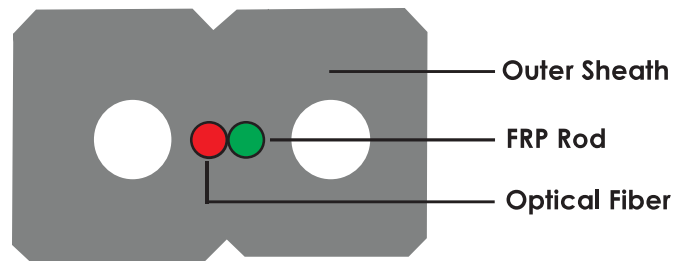# Fiber Optic Cables

2 Core Flexi Drop Cable – FTTH Indoor / Outdoor

FTTH - Indoor Cable

Avalon 2-fiber singlemode all dielectric Fiber to the Home (FTTH) drop cable is color coded in red and green optical fibers. These two fibers are embedded in sheath along with two ARP/FRP rods. The outer jacket is made of LSZH/LSOH material and is applicable for indoor application. It is designed for internal FTTH applications horizontal, riser and clipping to surfaces including skirting boards.

Features

- ITU-T REC.G657A
- EC Specifications 60793-2-50 Type B1.3
- TIA/EIA 492-CAAB
- Telecordia's GR-20-CORE
- ISO/IEC 11802 0S-1

Outer Sheath

FRP Rod

Optical Fiber

Ftth Indoor Cable

Ordering Information

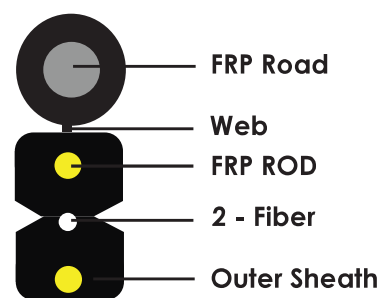| Part No. *	Description
AN-02-FTTH-IN	2 Core Fiber-to-the-Home (FTTH) Indoor Optical Fiber Cable — 9/125µm Singlemode

FTTH - Outdoor Cable

Avalon 2-fiber singlemode all dielectric Fiber to the Home (FTTH) drop cable is color coded in blue and orange optical fibers. The outdoor FTTH flat cable's outer sheath is flame retardant and is black PE with supporting 1mm FRP rod. The Fibers used in these cables are bending insensitive making it possible for applications requiring multiple bends. These cables can be buried directly considering its resistance against crush and impact conditions.

Compliance

- ITU-T REC. G657A
- EC Specifications 60793 -2-50 Type B1.3
- ISO/IEC 11802 OS-1
- TIA/EIA 492-CAAB
- Telecordia's GR-20-CORE

FRP Road

Web

FRP ROD

2 - Fiber

Outer Sheath

Ftth Outdoor Cable

Features

- As per ITU-T REC. G.657A
- Outdoor Grade
- LSZH black jacketing material
- Upcoated wire 2mm FRP Suspension Support
- FRP Rod embedded in the sheath
- Notched construction for easy stripping
- Flame Retardant Black Polyethylene cable jacket
- Core Diameter 9 µm

Ordering Information

Part No.*	Description
AN-02-FTTH-Outdoor	2 Core Fiber-to-the-Home (FTTH) Outdoor Optical Fiber Cable - 9/125µm Singlemode

AVALON
Network Products

Singlemode Armored/Direct Burial Fiber Cable

OUTER SHEATH (HDPE / LSZH)
CORRUGATED STEEL TAPE ARMOUR
INNER SHEATH (PE)
POLYESTER TAPE / POL YAL OPTIONAL
FLOODING JELLY
LOOSE TUBE WITH OPTICAL FIBER
STRENGTH MEMBER FRP

Features
- ITU-T G.652 D
- EC Specifications 60793-2-50 Type B1.3
- TIA/EIA 492-CAAB
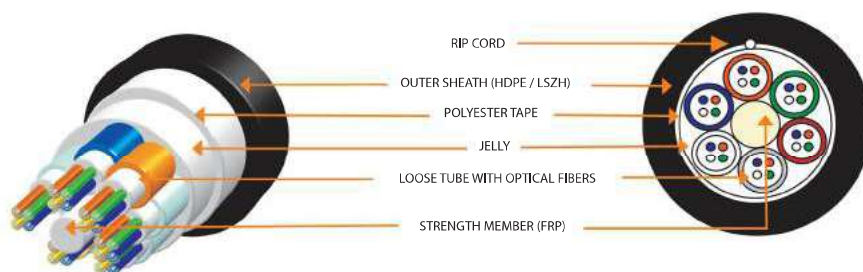- Telecordia's GR-20-CORE
- ISO/IEC 11802 0S-1

