



FTTx Solutions



WHO WE ARE

LEADING SUPPLIER AND SERVICE PROVIDER OF E&E, PHOTONICS AND TELCO IN SOUTHEAST ASIA



Kumpulan Abex Sdn. Bhd.
Co. Registration No. 198801000020 (167376-M)

Business Segments

Telecommunications
Industrial
Scientific
Enterprise
Support & Services
Project

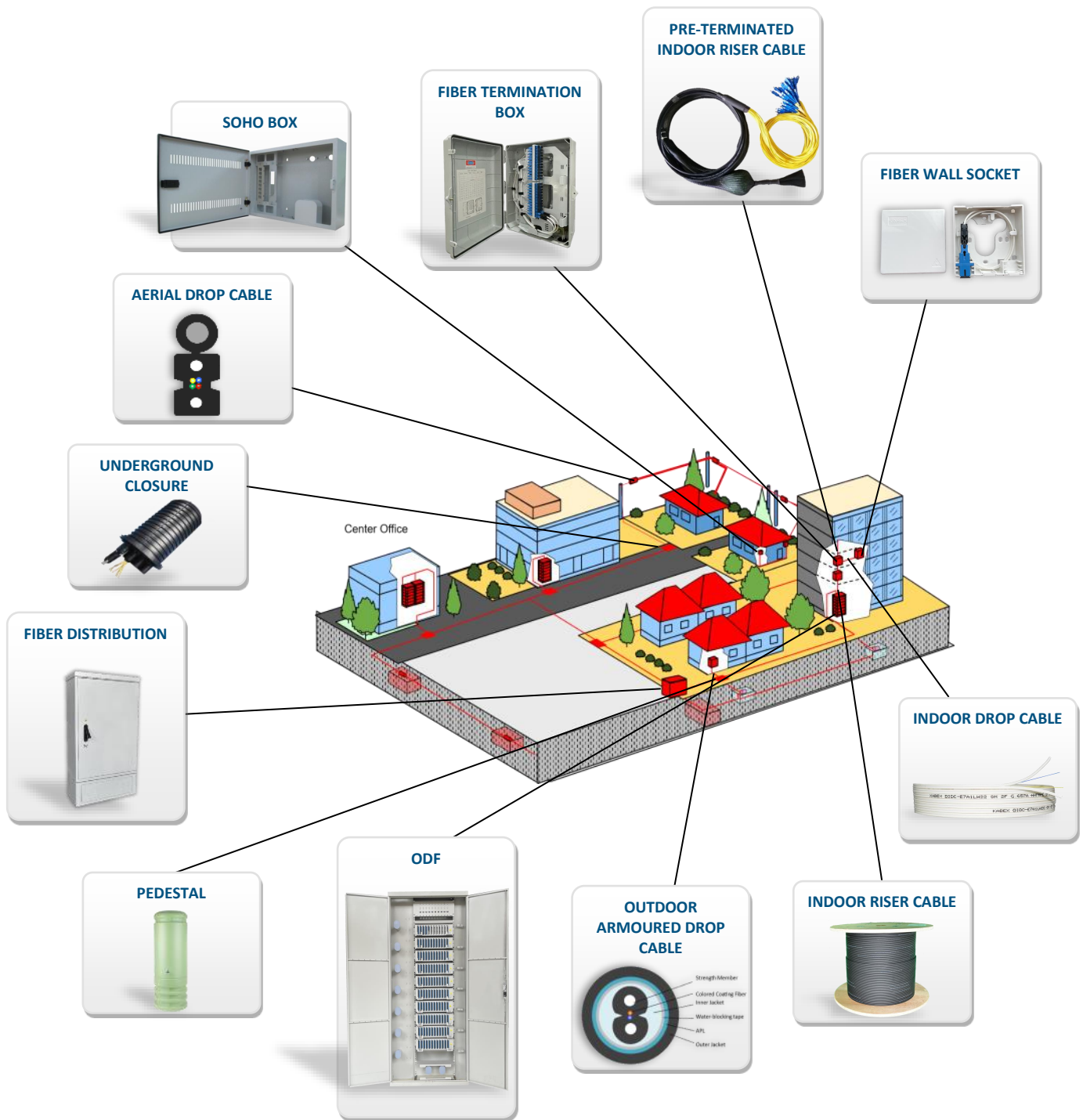
Service & Repair
Calibration Service
Instruments Spare Parts & Accessories
FTTx Training
Preventive Maintenance Service
Fiber Network Audit

Service & Calibration

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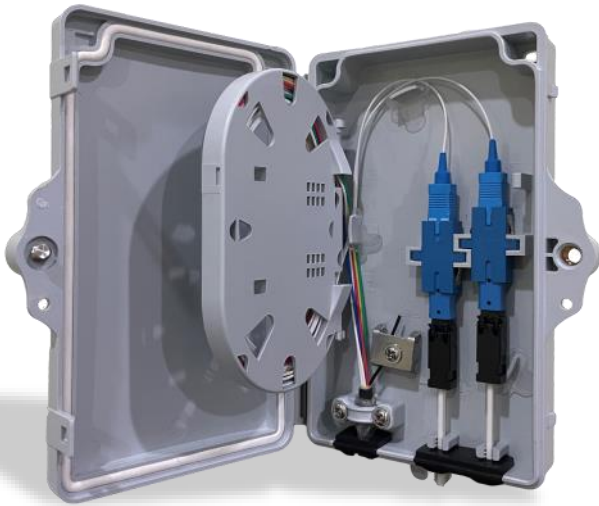
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OVERVIEW OF FTTH SOLUTIONS



FIBER TERMINATION BOX (ABS)

2 Ports



DESCRIPTION

Fiber Termination Box provides a high density wall-mounted solution for next generation networks, which aims to provide and manage maximum numbers of fiber termination in a limited space. It is normally installed outdoor and wall-mounted

FEATURES

- Waterproof design with IP*65 protection level
- Integrated with splice cassette and cable management tools
- Manage small and large quantities of fiber with a high packing density
- Easy to maintain and extend the capacity
- Fiber bend radius control more than 40mm
- Suitable for the fusion splice or mechanical splice
- LC or SC are both available
- Efficient cable management
- Burglar-proof padlock

STANDARD CONFIGURATION

- Splice cassette and cable management tools
- Installation nuts and bolts
- Protective sleeves
- Hose clamps
- Rubber seal for cable entrance

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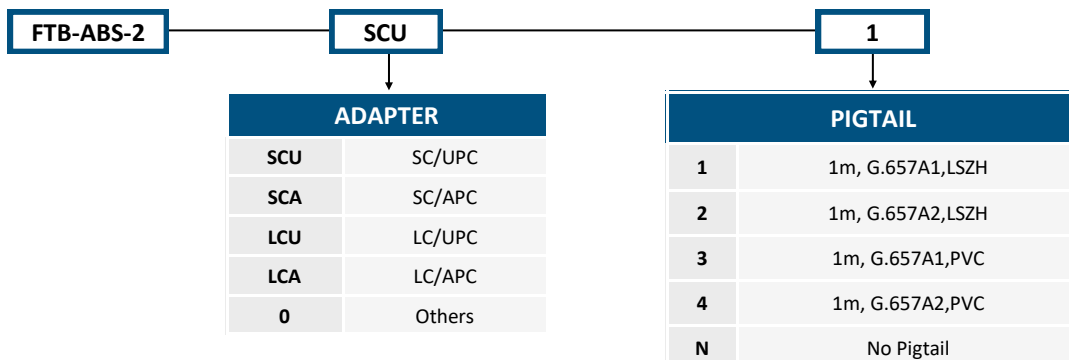


SPECIFICATIONS

Dimension (mm) LxWxH	167 x 102 x 37
Material	ABS+PC
Color	White
Empty Weight (g)	320
Fully Loaded Weight (g)	330

ORDERING INFORMATION

Example : FTB-ABS-2SCU1



Note : Specifications are subject to change without notice

FIBER TERMINATION BOX (ABS)

4 Ports



DESCRIPTION

Fiber Termination Box provides a high density wall-mounted solution for next generation networks, which aims to provide and manage maximum numbers of fiber termination in a limited space. It is normally installed outdoor and wall-mounted

FEATURES

- Waterproof design with IP*65 protection level
- Integrated with splice cassette and cable management tools
- Manage small and large quantities of fiber with a high packing density
- Easy to maintain and extend the capacity
- Fiber bend radius control more than 40mm
- Suitable for the fusion splice or mechanical splice
- FC or SC are both available
- 1*4 PLC Splitter can be installed as an option
- Efficient cable management
- Burglarproof padlock

STANDARD CONFIGURATION

- Splice cassette and cable management tools
- Installation nuts and bolts
- Protective sleeves
- Hose clamps
- Rubber seal for cable entrance

OPTIONAL CONFIGURATION

- FBT Splitter

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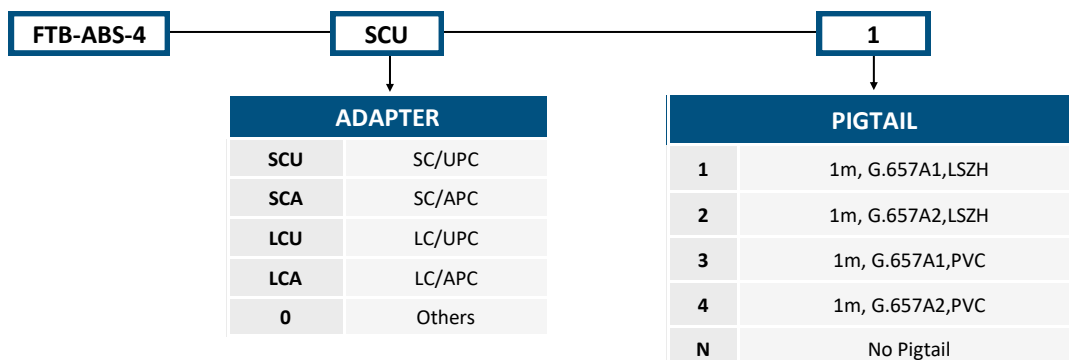
IP65



SPECIFICATIONS

Dimension (mm) LxWxH	186 x 116 x 40
Material	ABS+PC
Color	White
Empty Weight (g)	450
Fully Loaded Weight (g)	500

ORDERING INFORMATION



Note : Specifications are subject to change without notice

FIBER TERMINATION BOX (ABS)

6-8 Ports



DESCRIPTION

Fiber Termination Box provides a high density wall-mounted solution for next generation networks, which aims to provide and manage maximum numbers of fiber termination in a limited space. It is normally installed outdoor and wall-mounted

FEATURES

- Waterproof design with IP*65 protection level
- Integrated with splice cassette and cable management tools
- Manage small and large quantities of fiber with a high packing density
- Easy to maintain and extend the capacity
- Fiber bend radius control more than 40mm
- Suitable for the fusion splice or mechanical splice
- Capacity of fiber up to 8 ports
- FC or SC are both available
- 1*8 or 1*4 PLC Splitter can be installed as an option
- Efficient cable management
- Burglarproof padlock
- 8 ports cable entrance for drop cable

STANDARD CONFIGURATION

- Splice cassette and cable management tools
- Installation nuts and bolts
- Protective sleeves
- Hose clamps
- Rubber seal for cable entrance

