.1	334
432	12	30-36	30-36	22.0	419

*The nominal and minimal thickness of the outer sheath is 1.5mm and 1.35mm.

All-Dry Double Sheath Armored Cable

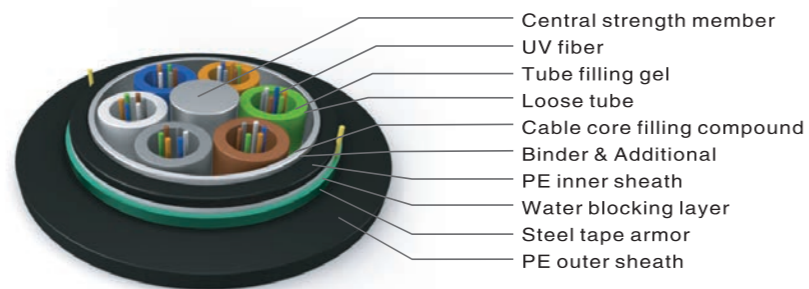
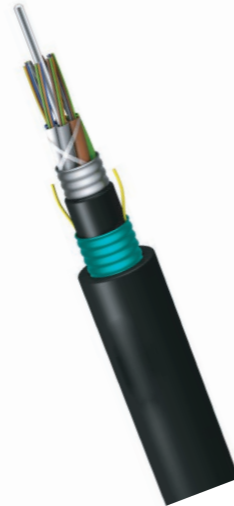
- 2-144 colored fibers
- Loose tube gel-free construction
- Fiber Reinforce Plastic central strength member.

Applications:

- Inter-building voice and data communication backbones
- Installed in ducts, underground conduits, direct buried and aerial.

Features:

- Double sheath construction for superior moisture-resistant and water blocking protection
- Single armor providing good mechanical performance and rodent-resistant construction
- Fiber Reinforce Plastic providing excellent tensile resistance and good fiber protection.



Performance:

Temperature	Minimum Bend Radius	Allowable Crush Resistance	Allowable Tensile Resistance
Storage -40°C to 75°C Installation -30°C to 60°C Operating -40°C to 70°C	20 × ND—Installation 10 × ND—In-service	Short term 1000 N/100mm Long term 3000 N/100mm	Short term 3000 N Long term 1000 N
Options	Flame-retardant material sheath like Low-Smoke Zero-Halogen material sheath available upon request; Phosphating steel wire strength member available upon request.		

Fiber Count	No. of Loose Tubes	Normal Cable Diameter mm	Normal Cable Weight Kg/Km
2-36	7	12.7	173
38-72	6	13.9	211
74-96	8	15.5	251
98-120	10	17.2	299
122-144	12	18.8	345

All-Dry Double Armored Cable

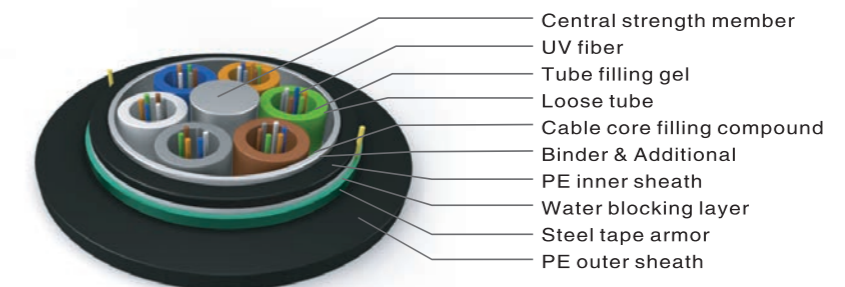
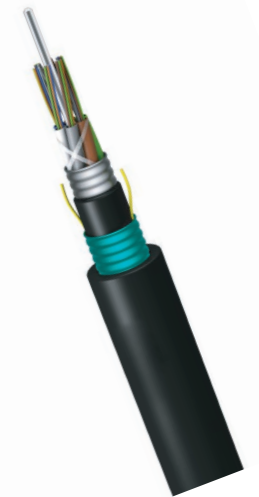
- 2-144 colored fibers
- Loose tube gel-free construction
- Fiber Reinforce Plastic central strength member

Applications:

- Inter-building voice and data communication backbones
- Installed in ducts, underground conduits, direct buried and aerial.

Features:

- Double sheath construction providing superior moisture-resistant and water prevention
- Double armored construction providing outstanding rodent-resistance and mechanical performance
- Fiber Reinforce Plastic providing excellent tensile resistance and good fiber protection.



Performance:

Temperature	Minimum Bend Radius	Allowable Crush Resistance	Allowable Tensile Resistance
Storage -40°C to 70°C Installation -30°C to 60°C Operating -40°C to 70°C	25 × ND—Installation 12.5 × ND—In-service	Short term 3000 N/100mm Long term 1000 N/100mm	Short term 4000 N Long term 2000 N
Options	Flame-retardant material sheath like Low Smoke Zero Halogen sheath available upon request; Phosphating steel wire strength member available upon request.		

Fiber Count	No. of Loose Tubes	Normal Cable Diameter mm	Normal Cable Weight Kg/Km
2-36	6	13.9	202
38-72	6	15.1	241
74-96	8	17.1	290
98-120	10	18.6	333
122-144	12	20.2	381

Submarine Cable

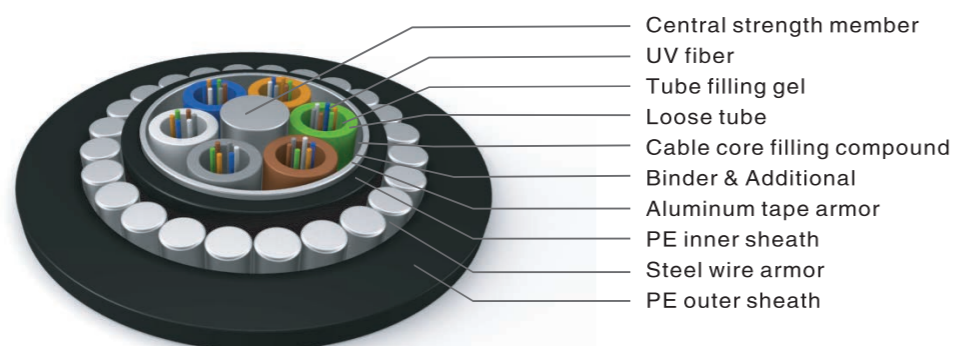
- 2-72 colored fibers
- Loose tube gel-filled construction
- Phosphating steel wire central strength member
- Corrugated coated aluminum tape armor
- Stranded phosphating steel wire armor
- Moisture-resistant PE sheath.