Applications

- ✓ 1000BASE-LX
- ✓ 10GBASE-LX4
- ✓ 10GBASE-LR/LW
- ✓ 10GBASE-ER/EW
- ✓ 531 Mbps Fiber Channel
- ✓ 155 Mbps ATM
- ✓ 622 Mbps ATM
- ✓ FDDI
- ✓ 1062 Mbps Fiber Channel

OS1 Ordering Information

Part No. *	Description
AN-FOC-XX-09-AR	Avalon Fiber Optic Outdoor Loose Tube Armored Cable OS1

* XX – No: of Cores – 02, 04, 06, 08, 12, 24, 48, 96 Core

Singlemode Un-Armored/Direct Burial Fiber Cable

RIP CORD
OUTER SHEATH (HDPE / LSZH)
POLYESTER TAPE
JELLY
LOOSE TUBE WITH OPTICAL FIBERS
STRENGTH MEMBER (FRP)

Features
- ITU-T G.652 D
- EC Specifications 60793-2-50 Type B1.3
- TIA/EIA 492-CAAB
- Telecordia's GR-20-CORE
- ISO/IEC 11802 0S-1

Applications

- ✓ 100BASE-FX
- ✓ 1000BASE-SX
- ✓ 1000BASE-LX
- ✓ 155 Mbps ATM
- ✓ 622 Mbps ATM
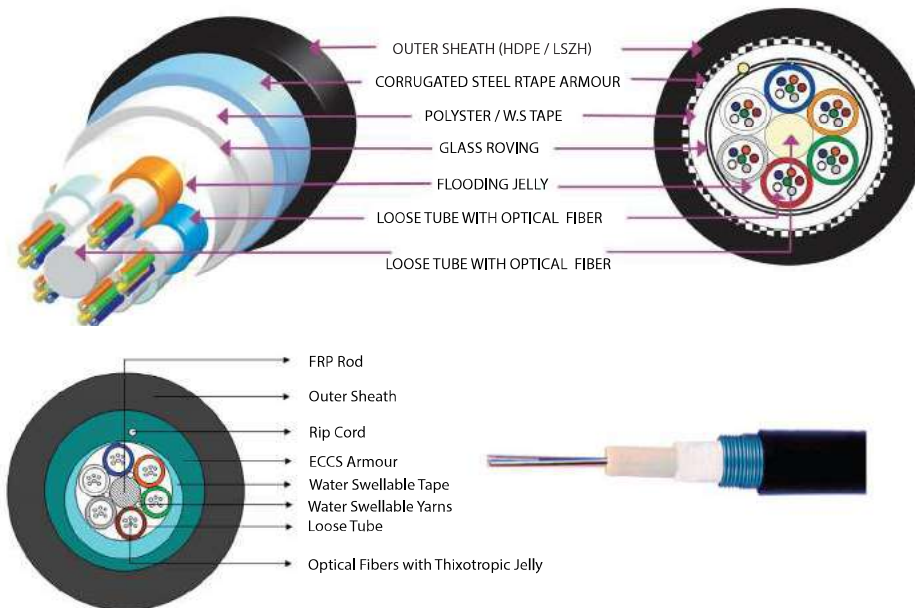- ✓ FDDI
- ✓ 1062 Mbps Fiber Channel

OS1 Ordering Information

Part No.*	Description
AN-FOC-XX-09-LT	Avalon Fiber Optic Indoor/Outdoor Cable OS1

* XX – No: of Cores – 02, 04, 06, 08 ,12 , 24, 48, 96 Core

Fiber Cabling

Multimode Armored/Direct Burial Fiber Cable

Avalon armored fiber cables (Multitube or Unitube designs) are used for 10Gbps networks to meet the requirement of continuous growing of high data rates. The 0M3 fiber cable has been developed according to the newest 10Gbit standards and allows the data transmission over a distance up to max 300 m at 850 nm. The mechanical strength is provided by the corrugated steel tape and glass yarn strength member adding extra shield against rodent and compression for direct burial application. The outer jacket is flame retardant and Low Smoke Zero Halogen. The Tube encloses multiple coated fibers that are surrounded by Thixotropic gel compound that protects the cable from moisture in outside environments.

OM3 Ordering Information

Part No. *	Description
AN-0M3-XX-50-AR	Avalon Fiber Optic Outdoor Loose Tube Armored Cable 0M3

* XX – No: of Cores – 02, 04, 06, 08,12, 24, 48, 96 Core.