OPTIONAL CONFIGURATION

- FBT Splitter

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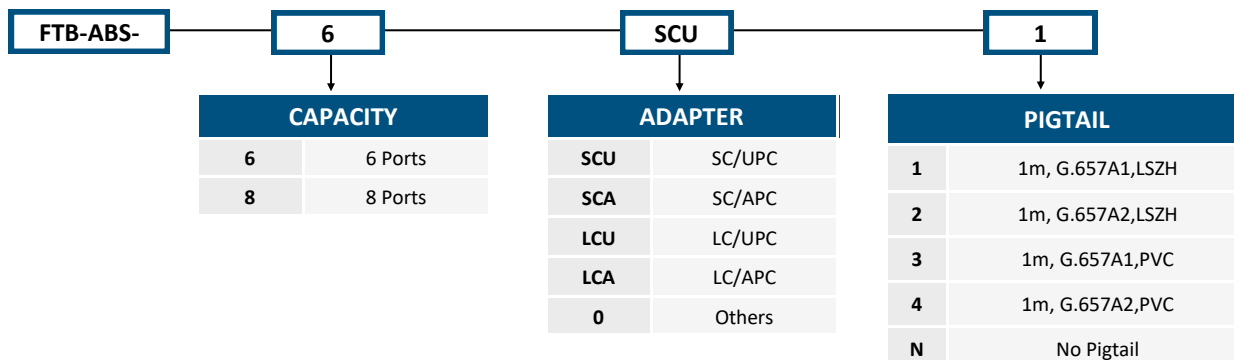


SPECIFICATIONS

Dimension (mm) LxWxH	235 x 205 x 60
Material	ABS+PC
Color	White
Empty Weight (g)	490
Fully Loaded Weight (g)	530

ORDERING INFORMATION

Example : FTB-ABS-6SCU1



Note : Specifications are subject to change without notice

FIBER TERMINATION BOX (ABS)

12-24 Ports



DESCRIPTION

Fiber Termination Box provides a high density wall-mounted solution for next generation networks, which aims to provide and manage maximum numbers of fiber termination in a limited space. It is normally installed outdoor and wall-mounted

FEATURES

- Waterproof design with IP*65 protection level
- Integrated with splice cassette and cable management tools
- Manage small and large quantities of fiber with a high packing density
- Easy to maintain and extend the capacity
- Fiber bend radius control more than 40mm
- Suitable for the fusion splice or mechanical splice
- Capacity of fiber up to 24 ports
- FC or SC are both available
- 1*8 or 1*4 PLC Splitter can be installed as an option
- Efficient cable management
- Burglarproof padlock
- 8 ports cable entrance for drop cable

STANDARD CONFIGURATION

- Splice cassette and cable management tools
- Installation nuts and bolts
- Protective sleeves
- Hose clamps
- Rubber seal for cable entrance

OPTIONAL CONFIGURATION

- FBT Splitter

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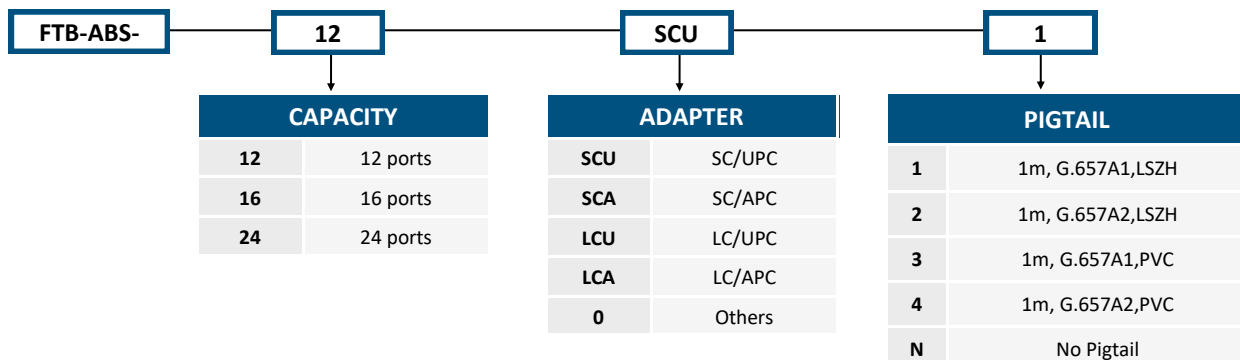


SPECIFICATIONS

Dimension (mm) LxWxH	380 x 292 x 112
Material	ABS+PC
Color	White
Empty Weight (kg)	4
Fully Loaded Weight (kg)	6.8

ORDERING INFORMATION

Example : FTB-ABS-12SCU1



Note : Specifications are subject to change without notice

FIBER TERMINATION BOX (ABS)

12-24 Ports (Pole)



DESCRIPTION

Fiber Termination Box provides a high density wall-mounted solution for next generation networks, which aims to provide and manage maximum numbers of fiber termination in a limited space. It is normally installed outdoor and wall-mounted

FEATURES

- Waterproof design with IP*65 protection level
- Integrated with splice cassette and cable management tools
- Manage small and large quantities of fiber with a high packing density
- Easy to maintain and extend the capacity
- Fiber bend radius control more than 40mm
- Suitable for the fusion splice or mechanical splice
- Capacity of fiber up to 24 ports
- FC or SC are both available
- 1*8 or 1*4 PLC Splitter can be installed as an option
- Efficient cable management
- Burglar-proof padlock
- 24 ports cable entrance for drop cable

STANDARD CONFIGURATION

- Splice cassette and cable management tools
- Installation nuts and bolts
- Protective sleeves
- Hose clamps
- Rubber seal for cable entrance

OPTIONAL CONFIGURATION

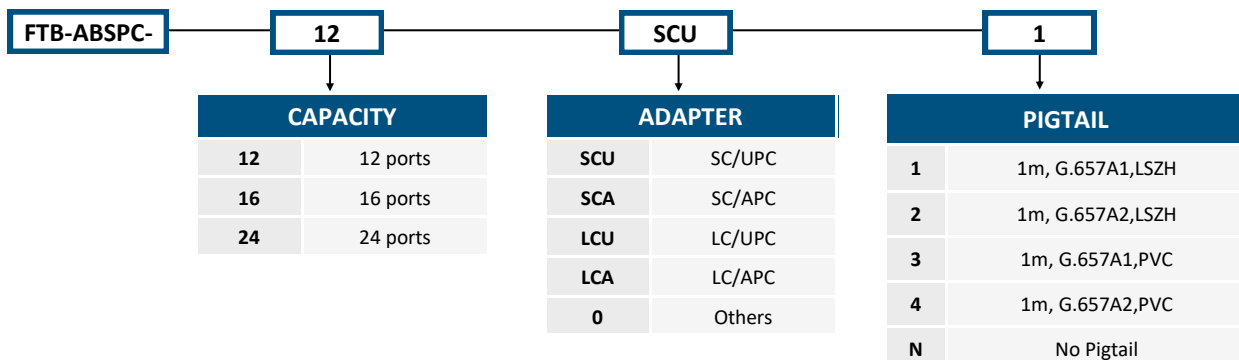
- FBT Splitter

SPECIFICATIONS

Dimension (mm) LxWxH	385 x 320 x 120
Material	ABS+PC
Color	White
Empty Weight (kg)	4
Fully Loaded Weight (kg)	6.8

ORDERING INFORMATION

Example : FTB-ABS-PC-12SCU1



Note : Specifications are subject to change without notice

FIBER TERMINATION BOX (ABS)

36-48 Ports



DESCRIPTION

Fiber Termination Box provides a high density wall-mounted solution for next generation networks, which aims to provide and manage maximum numbers of fiber termination in a limited space. It is normally installed outdoor and wall-mounted

FEATURES

- Waterproof design with IP*55 protection level
- Integrated with splice cassette and cable management tools
- Manage small and large quantities of fiber with a high packing density
- Easy to maintain and extend the capacity
- Fiber bend radius control more than 40mm
- Suitable for the fusion splice or mechanical splice
- Capacity of fiber up to 48 ports
- FC or SC are both available
- 1*8 or 1*4 PLC Splitter can be installed as an option
- Efficient cable management
- Burglarproof padlock
- 8 ports cable entrance for drop cable

STANDARD CONFIGURATION

- Splice cassette and cable management tools
- Installation nuts and bolts
- Protective sleeves
- Hose clamps
- Rubber seal for cable entrance

OPTIONAL CONFIGURATION

- FBT Splitter

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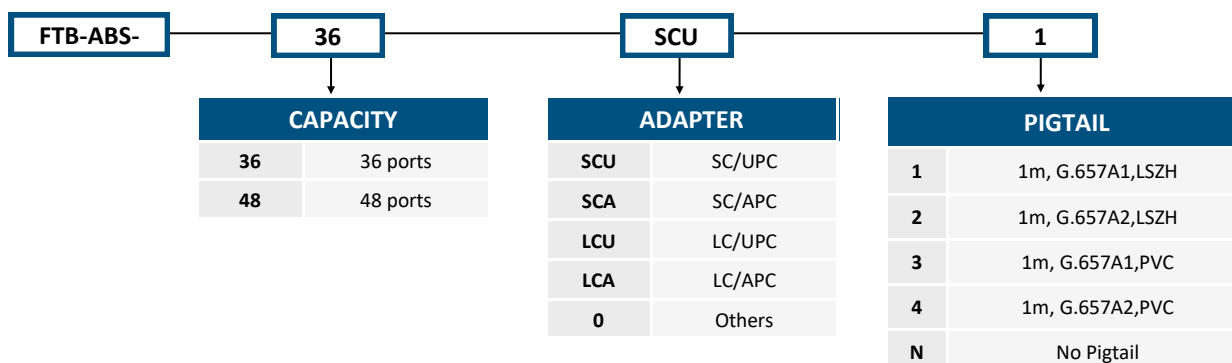


SPECIFICATIONS

Dimension (mm) LxWxH	420 x 320 x 130
Material	ABS+PC
Color	White
Empty Weight (kg)	4.5
Fully Loaded Weight (kg)	7.3

ORDERING INFORMATION

Example : FTB-ABS-36SCU1



Note : Specifications are subject to change without notice



DESCRIPTION

A cost effective solution for protecting passive termination of a fibers in FTTH application. Fiber Wall Socket is injection molded with an integral fiber retention system allowing for quick installation and a positive lock strain relief for most for fiber cable.

A compact wall outlet providing an optical demarcation point for FTTH application.

FEATURES

- The adapter points downward which avoids the laser beam from pointing to the eyes directly
- The clasp design for the cover greatly makes the installation easier
- It matches up with other A86 electronic devices
- Macro-diameter wrapping post in the box protects radically in a maximum way
- 3 types of connection method: Fusion Splicing, Mechanical Splicing and L-Type FA connector



SPECIFICATIONS

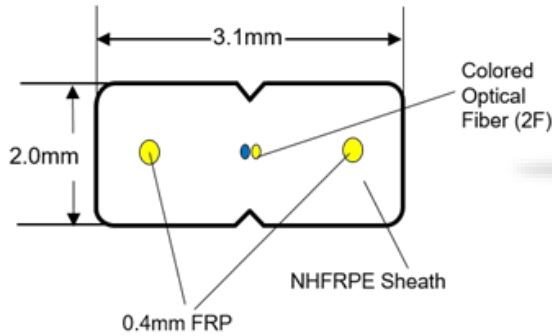
Dimension (mm) LxWxH

86 x 86 x 27

ORDERING INFORMATION

Part No	Description
FWS-0	Fiber Wall Socket with w/o Adapter
FWS-1-SCU	Fiber Wall Socket with 1 unit SC/UPC Adapter
FWS-2-SCU	Fiber Wall Socket with 2 units SC/UPC Adapter
FWS-1-SCA	Fiber Wall Socket with 1 unit SC/APC Adapter
FWS-2-SCA	Fiber Wall Socket with 2 units SC/APC Adapter
FWS-1-LCU	Fiber Wall Socket with 1 unit Duplex LC/UPC Adapter
FWS-1-LCA	Fiber Wall Socket with 1 unit Duplex LC/APC Adapter

Note : Specifications are subject to change without notice



DESCRIPTION

Optical Indoor/Outdoor Drop Cable used for FTTx, CCTV & IoT applications. For FTTx, it is specially designed for MDU fiber deployment and outdoor application together with microduct. The cable is lightweight and with LSZH Jacket.