Applications:

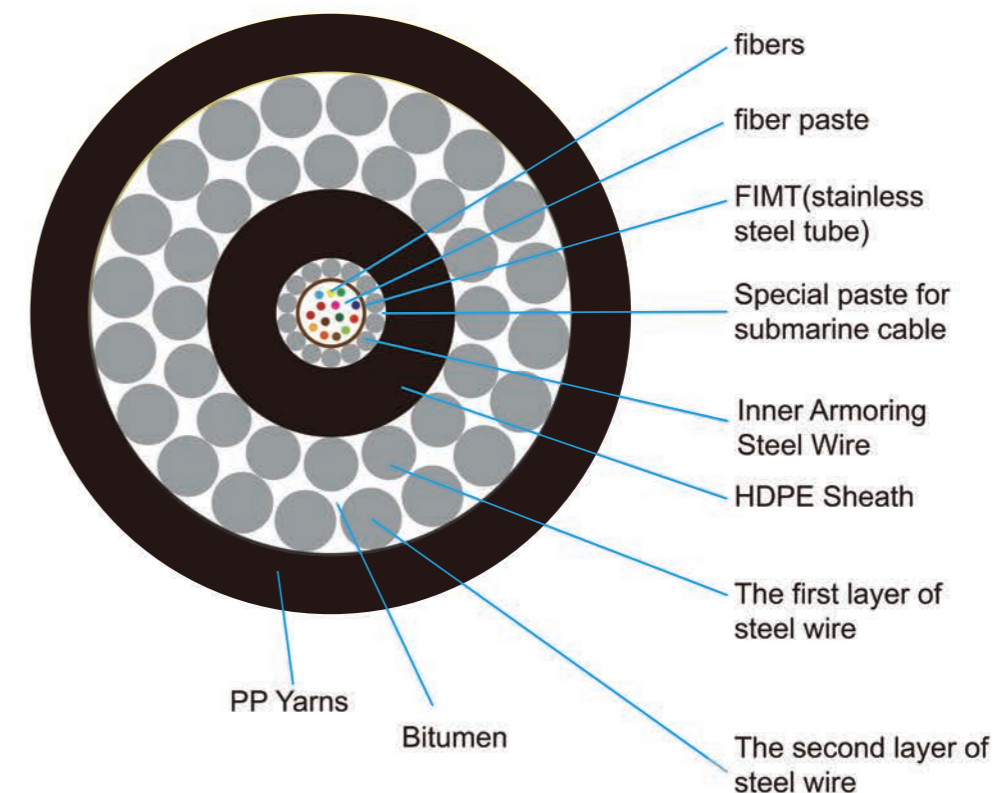
- Installed under lake, river, in ducts, and direct buried
- data communication backbones in building and metro

Features:

- Loose tube gel-filled and dual sheath construction for superior moisture-resistant and water blocking protection
- Phosphating steel wire central strength member providing excellent tensile resistance and good fiber protection
- Stranded phosphating steel wire armor providing outstanding crush resistance
- Guarantee of lifespan of 30 years.



Structure Cross Section Parameters



Parameters:

	Nominal Value	Remark
Stainless steel tube	Φ4.1mm	60 optical fibers
Inner Armoring Steel Wire	Φ1.16 mm	14 (phosphatized steel wire)
HDPE Sheath outer FIMT	Φ14.5mm	
The first layer of steel wire	Φ3.2	16
The second layer of steel wire	Φ3.6	20
Outer sheath	Φ35	

Performance:

Temperature	Minimum Bend Radius	Allowable Crush Resistance	Allowable Tensile Resistance
Storage -40°C to 75°C Installation -30°C to 60°C Operating -40°C to 70°C	30 × ND—Installation 15 × ND—In-service	Short term 5000 N/100mm Long term 3000 N/100mm	Short term 10000 N Long term 4000 N
Options	Different construction, with more sheaths and more armor, available upon application scenarios.		

Fiber Count	No. of Loose Tubes	Normal Cable Diameter mm	Normal Cable Weight Kg/Km
2-30	6	15.5	407
32-36	6	16.0	437
38-60	12	16.6	463
62-72	12	17.2	499

ADSS

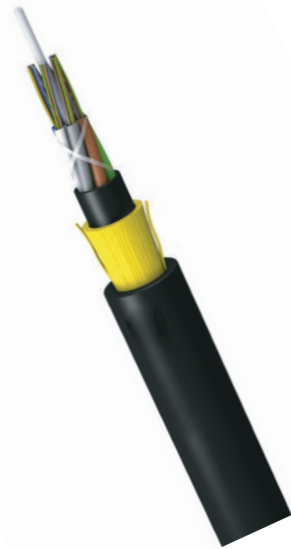
- 6-288 colored fibers
- Loose tube gel-filled construction
- Fiber Reinforced Plastic central strength member.