OM2 Ordering Information

Part No. *	Description
AN-0M2-XX-50-AR	Avalon Fiber Optic Outdoor Loose Tube Armored Cable 0M2

* XX – No: of Cores – 02, 04, 06, 08, 12, 24, 48, 96 Core.

OM1 Ordering Information

Part No. *	Description
AN-0M1-XX-62-AR	Avalon Fiber Optic Outdoor Loose Tube Armored Cable 0M1

* XX – No: of Cores – 02, 04, 06, 08, 12, 24, 48, 96 Core.

AVALON
Network Products

Multimode Duct /Un-armored Fiber Cable

Avalon multimode optical fiber cable is recommended for duct installation. All six tubes are constructed of PBPT material with eight color coded Optical fibers located in each tube. LSZH sheath allows indoor installation. The cable is protected against rodent, but is not recommended for direct burial application. The Tube encloses multiple coated fibers that are surrounded by Thixotropic gel compound that protects the cable from moisture in outside environments. The Fiber Reinforced Plastic (FRP) rod is present at the center of the core and PBTB loose tubes. It is filled with water resistance filing compound, containing prima- ry coated fibers that are stranded around the central strength member (FRP) into a compact and circular cable core.The outer sheath is made of HDPE/LSZH.

OM3 Ordering Information

Part No. *	Description
AN-0M3-XX-50-LT	Avalon Fiber Optic Indoor/Outdoor Cable, OM3

* XX – No: of Cores – 02, 04, 06, 08, 12, 24, 48, 96 Core.

OM2 Ordering Information

Part No. *	Description
AN-0M2-XX-50-LT	Avalon Fiber Optic Indoor/Outdoor Cable, OM2

* XX – No: of Cores – 02, 04, 06, 08, 12, 24, 48, 96 Core.

OM1 Ordering Information

Part No. *	Description
AN-0M1-XX-62-LT	Avalon Fiber Optic Indoor/Outdoor Cable, OM1

* XX – No: of Cores – 02, 04, 06, 08, 12, 24, 48, 96 Core.

Fiber Cabling

Fiber Optic Patch Panel

Avalon 12, 24 and 48 ports sliding patch panels can be ordered for ports such as SC, LC, ST or FC type. The panel can also be pre- loaded completely with the required adapters and simple management kit.   The sliding system in its basic form can be supplied with or without adapters. The tray is locked in place and has two plastic catches for simple installation. When fully extended the tray is designed to lower at 45 degrees or move the tray to the side and locks at 10 degrees only. It fully provides a perfect working platform for si- mple installation and easy maintenance.

12 Ports Fiber Patch Panel   24 Ports Fiber Patch Panel   48 Ports Fiber Patch Panel
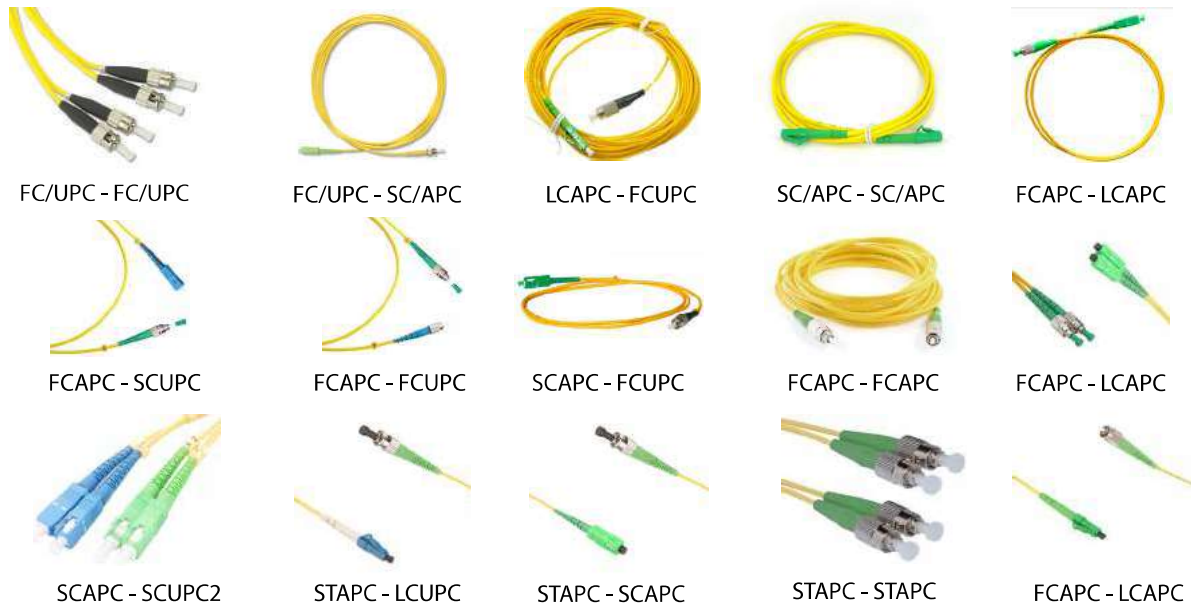
Specifications