The cable is designed to bring speed and flexibility to FTTx deployment. Our drop cable is designed with excellent mechanical properties and is able to withstand 500N pulling strength required during installation work.

FEATURES

- Single mode optical cable
- Sumitomo bare fiber with ITU-T G.657A1
- Kelvar yarn with LSZH jacket
- Optical performance and micro bending loss performance duly complied to ITU-T compliance
- TM Type approval with SIRIM test report

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SPECIFICATIONS

Applications	Indoor/Outdoor drop cable
Fiber Count	1, 2, 4, 6, 8, 12
Fiber Diameter	250 ± 15µm
Strength Member	FRP
Outer Sheath	Flame retardant PE (HEFRPE) sheath
Optical Cable Diameter	2x3.1 mm (±0.1mm) (1C and 2C drop cable) 3x4.1 mm (4C, 6C, 8C, 12C drop cable)
Cable Weight	10kg/km (1C and 2C drop cable) 20kg/km (4C, 6C, 8C, 12C drop cable)
Fiber Type	ITU-T G657A1
Max. Tensile Load	500N
Min. Bend Radius	15mm
Jacket Color	White or Black

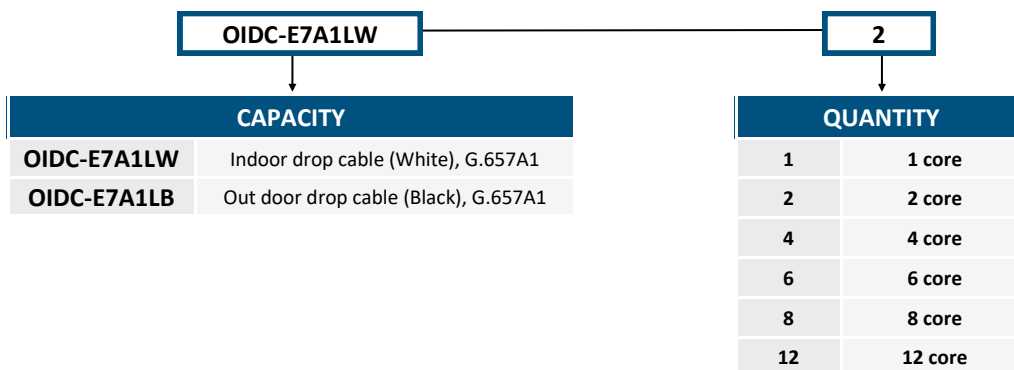
Note : Specifications are subject to change without notice

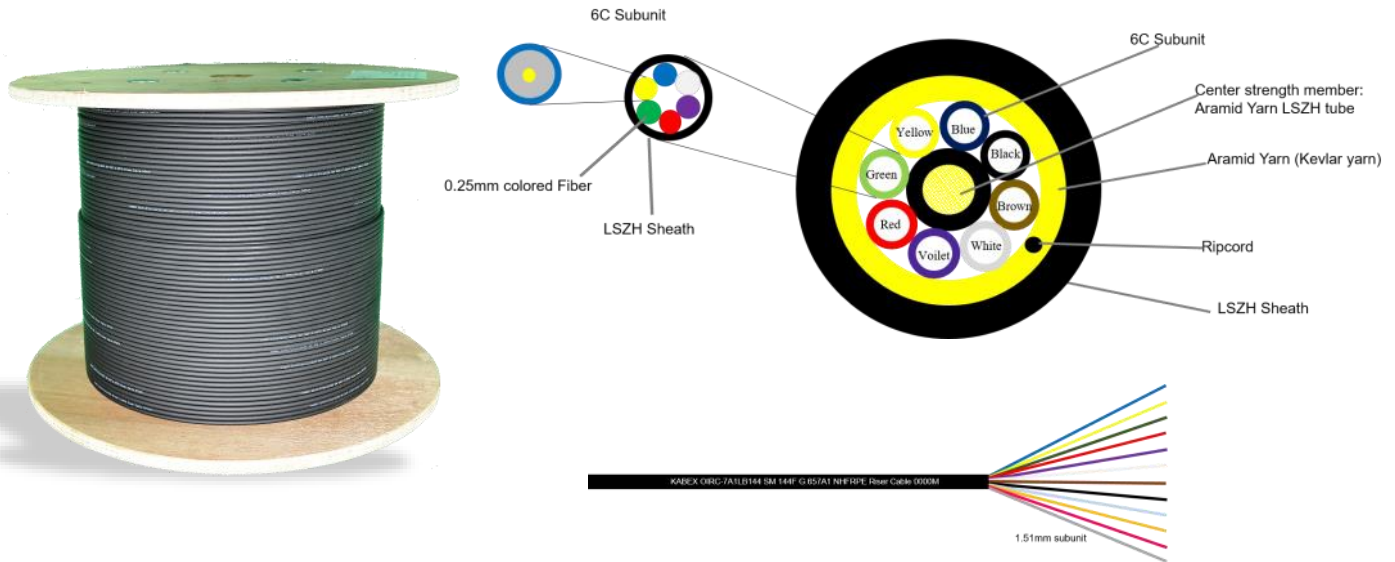
CHARACTERISTICS OF OPTICAL FIBER

Core Material	Ge-doped Silica
Core Mode Field Diameter	8.6~9.5 ± 0.4µm (λ=1310nm)
Cladding Material	Silica
Cladding Diameter	125±0.7µm
Core Concentricity Error	≤ 0.5µm
Cladding Non-Circularity	≤ 1%
Cable Cut-Off Wavelength	< 1260nm
Primary Coating Material	UV-Cured Acrylate
Primary Coating Diameter	245±10µm
Attenuation Coefficient @1310nm	≤0.40dB/km
Attenuation Coefficient @1383nm	≤0.35dB/km
Attenuation Coefficient @1550nm	≤0.30dB/km
Point Discontinuities (@1550nm)	≤0.10dB
Proof Stress	> 0.69Gpa (100 kpsi)

ORDERING INFORMATION

Example : O IDC-E7A1LW2





DESCRIPTION

Our Single Mode Indoor Riser Cable is designed for FTTx, CCTV & IOT applications. For FTTx, it is to be installed from MDF room to Fiber Termination Box (FTB) of each floor. Multicore Indoor Riser Cable ranges from 8C to 144C. It is loose tube cable structure design and is able to do mid-span access without terminating the cable.

FEATURES

- Sumitomo bare fibre with ITU-T G.657A1
- Kelvar yarn with LSZH sheath
- Small outer diameter with light weight of cable
- Easy installation & cable management
- TM Type approval with SIRIM test report



SPECIFICATIONS

Number of Fiber	8C	12C	16C	24C	36C	48C	60C	72C	96C	144C
Fiber Color	Blue, Yellow	Blue, Yellow, Green, Red	Blue, Yellow, Green, Red, Violet, White	Blue, Yellow, Green, Red, Violet, White	Blue, Yellow, Green, Red, Violet, White, Brown, Black, Aqua, Orange, Pink, Gray					
Subunit Material	LSZH (Low Smoke Zero Halogen) compound									
Subunit Diameter (mm)	0.96	1.06	1.16			1.51				
Central Strength Member material	Kevlar yarn with LSZH sheath									
Strength Member Material	Aramid Yarn (KEVLAR)									
Sheath Materials	LSZH (Low Smoke Zero Halogen) compound, moisture, chemical and fungus resistance.									
Sheath Thickness	Nom. 0.8mm									
Sheath Color	Black									
Cable Outer Diameter (mm)	5.0	5.5			6.5		7.5	9.5		
Cable Weight (kg/km)	5.0	5.5			35	40	50	80		
Packing	1km/drum or 2km/drum									

Note : Specifications are subject to change without notice

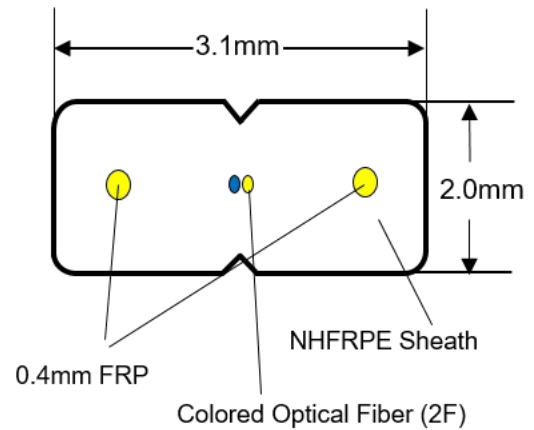
CHARACTERISTICS OF OPTICAL FIBER

Type of Fiber	Single mode (G.657A)
Core Material	Ge-doped Silica
Core Mode Field Diameter	8.6~9.5 ± 0.4µm (λ=1310nm)
Cladding Material	Silica
Cladding Diameter (µm)	125 ± 1
Core Concentricity Error (µm)	≤ 0.6µm
Cladding Non-Circularity (%)	≤ 1
Cable Cut-Off Wavelength	< 1260
Primary Coating Material (nm)	UV-Cured Acrylate
Primary Coating Diameter (µm)	245 ± 10
Attenuation Coefficient @1310nm	≤0.40dB/km
Attenuation Coefficient @1383nm	≤0.35dB/km
Attenuation Coefficient @1550nm	≤0.30dB/km
Point Discontinuities (@1550nm)	≤0.10dB
Proof Stress	> 1.0Gpa (150 kpsi)

ORDERING INFORMATION

Part No	Description
OIRC-7A1LB8	8C Indoor G.657A1 Riser Cable
OIRC-7A1LB12	12C Indoor G.657A1 Riser Cable
OIRC-7A1LB16	16C Indoor G.657A1 Riser Cable
OIRC-7A1LB24	24C Indoor G.657A1 Riser Cable
OIRC-7A1LB36	36C Indoor G.657A1 Riser Cable
OIRC-7A1LB48	48C Indoor G.657A1 Riser Cable
OIRC-7A1LB60	60C Indoor G.657A1 Riser Cable
OIRC-7A1LB72	72C Indoor G.657A1 Riser Cable
OIRC-7A1LB96	96C Indoor G.657A1 Riser Cable
OIRC-7A1LB144	144C Indoor G.657A1 Riser Cable

Note : Specifications are subject to change without notice



DESCRIPTION

The Pre-Terminated Indoor Drop Cable is designed to be used in FTTx applications. The ends of fibers are terminated with SC/UPC connectors. This datasheet covers the specifications of the fiber connectors and the singlemode optical fiber cables in compliances to ITU-T G.657A

FEATURES

- 100% tested for insertion loss and return loss
- Better IL and ORL performance
- Factory terminated, improved installation cost & time
- High connector tensile strength 70N
- End to end without splicing
- Number labelling with each core of cable
- Easy for cable management (plug & play only)
- TM Type Approval with SIRIM test report



SPECIFICATIONS

Characteristic	Parameter	
Connector	FC, SC, ST, LC, MU, SMA, E2000, MT-RJ	
Fiber Type	SM	
Polishing	UPC	APC
Insertion Loss (dB)	≤0.2	≤0.3
Return Loss (dB)	≤55	≤65
Optical Cable Diameter	2x3.1mm (1C and 2C); 3x4.1mm (4C, 6C, 8C & 12C)	
Exchangeability (dB)	≤0.2 (Randomly connected)	
Vibration	≤0.2 (5~50Hz, 1.5mm amplitude)	
Working Temperature (°C)	≤0.2 (-40 ~ +80°C, 21 cycle)	