Applications:

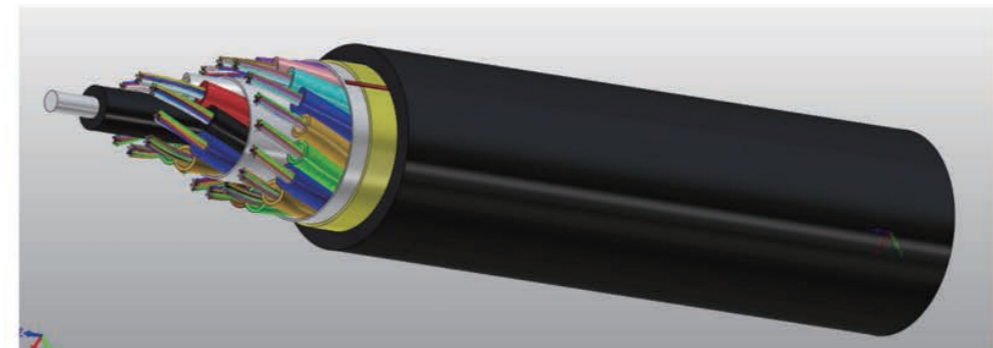
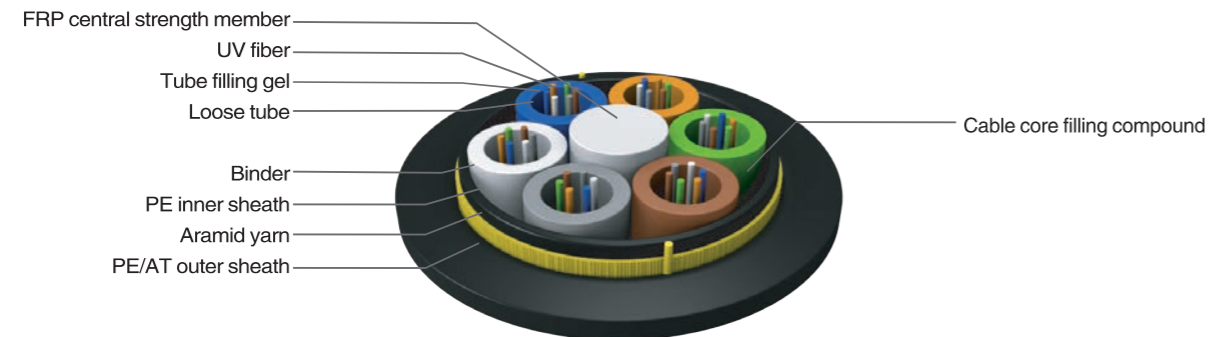
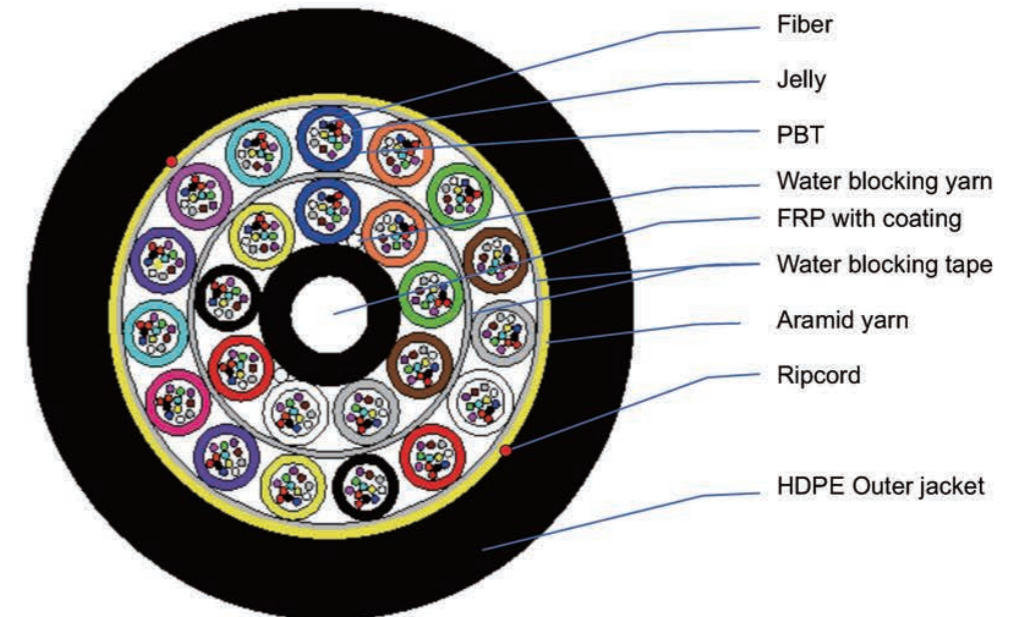
- Outdoor aerial self-supporting installation
- Long-distance communication, local trunk line, CATV and computer networks system
- Telecom and campus outside plant backbone applications
- Ethernet LAN Network as CCTV and Network Camera.

Features:

- Loose tube construction for good moisture-resistant
- Nonconductive construction providing excellent electric isolation
- Fiber Reinforce Plastic providing excellent tensile resistance and good fiber protection
- Sufficient high modulus aramid yarn overall strength member requiring no messenger wire for self-support.



Optical Fiber Cable ADSS Cross section



Performance:

Temperature	Minimum Bend Radius	Options
Storage -40°C to 70°C	20 × ND—Installation 10 × ND—In-service	Largest span over 1200m.
Installation -30°C to 60°C		
Operating -40°C to 70°C		

Cable Characteristics:

Amount of fiber	Max. no. of the Fiber per Tube	Number of Tube Positions	Diameter (Appr.) mm	Weight (Appr.) Kg/km
12	12	1.7	13.3	137
48	12	1.7	13.3	137
96	12	1.7	14.9	180
288	12	1.7	21.2	331

*Note: The minimum thickness of the outer jacket is 1.5mm.