Element	12 Port	24 Port	48 Port
U Size	1U (44.4mm)	1U (44.4mm)	2U (44.4mm)
Width	483mm	483mm	483mm
Depth	200mm	200mm	200mm
Weight	2.8kgs fully	2.8kgs fully	2.8kgs fully
Packaged Dimensions	450mm W X 55mm H x 260 mm D	450mm W X 55mm H x 260mm D	520 x 310 x 222 mm
IP Rating	IP20	IP20	IP20
Adapter Options	SC Duplex/Quad	SC /FC/ST/LC/E2000	SC /FC/ST/LC/E2000
Number of ports	12	24	48
Cable Entry 20mm	2	2	2
Mounting adjustment range	50mm	50mm	50mm
Material	Cold Rolled Steel	Cold Rolled Steel	Cold Rolled Steel
Material thickness	1.2mm	1.2mm	1,2mm
Material coating	Powder coating	Powder coating	Powder coating
Colour	Black RAL 9004	Black RAL 9004	Black RAL 9004
Operating Temperature	-40°C to + 50°C	-40°C to + 50°C	-40°C to + 50°C
Compliant to	RoHS, Reach / SVHC	RoHS, Reach / SVHC	RoHS, Reach / SVHC
Designed in accordance	TIA/EIA 568.C, ISO/IEC 11801, EN 50173,IEC 60304	TIA/EIA 568.C, ISO/IEC 11801, EN 50173,IEC 60304	TIA/EIA 568,C, ISO/IEC 11801, EN 50173,IEC 60304

Ordering Information

Fiber Type	Number of Parts		
	12	24	48
		Part Numbers	
FC	AN-12PP-1UFC	AN-24PP-1UFC	AN-48PP-2UFC
LC	AN-12PP-1ULC	AN-24PP-1ULC	AN-48PP-2ULC
ST	AN-12PP-1UST	AN-24PP-1UST	AN-48PP-2UST
SC	AN-12PP-1USC	AN-24PP-1USC	AN-48PP-2USC

AVALON
Network Products

APC Fiber Patch Cords

Avalon APC fiber patch cords support high speed data applications over installations that include entrance facilities, carrier equipment, telecommunications, patch field and CATV etc. Our APC patch cords are 100% factory inspected and comply with GR 326 issue 3.

FC/UPC - FC/UPC	FC/UPC - SC/APC	LCAPC - FCUPC	SC/APC - SC/APC	FCAPC - LCAPC
FCAPC - SCUPC	FCAPC - FCUPC	SCAPC - FCUPC	FCAPC - FCAPC	FCAPC - LCAPC
SCAPC - SCUPC2	STAPC - LCUPC	STAPC - SCAPC	STAPC - STAPC	FCAPC - LCAPC

Specifications

Characteristics	Conditions	Value
Insertion Loss Return Loss		< 0.2 dB
Fiber Type	Single Mode , Simplex or Duplex	
Return Loss		>-45db
Durability	1000 Matings	< 0.2 dB
Temperature Cycling	—40 — +80 degrees Celsius (42 Cycles)	< 0.2 dB
Humidity Cycling	75 degrees Celsius, 95%/336 hr	< 0.2 dB