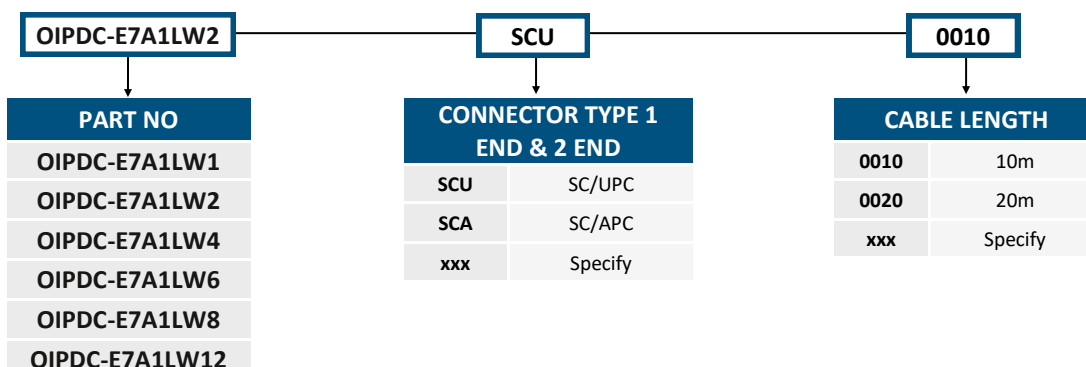
Note : Specifications are subject to change without notice

ORDERING INFORMATION

Example :-

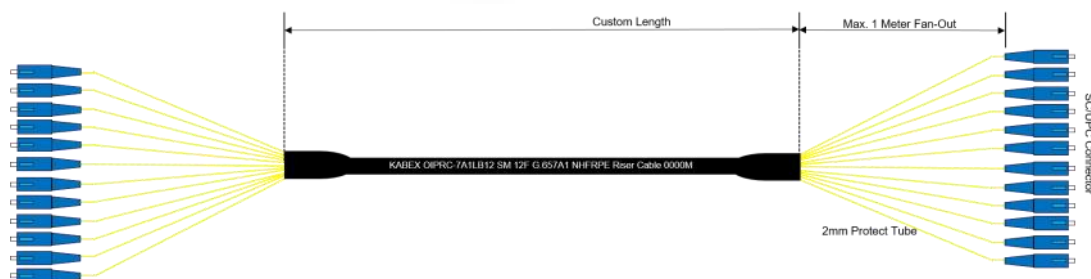
ONE END : OIPDC-E7A1LW2SCU0010

Two End : OIPDC-E7A1LW2SCUSCU0010



Note : Specifications are subject to change without notice

PRE-TERMINATED INDOOR RISER (MID-SPAN) CABLE



DESCRIPTION

The pre-terminated indoor riser cable is designed to be used in FTTX applications. Each core of cable is protected by 2.0mm tube separately at the fanout.

The ends of fibers are terminated with SC/UPC connectors. This datasheet covers the specifications of the fiber connectors and the single mode optical fiber cables in compliant to ITU-T G.657A1

FEATURES

- Supplied as standard with fanout kit and pulling eye
- 100% tested for insertion loss and return loss
- Better IL and ORL performance, improved installation cost & time
- Connector tensile strength 70N
- End to end without cable join
- Number labelling with each core of cable
- Easy for cable management (plug & play only)
- TM Type Approval with SIRIM test report

SPECIFICATIONS

Characteristic	Parameter	
Connector	FC, SC, ST, LC, MU, SMA, E2000, MT-RJ	
Fiber Type	SM	
Polishing	UPC	APC
Insertion Loss (dB)	≤0.2	≤0.3
Return Loss (dB)	≤55	≤65
Optical Cable Diameter	5.5mm (8C, 12C, 16C, 24C and 26C) 7.5mm (48C)	
Exchangeability (dB)	≤0.2 (Randomly connected)	
Vibration	≤0.2 (5~50Hz, 1.5mm amplitude)	
Working Temperature (°C)	≤0.2 (-40 ~ +80°C, 21 cycle)	

Note : Specifications are subject to change without notice

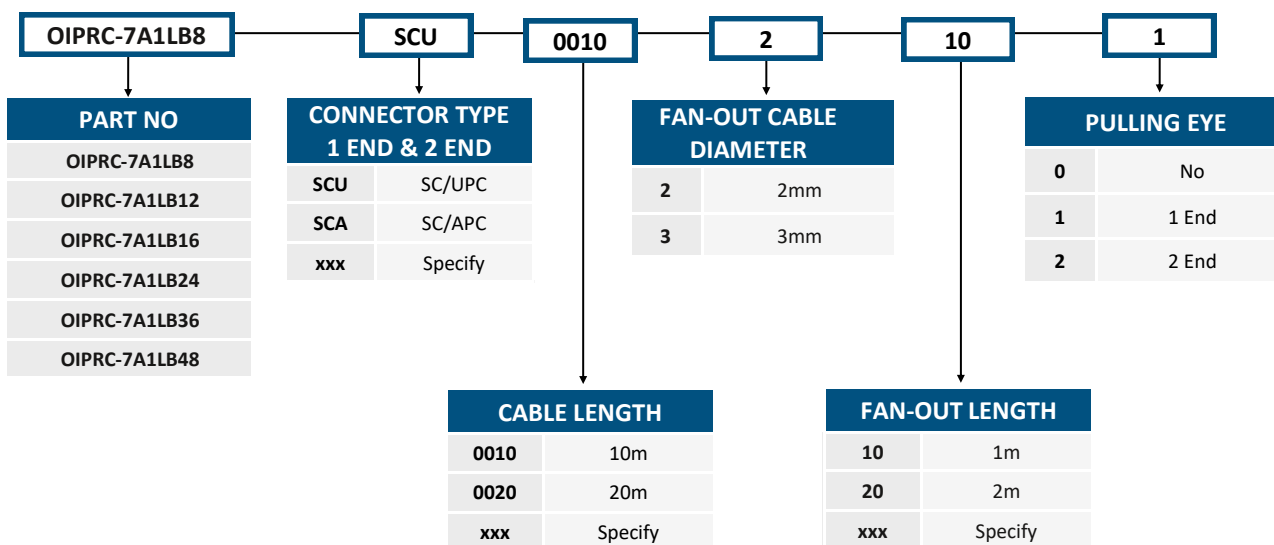
PRE-TERMINATED INDOOR RISER (MID-SPAN) CABLE

ORDERING INFORMATION

Example :-

One End : OIPRC-7A1LB8SCU00102101

Two End : OIPRC-7A1LB8SCUSCU00102102



Note : Specifications are subject to change without notice



DESCRIPTION

Soho Box is specifically designed for the last mile building of FTTX network project. The box brings a brilliant way by safely containing all kinds of ONU devices, Fiber Wall Socket, Wifi Modem, UTP Panel and other electronic equipments.

This Soho Box is normally based on a wall-mounted design and installed in the Utility Room. It is equipped with a good venting system internally. The hermetic shell is designed according to CE standards. The Soho Box contains of power sockets. It has capacious space to contain power area, distribution and splice area and equipment area.

FEATURES

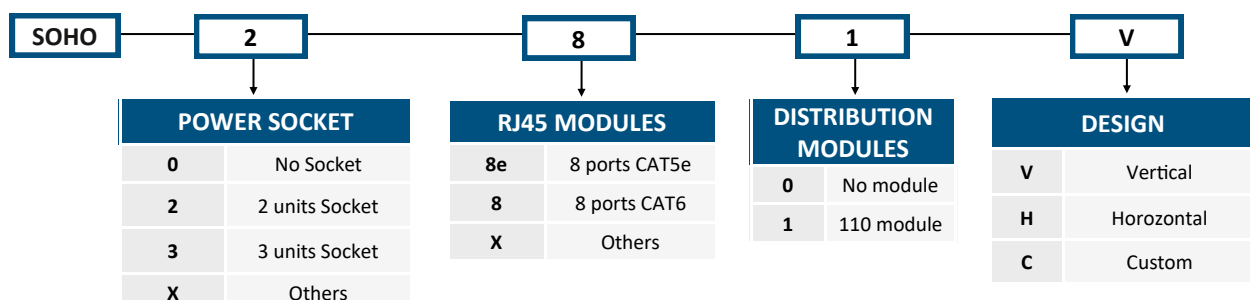
- Adopt Krone module, 110 module or RJ45 module as distribution unit, convenient for cable forming and maintenance
- Holes designed on the bottom panel on the cabinet, with dust-proof net, great performance on venting, dust-proof and rain-proof features.
- Flexible configuration for client's choices, simple operation and easy for maintenance
- Capacious space for the installation of router, various optical active equipments, data distribution module, voice module and fiber splice cassette as per customers' requirements.
- Wall-mounted installation, convenient for maintenance
- Using cold rolled steel material, surface treatment of degreasing, rustproof, phosphoric spraying, exquisite design with precise dimension and craftsmanship

SPECIFICATIONS

Characteristic	Parameter
Vertical Dimension	118mm(W)*300mm(L)*400mm(H)
Horizontal Dimension	118mm(W)*400mm(L)*300mm(H)

ORDERING INFORMATION

Example : SOHO-281V



Note : Specifications are subject to change without notice



DESCRIPTION

KABEX® Optical Distribution Frame (ODF) is a high-capacity, high-density fiber distribution frame, suitable for the composition and distribution of fibers in optical access network to achieve fiber optic lines connection, distribution and scheduling.

FEATURES

- The frame, mounting bracket and metallic parts are made of top quality corrosive resistive mild steel and powder coated with grey color RAL 7035
- The frame, mounting bracket and metallic parts are made of top quality corrosive resistive mild steel and powder coated with grey color RAL 7035.
- It can last more than 30 years for indoor applications.
- Full front operation which can be installed against wall, side by side or back to back.
- Complete cable routing design of fiber management guides with fiber bend radius over 30mm.
- Cable inlets and outlets available on top and at the bottom.
- Standard compliance mechanical design including basic dimension, mounting bracket, front panels, sub-racks and chassis for standard 19" installation.
- Suitable for ribbon and non-ribbon optical fibers, and inserting installation of SC, FC, LC, ST (additional flange) adapters.
- Come with lockable-common-key front door and detachable back panel.
- Capacity up to maximum of 1440 fibers with 3U FDUs; can be flexibly customized as required.

APPLICATIONS*2

- Communications
- Networks
- Industrial control
- Building automation

STANDARD CONFIGURATIONS

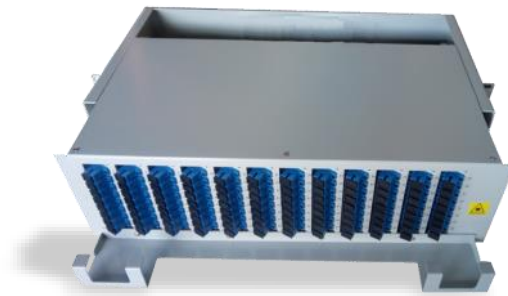
- Fiber Distribution Unit comes with :
 - Fiber Sleeves
 - Splice Trays
 - Adaptor & Pigtailes
- Fiber spooling Pillar
- Strength-core fixing panel

SPECIFICATIONS

Characteristic	Parameter
Dimension, mm*1	900W x 2200H x 300D
Capacity (no. of fibers)	Multiplication of 96C or 120C up to 1440C

Note : Specifications are subject to change without notice

DRAWER TYPE DA SERIES FDU*3



Drawer type, simplex SC, 96 or 120 fiber termination , 3U, with extended table for fiber guides

Note :

*1: The dimension of the ODF is designed in accordance with ETS 300 119-2.