Stranded Single Sheath Ribbon Cable

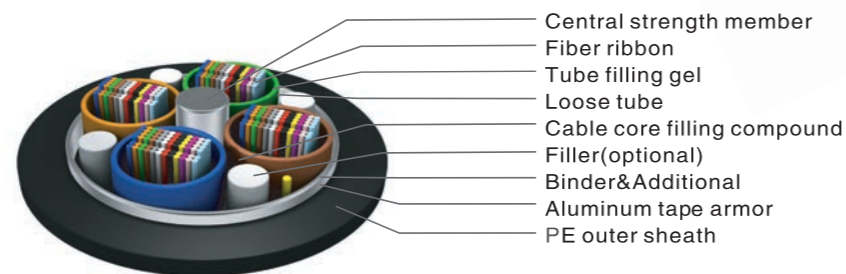
- 4-fiber ribbon, 6-fiber ribbon, 8-fiber ribbon, 12-fiber ribbon available
- Loose tube gel-filled construction
- Fiber Reinforced Plastic central strength member

Applications:

- Inter-building voice or data communication backbones
- Installed in ducts, underground conduits and aerial.

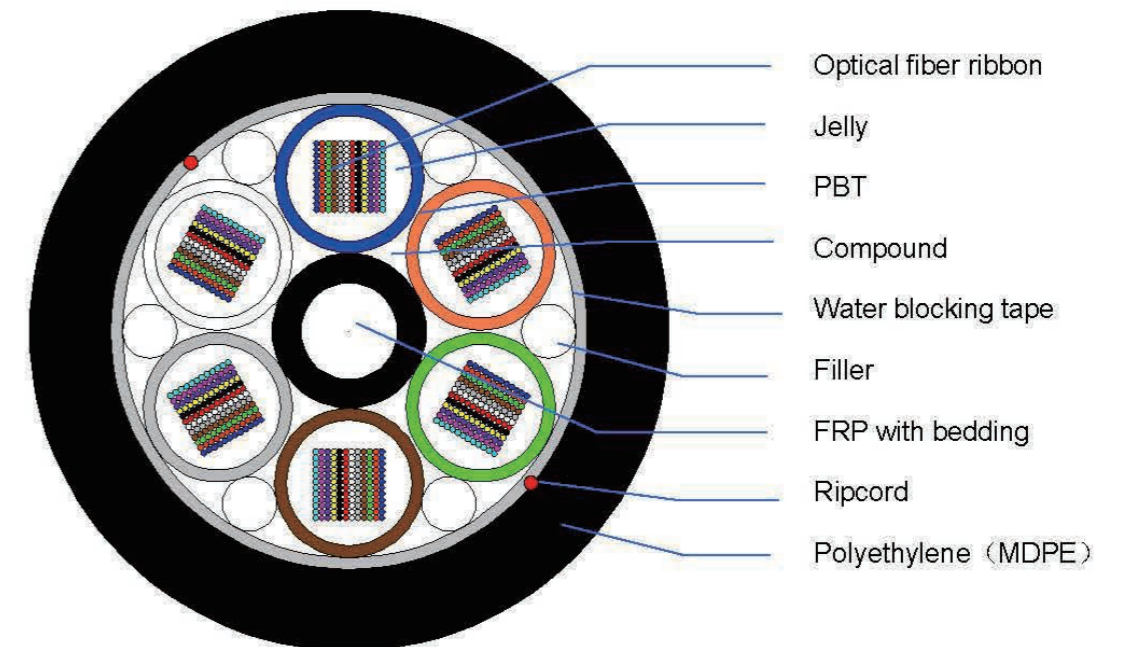
Features:

- Loose tube construction for water blocking protection
- Nonconductive construction for excellent electric isolation
- Fiber Reinforce Plastic providing excellent tensile resistance.



200µm mini-fiber for 864-core Special Loose Tube Ribbon Cable diameter is less than an inch, 0.9094 inch.

Optical Fiber Cable
Cross section



Performance:

Temperature	Minimum Bend Radius	Allowable Crush Resistance
Storage -40°C to 70°C	20 × ND—Installation	Short term 1000 N/100mm Long term 300 N/100mm
Installation -30°C to 60°C		
Operating -40°C to 70°C	10 × ND—In-service	
Options	Flame-retardant sheath like Low Smoke Zero Halogen material available upon request; Corrugated steel tape armor available upon request.	

Cable Characteristics:

Amount of Fiber	Product Type	Ribbon per Tube	Fibers per Ribbon	Number of Tube Positions	Numbers of Active Tubes	Diameter(Appr.) mm	Weight(Appr.) Kg/Km
864	Dielectric	12	12	6	6	23.1	435
1728	Dielectric	12	24	6	6	40.2	1170

ADSS Mini Cable

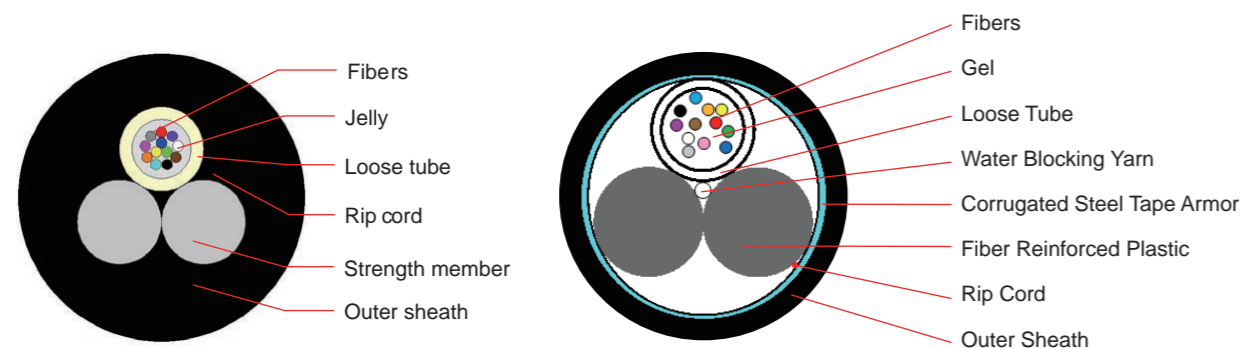
- 2-12 colored fibers
- Loose tube gel-filled construction
- Fiber Plastic Reinforced strength member
- UV- and moisture-resistant PE sheath.