*2: The ODF and associated accessories are meant for indoor application

*3: The FDU is complete with splice trays, molded splice holders, splice protection sleeves and connector pigtails, and adapters mounted on patch panels

GENERAL SPECIFICATIONS	
Adapters (Angled @ 300)	SC, FC, LC Duplex, E2000
Capacity	96 or 120 fibers (SC) with numbering label for easy identification of port
Material	Corrosive resistive cold rolled steel (1.5mm; other thickness upon request)
Color	Powder coated (grey)
Dimension	482.6x265x131mm, 3U
Installation Method	19" rack mount
Splice Tray Capacity	24 fibers / tray (with ABS material), up to 5pcs of splice tray for 120C
Quantity	1 pc/carton

ORDERING INFORMATION

Example : ODF-A-902230-1152SCP1

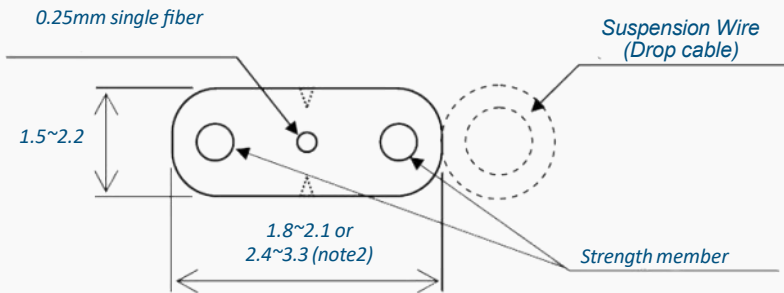
ODF-A-902230		1152		SCP		1	
ODF DESCRIPTION		CAPACITY		ADAPTER TYPE		PIGTAIL	
ODF-A-902230	Optical Distribution Frame, grey, 2.2m height, 0.9m width, 0.3m depth	96	96 termination	SCP	SC/UPC	1	1.5m G657A1 LSZH
		192	192 termination	SCA	SC/APC	2	1.5m G657A1 PVC
		288	288 termination	FCP	FC/UPC	3	1.5m G657A2 LSZH
		384	384 termination	FCA	FC/APC	4	1.5m G657A2 PVC
		480	480 termination	LCP	LC/UPC Duplex	N	No Pigtail
		576	576 termination	LCA	LC/APC Duplex		
		672	672 termination	E2P	E2000/UPC		
		768	768 termination	E2A	E2000/APC		
		960	960 termination	N	No Adapter		
		864	864 termination				
		1056	1056 termination				
		1152	1152 termination				
		1200	1200 termination				
		1320	1320 termination				
		1440	1440 termination				
		xxx	Specify				

Note : Specifications are subject to change without notice



DESCRIPTION

Field Assembly SC type connector for bend insensitive SM fiber drop cable or indoor cable. The two fiber drop/indoor cable shall be applicable for this connector if one fiber is used and other fiber must be cut at the cable jacket end. This connector is not applicable to the loose cable



Note 1 : Bend insensitive SM fiber must comply with ITU-T.G.652B, G652D and G652A. Allowable fiber diameter is 0.25+/-0.015mm.

Note 2 : In case of drop cable, the messenger wire must be removed before installation.

SPECIFICATIONS

Characteristic	Parameter
Fiber Cleaver	Yes
Operating Temperature	-40 ~ 75°C
Insertion Loss (Wavelength : 1310/1550nm)	Max. 0.3dB
Return Loss (Wavelength : 1310/1550nm)	Min50dB
Allowable Tensile Strength	10N
Allowable Connector Mating	500 times
Packing Unit	Each connector and spare Cable holder is packaged in a PE bag individually. 100 connectors, an Assembly guide jig, an E-SC Cut Spacer, a spare Cable holder and an instruction manual are packaged in a middle size of a PE bag.
Composition and Construction	1x Connector plug with wedge plate and cable holder (M) Spare cable holder (M) Assembly guide jig E-SC Cut Spacer Instruction Manual

ORDERING INFORMATION

Part No	Description
SMF (End Face: UPC)	YZS1823098

FC ADAPTER



FC Square



FC Round D-Type

SC ADAPTER



SC Simplex



SC Duplex

MT-RJ & MPO ADAPTER



MT-RJ



MPO

DESCRIPTION

Optical Fiber Adapter is used to mate two connectors, usually mounted in a distribution panel or wall mount box. It is a precision components made from zirconia ceramic to ensure the perfect alignment of connectors and reduced insertion loss for both SM and MM fibers. In most cases, the split sleeve is the critical part of the system that aligns the ferrule part of the connector, keeping the fibers in perfect alignment.

In the case of MT-RJ, the alignment is carried out by two guide pins fitted into one of the connectors. The adapter is purely to support and lock the connectors together in the distribution panel or wall box.

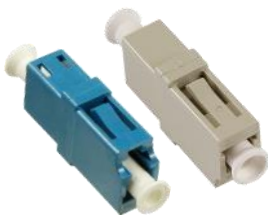
FEATURES

- Available in FC, SC, ST, LC, MU, MT-RJ and MPO
- Available in simplex, duplex, quad (LC) and Hybrid versions
- High precision zirconia or standard phosphor bronze sleeves
- Low insertion loss
- High repeatability and stability

APPROVED BY



LC & MU ADAPTER



LC Simplex



LC Duplex



LC Duplex with SC



MU Adapter

ST & SMA ADAPTER



ST Adapter



SMA Adapter

HYBRID ADAPTER



LC/SC



SC/ST



SC/FC



FC/ST

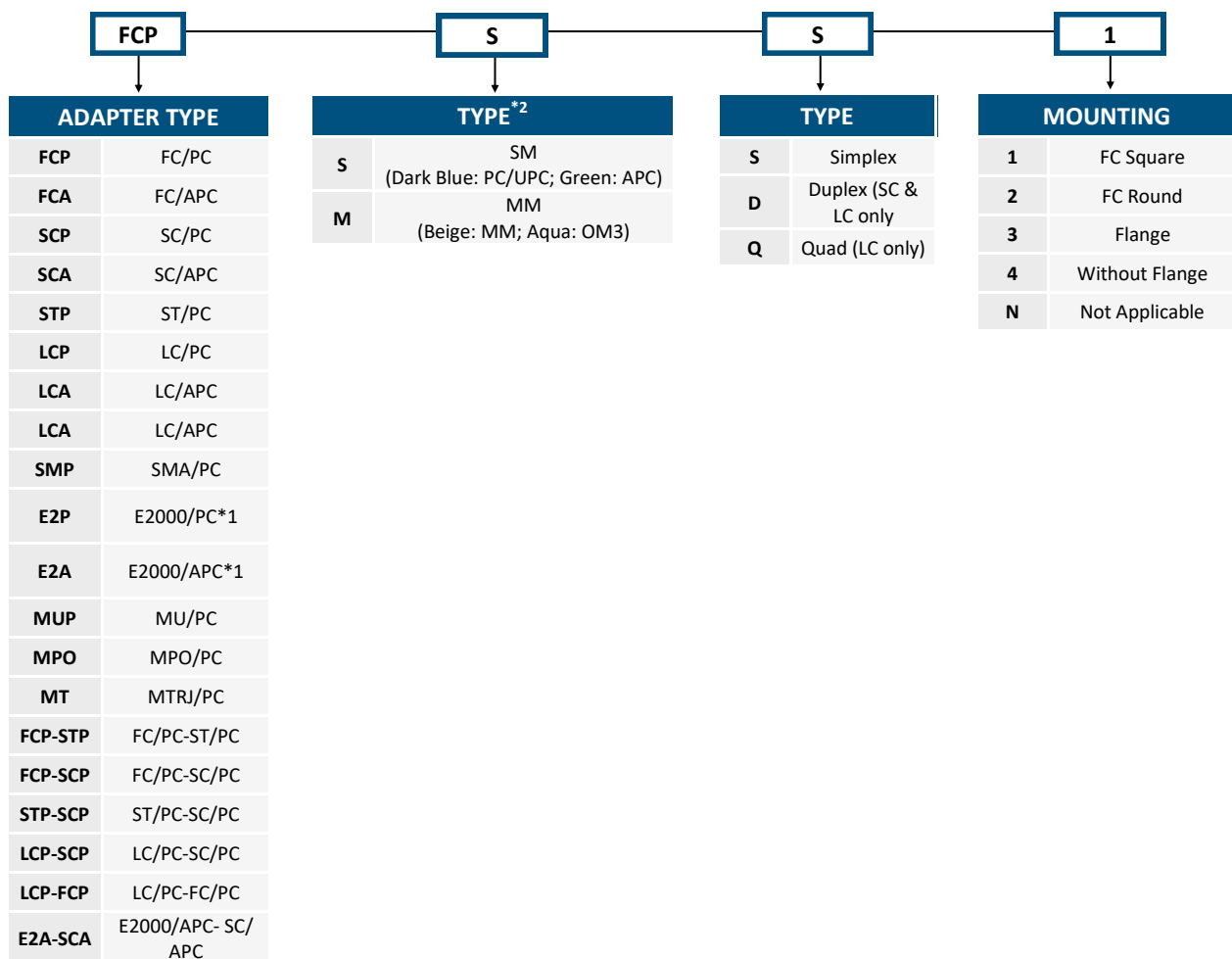
Note : Specifications are subject to change without notice

SPECIFICATIONS

Characteristic	Parameter
End face	PC/APC
Mode	Single Mode or Multi Mode
Sleeve Material	Zirconia Ceramic or Phosphor Bronze
Adapter Housing	Polymeric plastic tested in accordance to IEC60068-2-10 and in compliance with UL94 V-0 Rating Corrosive resistant nickel plated brass material for metal parts
Insert Loss	≤ 0.2 dB
Exchangeability	≤ 0.2 dB (connect randomly)
Tensile Strength	≤ 0.2 dB (0 ~ 100N)
Lifetime	>500 times mating (in accordance to IEC 61300-2) Adapter lifetime >15 years
Vibration	≤ 0.2 dB (5 ~ 50Hz, 1.5mm Amplitude)
Working Temperature	≤ 0.2 dB (-40 ~ 80C, 21 Cycles)

ORDERING INFORMATION

Example : FDP-SSC1

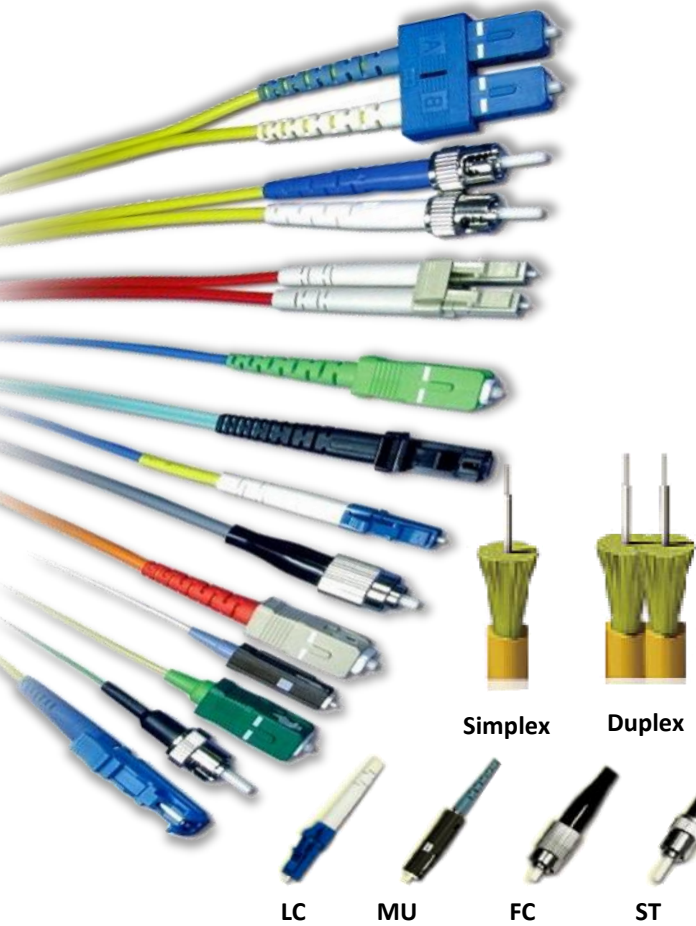


Note :

*1: E2000 connectors are from R&M

*2: Color is only applicable to polymeric material based connector's

Note : Specifications are subject to change without notice



DESCRIPTION

High performance and quality of connectors cable assembly is required for next generation optical network to assure long term reliability for demanding applications such as FTTx, DWDM, 100G, CATV and etc

The connectors assembly are Telcordia and RoHS compliant. The termination passed end faced inspection and 100% test for Insertion Loss (IL) and Optical Return Loss (ORL)

FEATURES

- Available in FC, SC, ST, LC, SMA, E2000, MU and MT-RJ
- Available in Simplex, Duplex and Hybrid Version
- High precision zirconia (except MT-RJ with thermoplastic)
- Low insertion loss
- High repeatability and stability
- Premium connector with ORL 55dB for UPC and 65dB for APC
- Standard connector with ORL 50dB for UPC and 60dB for APC

Simplex

Duplex

LC

MU

FC

ST

SC

SMA

MT

E2000



SPECIFICATIONS

Connector	FC, SC, ST, LC, MU, SMA, E2000				MT-RJ		
Fiber Type	SM				MM	SM	MM
Polishing	Standard UPC	Premium UPC	Standard APC	Premium APC	PC	PC	
Insertion Loss (dB)	Typical ≤ 0.2 Max ≤ 0.3	≤ 0.2	Typical ≤ 0.2 Max ≤ 0.3	Typical ≤ 0.2 Max ≤ 0.3	≤ 0.25	Typ. 0.3 Max 0.5	
Return Loss (dB)	≥ 50	≥ 55	≥ 60	≥ 65	-	≥ 35	-
Cable Diameter (mm)	Φ3, Φ2, Φ0.9				Φ2, Φ3		
Exchangeability (dB)	≤ 0.2 dB (Randomly connected)						
Vibration	≤ 0.2 dB (5~50Hz, 1.5mm amplitude)						
Temp. Range	≤ 0.2 dB (-40°C ~ 80°C, 21 Cycles)						

FERULE SPECIFICATIONS

End-face Polishing		PC	UPC	Standard APC	Premium APC	
Radius of Curvature (mm)	SC	5~30	10~25mm	5~12mm	5~12mm	
	LC	5~30	7~25mm	5~12mm	5~12mm	
Apex Offset (μm)		≤ 70μm	≤ 50μm	≤ 70μm	≤ 50μm	
Fiber Undercut		-90nm (Undercut)		+50nm (Protrusion)		
Angle Deviation		—		8° ± 0.5°		

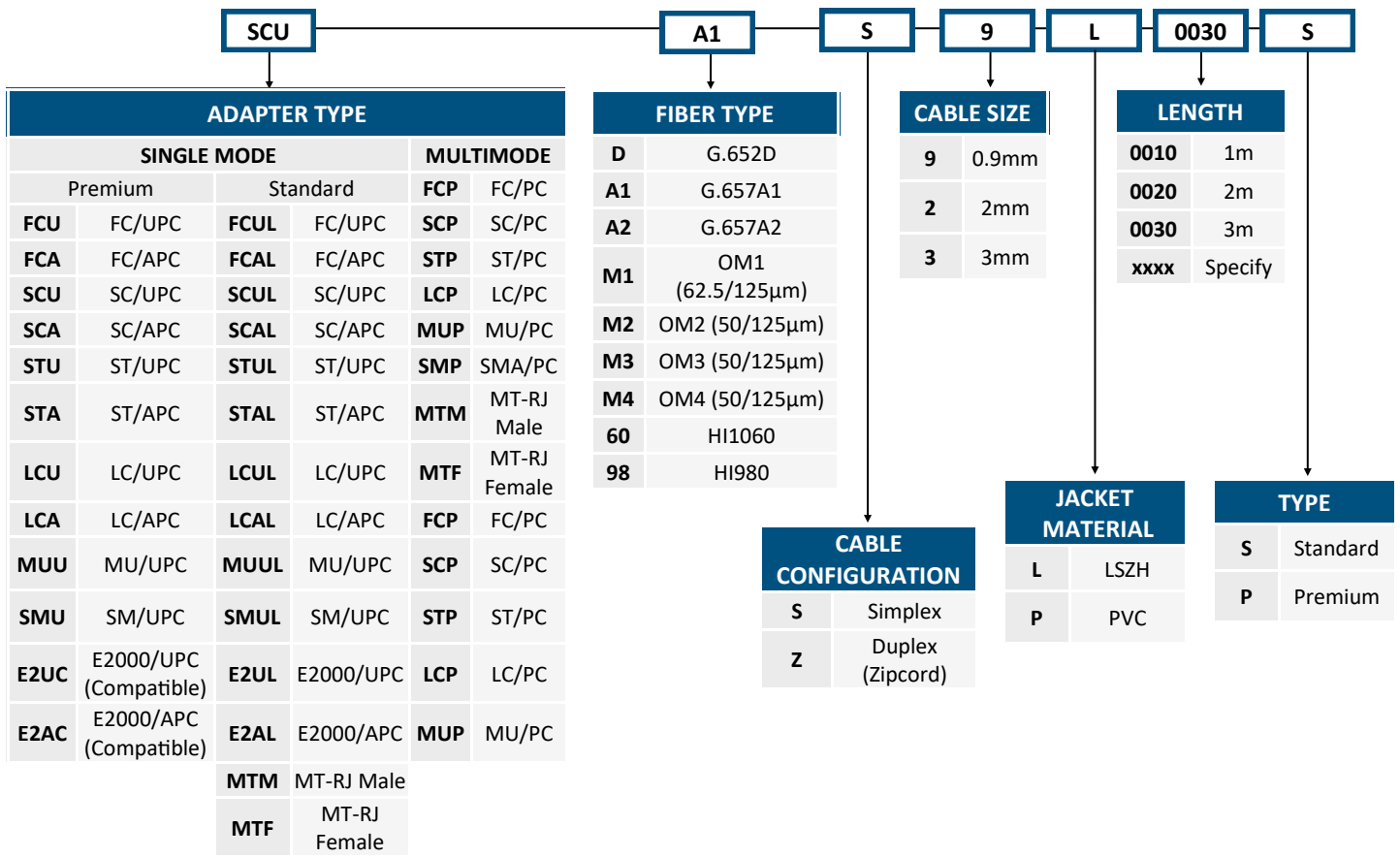
Note : Specifications are subject to change without notice

ORDERING INFORMATION

Example :-

Pigtail :SCU-A1S9L0030S *Pigtail come with one end only

Patch Cord :SCUSCU-A1S9L0030S



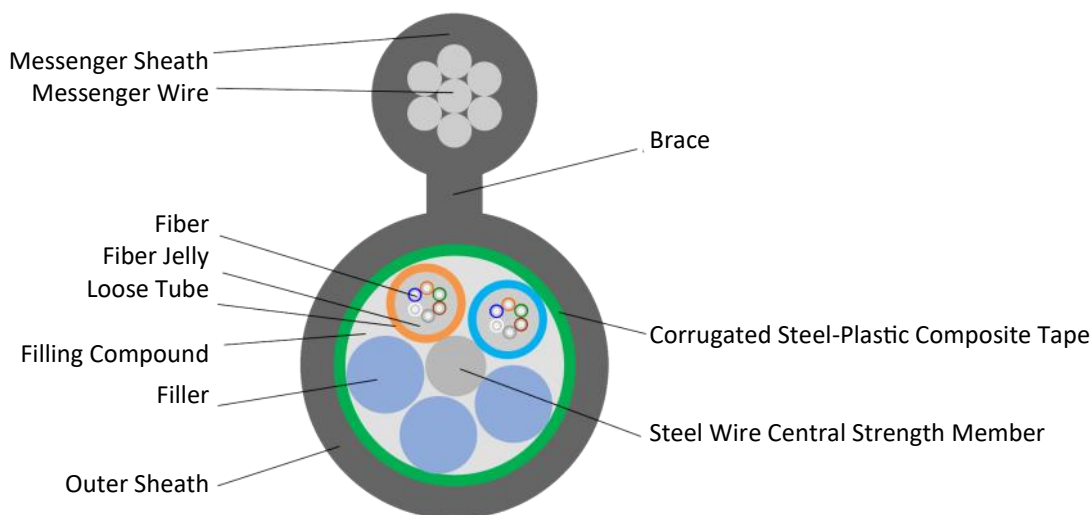
Note :

*1: E2000 connectors are from R&M

*2: Color is only applicable to polymeric material based connector's

Note : Specifications are subject to change without notice

Aerial, Figure 8



SPECIFICATIONS

Items		ODTC8A	
Fiber Count		4 - 96	
Fiber Type		G.652D	
Bare Fiber Type		SUMITOMO	
Colored Coating Fiber	Dimension	250µm±15µm	
	Color	Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Purple, Pink, Aqua	
Loose Tube	Dimension	(1.7-2.0)±0.1mm	
	Material	PBT	
	Color	Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Purple, Pink, Aqua	
Filler	Dimension	(1.7-2.0)±0.1mm	
	Material	PP	
	Color	Natural	
Central Strength Member (CSM)	Material	Steel Wire	FRP
Messenger Wire	Dimension	2.4(0.8*7)mm	
	Material	Steel Wire	
Armour	Material	Corrugated Steel-Plastic Composite Tape	
Outer Sheath		(9.2±0.3)mm x (16.5±0.5)mm (4-24F)	
		(9.6±0.3)mm x (16.9±0.5)mm (36F)	
	Dimension	(10.1±0.5)mm x (17.4±0.7)mm (48F/60F)	
		(10.7±0.5)mm x (18.0±0.7)mm (72F)	
		(12.2±0.5)mm x (19.5±0.7)mm (96F)	
	Material	PE	
	Color	Black	
Fiber Attenuation Coefficient in Cable	dB/km(1310nm)	≤0.36dB/km	
	dB/km(1550nm)	≤0.22dB/km	

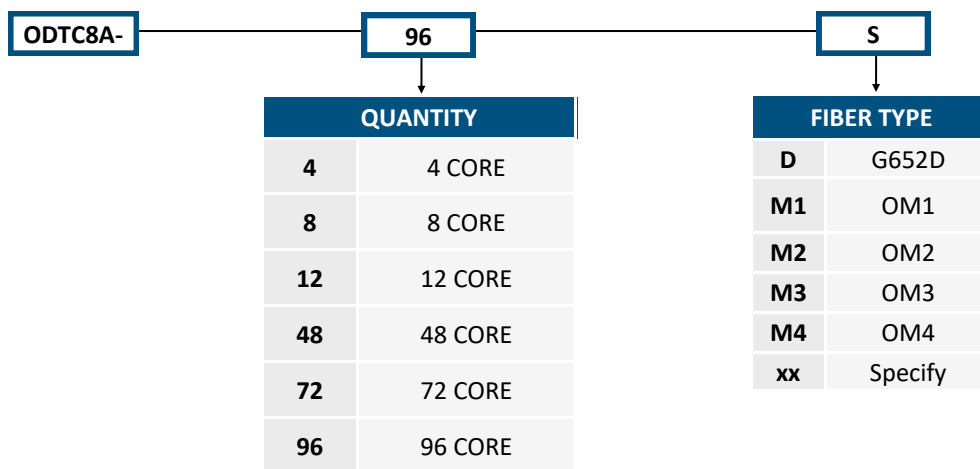
Note : Specifications are subject to change without notice