Applications:

- Broadband network
- Installed in ducts and aerial
- FTTX.

Features:

- Loose tube gel-filled construction for good moisture-resistant and water blocking protection
- Nonconductive sheath and central strength member providing excellent electric isolation
- Fiber Reinforce Plastic stranded with loose tube providing excellent tensile resistance and good fiber protection.



Performance:

Temperature	Minimum Bend Radius	Maximum Installation Tensile Load	Allowable Tensile Resistance
Storage -20°C to 65°C Installation -20°C to 65°C Operating -10°C to 55°C	20 × ND—Installation 10 × ND—In-service	Short term 1500 N	Short term 1000 N/100 mm

Bow Tie Shape Drop Cable

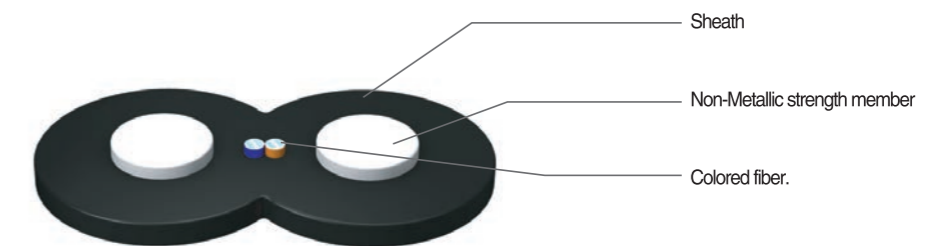
- Low bend-loss fibers
- Tight buffer construction
- High modulus strength member
- UV- and moisture-resistant outer sheath

Application:

- Broadband network
- Installed in ducts or aerial

Features:

- All-dry structure, user-friendly design, easy for stripping and splicing and easy for installation
- High modulus strength member providing good cable mechanical performance
- Guarantee of lifespan of 15years



Performance:

Temperature	Minimum Bend Radius	Allowable Tensile Load	Allowable Crush Resistance	Normal Cable Measurement	Normal Cable Weight
Storage -30°C to 70°C Installation -30°C to 70°C Operating -30°C to 70°C	20 × ND—Installation 10 × ND—In-service	Short term 200 N Long term 100 N	Short term 2200 N/100mm Long term 1000 N/100mm	2.0 mm×3.0 mm	10Kg/Km
Options	Flame-retardant sheath like Low Smoke Zero Halogen material available upon request.				
Notes	Normal cable measurement determined by exterior rectangle.				

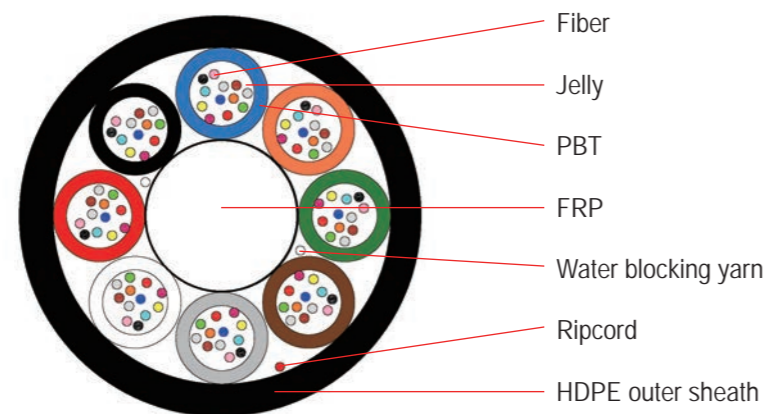
Air-Blown Micro-Cable

Applications:

- Inter-building and intra-building voice and data communication backbones
- Installed in ducts, underground conduits and aerial
- Installation in cable trays and general horizontal applications.

Features:

- Ease of handling, smaller size, saving installation cost
- Excellent electric isolation and air-blown installation
- Excellent fire prevention
- Compatible with any installation environment.



Performance:

Temperature	Minimum Bend Radius	Allowable Crush Resistance	Allowable Tensile Load
Storage -40°C to 70°C Installation -5°C to 50°C Operating -40°C to 70°C	20 × ND—Installation 10 × ND—In-service	Short term 1000 N/100mm Long term 300 N/100mm	Short term 160 N Long term 100 N

Dimension of the cable:

Amount of fiber	Max. no. of the Fiber per Tube	No. of tube positions	Number of Active Tubes	Diameter (Appr.) mm	Weight (Appr.) Kg/km
12	12	6	0.6	6.1	29
24	12	6	0.6	6.1	29
36	12	6	0.6	6.1	30
48	12	6	0.6	6.1	30
96	12	8	0.6	7.1	46
144	12	12	0.6	9.2	73
288	24	12	0.6	11.6	110

*Note: The minimum thickness of the sheath is 0.4mm.

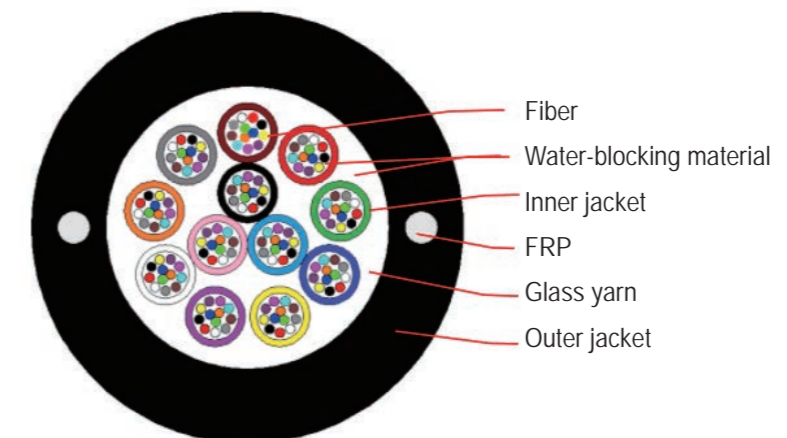
Micro Module

Applications:

- Inter-building and intra-building voice and data communication backbones
- Installed in ducts

Features:

- More cable cores, compact structure and small size
- Mainly used for distribution and access network
- The inner jacket can be easy to be removed with finger nails
- All dielectric structure design, without electromagnetic induction effect.