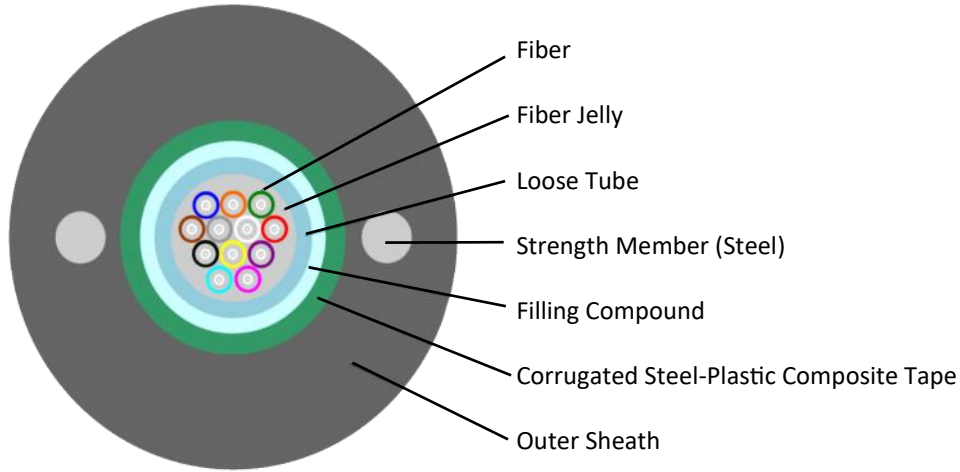
MECHANICAL AND PHYSICAL PROPERTIES

No.	Characteristics	Parameter Value	
1	Tensile Strength	Short Term	2700N
		Long Term	900N
2	Crush Resistance Strength (N/100mm)	Short Term	1000N
		Long Term	300N
3	Min. Bending Radius (mm)	Dynamic	20D
		Static	10D
4	Temperature Range (°C)	-40 ~ +60	

ORDERING INFORMATION

Example : ODTc8A-96D





SPECIFICATIONS

Part No		ODXTW
Fiber Count		4-12
Fiber Type		Single Mode: G.652D (OS1/OS2) Multimode: OM1/OM2/OM3/OM4
Colored Coating Fiber	Dimension	250µm±15µm
	Colour	Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Purple, Pink, Aqua
Loose Tube	Dimension	2.0±0.1mm
	Material	PBT
	Colour	Natural
Armour	Material	Corrugated Steel-Plastic
Outer Sheath	Dimension	7.8mm±0.3mm
	Material	PE
	Color	Black
Fiber Attenuation Co-efficient in Cable	dB/km(1310nm)	≤0.36dB/km
	dB/km(1550nm)	≤0.22dB/km
	dB/km (850nm)	≤3.0dB/km (OM1/2/3/4)
	dB/km (1300nm)	≤1.0dB/km (OM1/2/3/4)

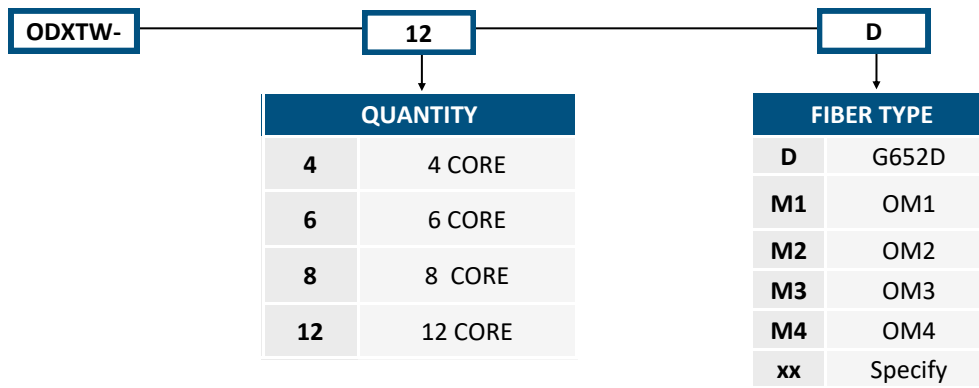
MECHANICAL AND PHYSICAL PROPERTIES

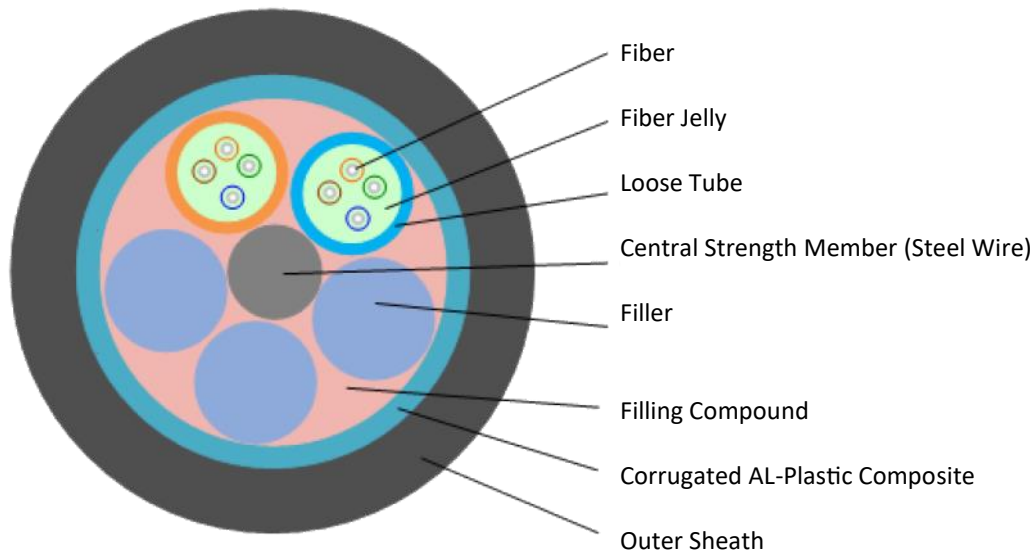
No.	Characteristics	Parameter Value	
1	Tensile Strength	Short Term	1000N
		Long Term	500N
2	Crush Resistance Strength (N/100mm)	Short Term	1000N
		Long Term	300N
3	Min. Bending Radius (mm)	Dynamic	20D
		Static	10D
4	Temperature Range (°C)	-40 ~ 60	

Note : Specifications are subject to change without notice

ORDERING INFORMATION

Example : ODXTW-12D





SPECIFICATIONS

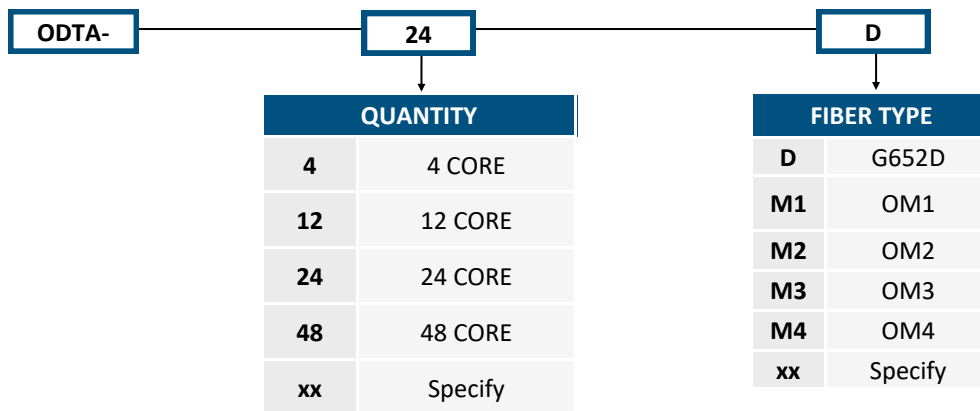
Part No		ODTA
Fiber Count		4-192
Fiber Type		G.652D/OM1/OM2/OM3/OM4
Colored Coating Fiber	Dimension	250 μ m \pm 15 μ m
	Color	Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Purple, Pink, Aqua
Loose Tube	Dimension	(1.7-2.0) \pm 0.1mm
	Material	PBT
	Colour	Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Purple, Pink, Aqua
Filler (If needed)	Dimension	(1.7-2.0) \pm 0.1mm
Filler (If needed)	Material	PP
	Colour	Natural
	Material	Steel
Armour	Material	Corrugated Al-Plastic
	Dimension	(9.7 \pm 0.3)mm (4-24F); (10.2 \pm 0.3)mm (36F); (11 \pm 0.5)mm (48F); (11.5 \pm 0.5)mm (72F); (13.4 \pm 0.5)mm (96F); (14.8 \pm 0.5)mm (120F); (16.9 \pm 0.5)mm (144F); (18.5 \pm 0.5)mm (192F);
	Material	PE
	Color	Black
	dB/km(1310nm)	\leq 0.36dB/km
	dB/km(1550nm)	\leq 0.22dB/km
	dB/km (850nm)	\leq 3.0dB/km (OM1/2/3/4)
	dB/km (1300nm)	\leq 1.0dB/km (OM1/2/3/4)

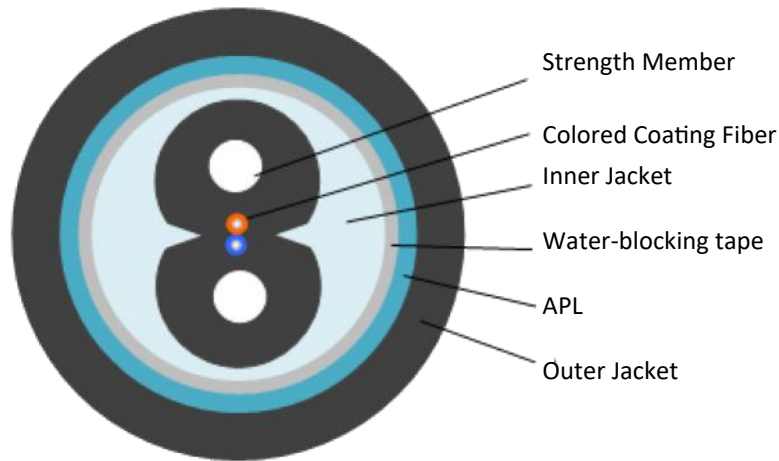
MECHANICAL AND PHYSICAL PROPERTIES

No.	Characteristics	Parameter Value	
1	Tensile Strength	Short Term	1500N
		Long Term	600N
2	Crush Resistance Strength (N/100mm)	Short Term	1000N
		Long Term	300N
3	Min. Bending Radius (mm)	Dynamic	20D
		Static	10D
4	Temperature Range (°C)	-40 ~ 60	

ORDERING INFORMATION

Example : ODTA-24D





TECHNICAL PARAMETER

ITU-T G.657 (B6a1)		
Mode Field Diameter (MFD)	1310nm 1550nm	8.8±0.4 μm 9.8±0.5 μm
Cut-off Wavelength (λ _{cc})		≤1260 nm
Attenuation Coefficient	1310nm 1383nm 1550nm	≤0.4 dB/km ≤0.4 dB/km ≤0.3 dB/km
Macro Bending Loss	Φ20mm, 1circles, at 1625nm Φ20mm, 1circles, at 1550nm	≤1.5 dB ≤0.75 dB
Attenuation Non-Uniformity		≤0.05
Dispersion Coefficient	1288~1339nm 1271~1360nm 1550nm	≤3.5 Ps/(nm.km) ≤5.3 Ps/(nm.km) ≤18 Ps/(nm.km)
Zero Dispersion Wavelength		1300~1324 nm
Max Zero Dispersion Slope		≤0.092 Ps/(nm ² .km)
Group Index of Refraction (Typical Value)	1310nm 1550nm	1.466 1.467
Cladding Diameter		125±0.7 μm
Core/Cladding Concentricity Error		≤0.5 μm
Cladding Non-Circularity		≤1.0%
Coating Diameter		245±10 μm
Cladding/Coating Concentricity Error		≤12.0 μm
Coating Non-Circularity		≤8%
Diameter of Colored Coating		250±15 μm
Proof Stress		≥0.69 Gpa
Proof Strain		≥1.0%
Coating Strip Force		1.0-5.0 N 1.3-8.9 N
Dynamic Stress Corrosion Susceptibility Parameter (n _d value)		≥20

Note : Specifications are subject to change without notice

SPECIFICATIONS

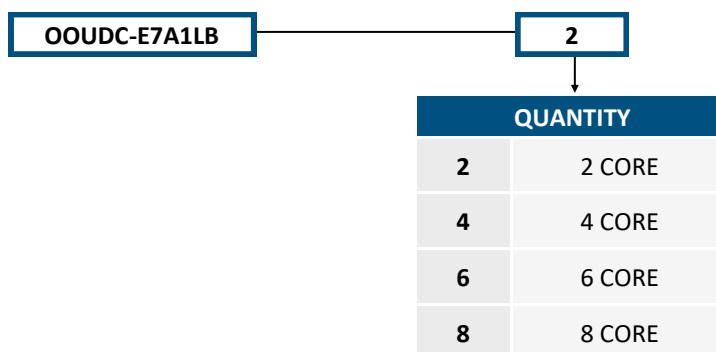
Part No		OOUDC
Fiber Count		2
Colored Coating Fiber	Dimension	250±15µm
	Color	Blue & Orange
Strength Member	Dimension	0.5mm
	Material	FRP
Inner Jacket	Dimension	3.0±0.1mm×2.0±0.1mm
	Material	LSZH
	Color	Black
Outer Jacket	Dimension	6.5±0.2mm
	Material	PE
	Color	Black

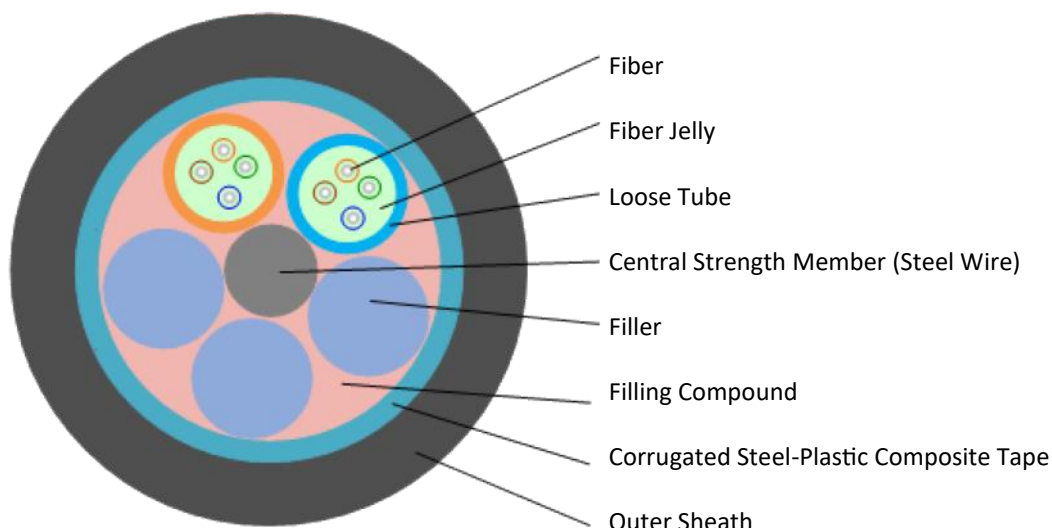
MECHANICAL AND PHYSICAL PROPERTIES

No.	Characteristics	Parameter Value	
1	Tensile Strength	Short Term	1500N
		Long Term	600N
2	Crush Resistance Strength (N/100mm)	Short Term	1000N
		Long Term	300N
3	Min. Bending Radius (mm)	Dynamic	20D
		Static	10D
4	Temperature Range (°C)	-40 ~ 60	

ORDERING INFORMATION

Example : OOUDC-E7A1LB2





SPECIFICATIONS

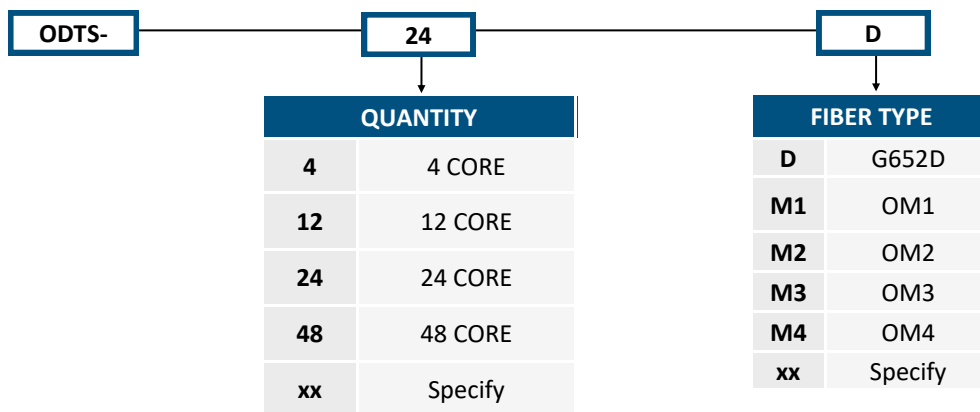
Part No		ODTS
Fiber Count		4-192
Fiber Type		G.652D/OM1/OM2/OM3/OM4
Colored Coating Fiber	Dimension	250µm±15µm
	Color	Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Purple, Pink, Aqua
Loose Tube	Dimension	(1.7-2.0)±0.1mm
	Material	PBT
	Colour	Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Purple, Pink, Aqua
Filler (If needed)	Dimension	(1.7-2.0)±0.1mm
	Material	PP
	Colour	Natural
Central Strength Member (CSM)	Material	Steel
Armour	Material	Corrugated Al-Plastic
Outer Sheath	Dimension	(9.7±0.3)mm (4-24F); (10.2±0.3)mm (36F); (11±0.5)mm (48F); (11.5±0.5)mm (72F); (13.4±0.5)mm (96F); (14.8±0.5)mm (120F); (16.9±0.5)mm (144F); (18.5±0.5)mm (192F)
	Material	PE
	Color	Black
Fiber Attenuation Coefficient in Cable	dB/km(1310nm)	≤0.36dB/km
	dB/km(1550nm)	≤0.22dB/km
	dB/km (850nm)	≤3.0dB/km (OM1/2/3/4)
	dB/km (1300nm)	≤1.0dB/km (OM1/2/3/4)

MECHANICAL AND PHYSICAL PROPERTIES

No.	Characteristics	Parameter Value
1	Tensile Strength	Short Term
		Long Term
2	Crush Resistance Strength (N/100mm)	Short Term
		Long Term
3	Min. Bending Radius (mm)	Dynamic
		Static
4	Temperature Range (°C)	-40 ~ 60

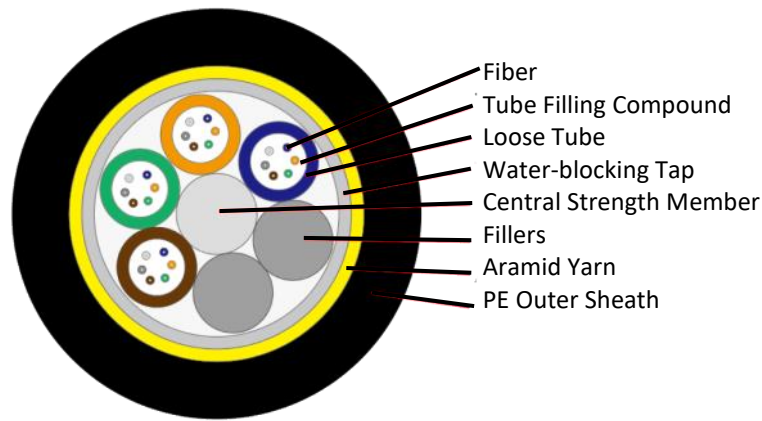
ORDERING INFORMATION

Example : ODTS-24D



ADSS (SINGLE SHEATH)

All Dielectric Self Supporting Aerial Cable



DESCRIPTION

ADSS cable is loose tube stranded. The fibers, 125µm, are positioned in a loose tube made of a high modulus plastic. The tubes are filled with a water-resistant filling compound. The tubes and fillers are stranded around a FRP as a non-metallic strength member into a compact and circular cable core, and the cable core is wrapped with a layer of Kevlar. Between the Kevlar yarn and the loose tube, water-blocking material is applied to keep the cable compact and watertight. Finally, the cable is completed with a polyethylene (PE) or AT outer sheath.

FEATURES

- The metal free nature of the cable allows installation on a live power system with ensure safety for the installation crew.
- Application of AT sheath materials assures excellent resistance against electrical erosion, even in high field strength environment.
- light weight and small diameter reducing the load caused by ice and wind and the load on towers and back props.
- Excellent mechanical and temperature performance
- Good performance of tensile strength and temperature

SPECIFICATIONS

Item	G.652	G.655	50/125um	62.5/125um
Attenuation	@850nm		≤3.0dB/km	≤3.2dB/km
	@1300nm		≤1.0dB/km	≤1.2dB/km
	@1310nm	≤0.36dB/km	≤0.40dB/km	
	@1550nm	≤0.22dB/km	≤0.23dB/km	
Bandwidth (Class A)	@850nm		≥500MHZ.km	≥200MHZ.km
	@1300nm		≥1000MHZ.km	≥600MHZ.km
Numerical aperture			0.200±0.015NA	0.275±0.015NA
Cable cut-off wavelength	≤1260nm	≤1450nm		

MECHANICAL AND PHYSICAL PROPERTIES

Cable Diameter		10.5	12.5
Cable Weight (kg/km)	PE Sheath	105	121
	AT Sheath	110	129
Daily Max Working tension (KN)		1.5	2.0
Max Allowable Working Tension (KN)		4	5.5
Break Strength (KN)		10	15
Crush Resistance Strength (N/100mm)	Short Term	1000	1000
	Long Term	2000	2000
Suitable Span (m)		100	150

Note : Specifications are subject to change without notice

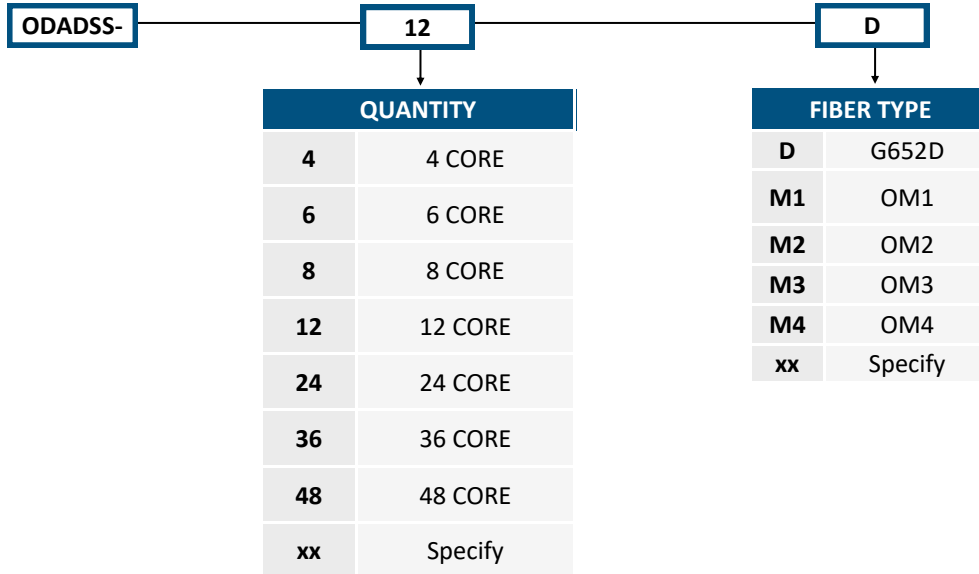
ADSS (SINGLE SHEATH)

All Dielectric Self Supporting Aerial Cable

Operating Temperature (°C)	-40~+70
Storage Temperature (°C)	-40~+70

ORDERING INFORMATION

Example : ODADSS-12D



HEADQUARTERS



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KUMPULAN ABEX



KABEX MARKETING