Performance:

Temperature	Minimum Bend Radius	Allowable Crush Resistance
Storage -20°C to 60°C Installation -10°C to 40°C Operating -30°C to 60°C	10 × ND	Short term 2000 N/100mm Long term 600 N/100mm

Fibers per Tube	Cores	Inner Unit Diameter	Cable Diameter	Max Tension	Cable Weight	Outer Color
12	12	1.4 ± 0.1 mm	6.3 mm ± 0.4mm	800N	30 kg/km	Black
	24	1.4 ± 0.1 mm	7.0mm ± 0.4mm	800N	37 kg/km	Black
	36	1.4 ± 0.1 mm	7.7mm ± 0.4mm	1000N	44 kg/km	Black
	48	1.4 ± 0.1 mm	8.1mm ± 0.4mm	1000N	50 kg/km	Black
	72	1.4 ± 0.1 mm	9.5mm ± 0.4mm	1600N	66 kg/km	Black
	96	1.4 ± 0.1 mm	10.7mm ± 0.4mm	2200N	81 kg/km	Black
	144	1.4 ± 0.1 mm	11.5 mm ± 0.4mm	2200N	97 kg/km	Black
	288	1.4 ± 0.1 mm	14.4 mm ± 0.4mm	2700N	147kg/km	Black



Optical Power Ground Wire

SUMEC WASIN's OPGW cables are typically designed for optical transmission and overhead ground wire for power transmission. The cable is working in power transmission line both as optical fiber cable and overhead ground wire which can provide protection of lightning strike and conducting short circuit current.

This consist of stainless steel tube optical unit, aluminum cladding steel wire, aluminum alloy wire. It has central stainless steel tube structure and layer stranding structure. The cable can be designed according to different environment condition and customer's requests.

Features:

Stainless-steel optical fiber unit of central loose tube or stranding construction

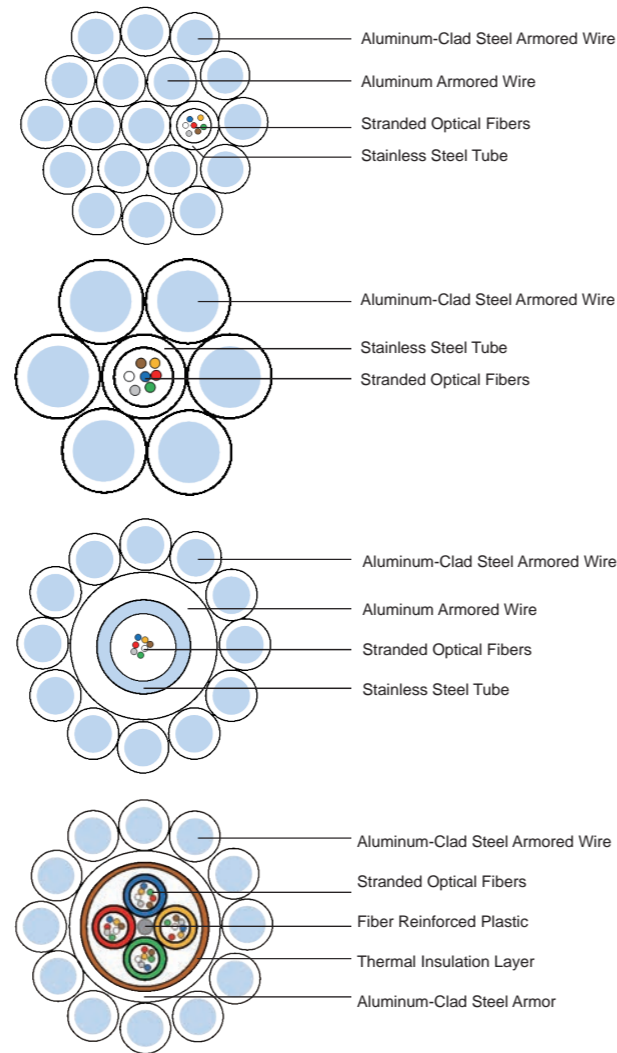
Aluminum alloy wire and aluminum clad steel wire armored
 Coated with anticorrosive grease between layers

Being able to support heavy load and long span installation

Meeting requirement of ground wire's mechanical and electric

requirements by adopting proportion of steel and aluminum

Easy for producing accordance with existing ground wire and easy for replacing.



Catalogue Code	OPGW-60	OPGW-70	OPGW-90	OPGW-110	OPGW-130
Fiber Count	48	32	48	52	30
Normal Cable Diameter(mm)	10.5	12.0	13.0	14.0	15.0
Normal Cable Weight(Kg/Km)	415	320	374	432	527
Short-Circuit Capacity, from 40 C to 400 C (kA2sec)	24.0	57.3	78.9	105.8	150.4
Rated Tensile Strength(KN)	75	45	53	64	80
DC Resistance in 20 C (Ω/Km)	1.36	0.524	0.448	0.386	0.327

American Team



America Main Markets



USA Warehouse



SUMEC

“For a better connected world”

GPON/EPON ONU

Smart device, an intelligent routing-type ONU



SM16322-XHWHR-T30

Device Parameters

Dimensions (L x W x H)	160mm x 139mm x 28.5mm (without external antenna and pads)
Weight	350g
Operating temperature	0°C - 50°C
Operating humidity	10% to 90% (non-condensing)
Power adapter input	100-240V AC, 50-60Hz
System power supply	11-14V DC, 0.6A
Static power consumption	2 W
Maximum power consumption	5 W
NNI	GPON/EPON
UNI	1RF-OUT + 1GE + 1FE + 2.4G Wi-Fi
Indicators	PWR/PON/LOS/GE/FE/WiFi/CATV *
Installation mode	On the desk, or on the wall
Compliance certification	CE/WiFi

Interface Parameters

GPON/EPON Port	<ul style="list-style-type: none">GPON: FSAN G.984.2 standard, Class B+EPON: 1000BASE-PX20+ Symmetric, CTC2.1, CTC3.0GPON: 2.488/1.244Gbps Downstream/UpstreamEPON: 1.25Gbps Downstream/UpstreamWavelength: Transmit 1310nm, Receiver 1490nmReceiver Sensitivity: GPON: -28dBm; EPON: -27dBmTransmit Optical Power: GPON: 0.5~5dBm; EPON: 0~4dBmSC/PC single-mode fiberSaturation Optical Power: GPON: -8dBm; EPON: -3dBmFlexible mapping between GEM Port and TCONTGPON: Consistent with the SN or password authentication defined in G.984.3EPON: Consistent with the MAC or LOID authentication defined in IEEE 802.3ahBi-directional FECSR-DBA and NSR-DBAType B (single-homing & dual-homing)
Ethernet Port	<ul style="list-style-type: none">Ethernet port-based VLAN tags and tag removal1:1 VLAN, N:1 VLAN, or VLAN transparent transmissionQinQ VLANLimit on the number of learned MAC addressesMAC address learning1GE auto-adaptive 10 Mbit/s, 100 Mbit/s or 1000 Mbit/s1FE auto-adaptive 10 Mbit/s and 100 Mbit/sFull/half duplex modeAuto MDI/MDI-X
WLAN	<ul style="list-style-type: none">Comply with IEEE 802.11a/b/g/n protocol standard, support 2.4GHz5dBi antenna gainMaximum ideal rate up to 300Mbps2.4GHz supports MIMO technologyEncryption mode AES, TKIP, WPA, WPA2, WPA-PSK/WPA2-PSK
CATV *	<ul style="list-style-type: none">Wavelength: 1550nmRF frequency: 45MHz~1000MHzRF output level: ≥ 86dBuVRF output return loss: ≥ 10dBRF output impedance: 75ΩCNR: ≥ 42dB; CSO: ≤ -60dBc; CTB: ≤ -65dBc

Product Function

Smart O&M

- Rogue ONU detection
- Loop detection
- Dying-Gas detection and reporting

Basic Service

- Bridge and routing mode access Internet
- IPTV service configuration
- CATV service configuration

Wireless

- IEEE802.11a/b/g/n standard, 2.4G
- Hide SSID
- Support MIMO-OFDM encoding mode: BPSK, QPSK, 16QAM, 64QAM
- Support wireless security of AES, TKIP, WPA, WPA2, WPA-PSK/WPA2-PSK

Layer 3 function

- Port forwarding
- PPPoE/Static IP/DHCP
- NAT/NAPT
- ALG, UPnP
- DDNS/DNS server/DNS client
- IPv6/IPv4 dual stack, and DS-Lite
- Static/Default routes
- Multiple services on one WAN port

CATV *

- Support remote configuration from OLT

QoS

- Ethernet port rate limitation
- Priority tag
- SP/WRR/SP+WRR queue schedule
- Traffic shaping
- Congestion avoidance
- Broadcast packet rate limitation

Power Saving

- Indicator power saving
- Meet GPON energy saving of G987.3 protocol

Security

- Firewall
- Filtering based on MAC/IP/URL addresses
- Access control

Common O&M

- Automatic registration / link detection / remote upgrade
- OMCI /WEB/TR069 management
- Backup and Restore configuration
- VLAN transparent/tag/untag

Multicast

- Multicast version 2.0
- Multicast VLAN configuration
- Multicast transparent/snooping/proxy
- Fast leave function

* CATV: Optional function

SUMEC

“For a better connected world”

GPON/EPON ONU

Smart device, an intelligent bridge-type ONU



SM164242-GH DUHR-T21

Device Parameters

Dimensions (L x W x H)	235.2mm x 158mm x 30mm (without external antenna and pads)
Weight	300g
Operating temperature	0°C - 50°C
Operating humidity	10% to 90% (non-condensing)
Power adapter input	100-240V AC, 50-60Hz
System power supply	11-14V DC, 1.5A
Static power consumption	2 W
Maximum power consumption	7 W
NNI	GPON/EPON
UNI	2POTS + 4GE + 2.4G/5G Wi-Fi + 1USB
Indicators	POWER/LAN/TEL/PON/LOS/WIFI/WPS/USB/ CATV
Installation mode	On the desk, or on the wall
Compliance certification	CE/WiFi

Interface Parameters

GPON/EPON Port	<ul style="list-style-type: none">GPON: FSAN G.984.2 standard, Class B+EPON: 1000BASE-PX20+ Symmetric, CTC2.1, CTC3.0GPON: 2.488/1.244Gbps Downstream/UpstreamEPON: 1.25Gbps Downstream/UpstreamWavelength: Transmit 1310nm, Receiver 1490nmReceiver Sensitivity: GPON: -28dBm; EPON: -27dBmTransmit Optical Power: GPON: 0.5~5dBm; EPON: 0~4dBmSC/PC single-mode fiberSaturation Optical Power: GPON: -8dBm; EPON: -3dBmFlexible mapping between GEM Port and TCONTGPON: Consistent with the SN or password authentication defined in G.984.3EPON: Consistent with the MAC or LOID authentication defined in IEEE 802.3ahBi-directional FECSR-DBA and NSR-DBAType B (single-homing & dual-homing)
Ethernet Port	<ul style="list-style-type: none">Ethernet port-based VLAN tags and tag removal1:1 VLAN, N:1 VLAN, or VLAN transparent transmissionQinQ VLANLimit on the number of learned MAC addressesAuto-adaptive 10 Mbit/s, 100 Mbit/s or 1000 Mbit/sFull/half duplex mode, auto MDI/MDI-X
POTS Port	<ul style="list-style-type: none">Maximum REN: 4G.711A/μ, G.729a/b and G.722 encoding/decodingT.30/T.38/G.711 fax modeDTMF, Emergency calls (with the SIP protocol)
USB Port	<ul style="list-style-type: none">USB 2.0 interfaceTransmission Rate: 480MbpsFTP-based network storageFile/Print sharing based on SAMBADLNA function
WLAN	<ul style="list-style-type: none">Comply with IEEE 802.11a/b/g/n/ac protocol standard, support 2.4GHz and 5GHz5dBi antenna gainMaximum ideal rate up to 1.2Gbps2.4GHz supports 2*2 MIMO technology5GHz supports 2*2 MIMO technologyWMM/Multiple SSIDs/WPS
CATV (Optional)	<ul style="list-style-type: none">Wavelength: 1550nmRF frequency: 45MHz~1000MHzRF output impedance: 75Ω

Product Function

Smart O&M

- Rogue ONU detection
- Loop detection
- Dying-Gas detection and reporting

Basic Service

- Bridge and routing mode access Internet
- IPTV service configuration
- Voice service configuration

Wireless

- IEEE802.11a/b/g/n/ac standard, 2.4G and 5G
- Maximum 8 SSID
- Hide SSID
- Support wider RF bandwidth, up to 80MHz
- Support higher 256-QAM modulation mode
- Support MIMO-OFDM encoding mode
- Support wireless security of 64/128 bit WEP, 802.1x, WPA and WPA2

Layer 3 function

- Port forwarding
- PPPoE/Static IP/DHCP
- NAT/NAPT
- ALG, UPnP
- DDNS/DNS server/DNS client
- IPv6/IPv4 dual stack, and DS-Lite
- Static/Default routes
- Multiple services on one WAN port

QoS

- Ethernet port rate limitation
- Priority tag
- SP/WRR/SP+WRR queue schedule
- Traffic shaping
- Congestion avoidance
- Broadcast packet rate limitation

CATV (Optional)

- Support remote configuration from OLT

Power Saving

- Indicator power saving
- Meet GPON energy saving of G987.3 protocol

Security

- Firewall
- Filtering based on MAC/IP/URL addresses
- Access control

Common O&M

- Automatic registration / link detection / remote upgrade
- OMCI /WEB/TRO69 management
- Backup and Restore configuration
- VLAN transparent/tag/untag

Multicast

- Multicast version 2.0
- Multicast VLAN configuration
- Multicast transparent/snooping/proxy
- Fast leave function

SUMEC

“For a better connected world”

GPON/EPON ONU

Smart service, interconnection, and O&M



SM16101-GHZ-T10

Device Parameters

Dimensions (L x W x H)	78mm x 78mm x 26mm	System power supply	11-14V DC, 0.5 A
Weight	< 100 g	Static power consumption	2 W
Operating temperature	0°C - 50°C	Maximum power consumption	2.5 W
Operating humidity	10% to 90% (non-condensing)	Ports	1GE
Power adapter input	100-240V AC, 50-60Hz	Indicators	POWER/LAN/LOS/PON

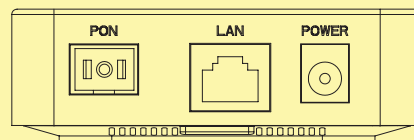
Interface Parameters

GPON/EPON Port

- GPON: FSAN G.984.2 standard, Class B+
- EPON: 1000BASE-PX20+ Symmetric, CTC2.1, CTC3.0
- GPON: 2.488/1.244Gbps Downstream/Upstream
- EPON: 1.25Gbps Downstream/Upstream
- Wavelength: Transmit 1310nm, Receiver 1490nm
- Receiver Sensitivity: GPON: -28dBm; EPON: -27dBm
- Transmit Optical Power: GPON: 0.5~5dBm; EPON: 0~4dBm
- SC/PC single-mode fibre
- Saturation Optical Power: GPON: -8dBm; EPON: -3dBm
- Flexible mapping between GEM Port and TCONT
- GPON: Consistent with the SN or password authentication defined in G.984.3
- EPON: Consistent with the MAC or LOID authentication defined in IEEE 802.3ah
- Bi-directional FEC
- SR-DBA and NSR-DBA
- Type B (single-homing & dual-homing)

Ethernet Port

- Ethernet port-based VLAN tags and tag removal
- 1:1 VLAN, N:1 VLAN, or VLAN transparent transmission
- QinQ VLAN
- Limit on the number of learned MAC addresses
- MAC address learning
- Auto-adaptive 10 Mbit/s, 100 Mbit/s or 1000 Mbit/s
- Full/half duplex mode
- Auto MDI/MDI-X
- IPv4 stack



Product Function

Smart O&M	<ul style="list-style-type: none"> • Rogue ONU detection • Loop detection • Dying-Gas detection and reporting 	Multicast	<ul style="list-style-type: none"> • Multicast version 2.0 • Multicast VLAN configuration • Multicast transparent/snooping • Fast leave function
Common O&M	<ul style="list-style-type: none"> • Automatic registration • Automation link detection • Automation remote upgrade • OMCI / WEB management for GPON • OAM / WEB management for EPON • Backup and Restore configuration • Port VLAN configuration • MAC address learning 	QoS	<ul style="list-style-type: none"> • Ethernet port rate limitation • Priority tag • SP/WRR/SP+WRR queue schedule • Traffic shaping • Congestion avoidance
Power Saving	<ul style="list-style-type: none"> • Indicator power saving • Meet GPON energy saving of G987.3 protocol 	Layer 3 function	<ul style="list-style-type: none"> • Port forwarding • PPPoE/Static IP/DHCP • NAT/NAPT • ALG, UPnP • DDNS/DNS server/DNS client • IPv4 stack, and DS-Lite • Static/Default routes • Multiple services on one WAN port • Router and Bridge mode switchable
Security	<ul style="list-style-type: none"> • Firewall • Filtering based on MAC/IP/URL addresses • Access control 		