Ordering Information

Part Number *	Description
ANPCO9FC-FC/APCS00X-YY	FC/UPC - FC/APC Singlemode Fiber Patch Cord
ANPCO9FC-SC/APCS00X-YY	FC/UPC - SC/APC Singlemode Fiber Patch Cord
ANPCO9FC-LC/APCS00X-YY	FC/UPC - LC/APC Singlemode Fiber Patch Cord
ANPCO9FC/APC-SCS00X-YY	FC/APC - SC/UPC Singlemode Fiber Patch Cord
ANPCO9SC-SC/APCS00X-YY	SC/UPC - SC/APC Singlemode Fiber Patch Cord
ANPCO9FC/APC-LCS00X-YY	FC/APC - LC/UPC Singlemode Fiber Patch Cord
ANPCO9SC/APC-LCS00X-YY	SC/APC - LC/UPC Singlemode Fiber Patch Cord
ANPCO9LC/APC-LC/APCS00X-YY	LC/APC - LC/APC Singlemode Fiber Patch Cord
ANPCO9FC/APC-FC/APCS00X-YY	FC/APC - FC/APC Singlemode Fiber Patch Cord
ANPCO9FC/APC-SC/APCS00X-YY	FC/APC - SC/APC Singlemode Fiber Patch Cord
ANPCO9SC-FC/APCS00X-YY	SC/UPC - FC/APC Singlemode Fiber Patch Cord
ANPCO9SC/APC-SC/APCS00X-YY	SC/APC - SC/APC Singlemode Fiber Patch Cord
ANPCO9SC-SC/APCS00X-YY	SC/UPC - SC/APC Singlemode Fiber Patch Cord
ANPCO9FC/APC-LCS00X-YY	FC/APC - LC/APC Singlemode Fiber Patch Cord

* Replace X with 1, 2, 3... 10…or 30 meters etc and YY with SP (Simplex) or DP (Duplex)

Fiber Cabling

UPC Fiber Patch Cords

Singlemode & Multimode
Avalon UPC fiber patch cords provide connections from active components to patch panels and to wall outlets. The fiber patch cords are polished, crimped and tested with superior performance and manufactured as duplex. All terminations passed the 400x visual inspection, inserted and return loss test. The fiber offers various type of connectors such as LC, SC, ST, FC, MTRJ, Duplex to Simplex type. Various fiber microns are available such 62.5/125 (0M1), 50/125 (0M2) 50/125 (0M3), 9/125 (0S1).

FC UPC Fiber Optic Patch Cords
Avalon FC fiber optic patch cord are available in both singlemode and multimode versions, and is fully inter-mateable with NTT-FC products. Both singlemode and multimode FC fiber patch cords come with a Zirconia ceramic ferrule with pre-polished UPC profile and APC profile in cases of singlemode. These end face types allow for faster polishing and low back reflection and optical loss, while ensuring maximum repeatability. Avalon Patch Cords come with different connector combinations such as FC-FC, FC-LC, FC-SC, FC-ST in different lengths.

LC UPC Fiber Optic Patch Cords
Avalon LC fiber optic patch cords are ideal for high density applications. The LC fiber patch connector has a Zirconia ceramic ferrule measuring 1.25mm O.D. with either a UPC or APC end face and provides optimum insertion and return loss. The LC fiber patch cable connector is used on small diameter mini-cordage (1.6 mm/2.0mm) as well as 3.0mm cable. The LC fiber cable connectors are available in cable assembled or one piece connectors. Avalon Patch Cords come with different connector combinations such as LC – LC, LC – SC, LC-ST and LC-FC etc. multimode or Single mode in different lengths.

SC UPC Fiber Optic Patch Cords
Avalon SC fiber optic patch cords are ideal for a wide range of applications where back reflection must be kept to a minimum. The connector has a UPC or APC polish on the fiber optic connector end face. They come with different connector combinations in single mode and multi-mode versions. The SC fiber optic patch cords such as SC-LC, SC-ST, SC-FC and SC-SC etc. The SC fiber optic cable assemblies come with fiber micros such as 9/125 (G.657A, G.657B, G.655, G.652D), 50/125 and 62.5/125.

ST UPC Fiber Optic Patch Cords
Avalon ST fiber optic patch cords have a UPC or APC polish on the connector end face. This polish results in a highly radius domes end face surface that optimizes physical contact between the mated fiber optic cores. The Patch Cords come with different connector combinations such as ST-ST, ST-LC, ST-SC, ST-FC, fiber optic patch cables and fiber optic jumper cables. The custom design types include single mode 9/125, multimode 50/125, multi-mode 62.5/125, simplex and duplex.

Specifications

Characteristics	Description	Value
Insertion Loss Return Loss	Against Reference Connector	< 0.2 dB
	SPC	> 40 dB
	UPC	> 50 dB
	APC	> 60 dB
Durability	1000 Matings	< 0.2 dB
Temperature Cycling	—40 — +80 degrees Celsius (42 Cycles)	< 0.2 dB
Humidity Cycling	75 degrees Celsius, 95%/336hr	< 0.2 dB
Vibration	10-55HZ	< 0.2 dB
Flex Test	0 to 90 degrees to 0 to 90, 5kgf(100 cycles)	< 0.2 dB
Twist Test	0.9mm : .75kgf, 2.0mm:1.53kgf	< 0.2 dB
Straight Pull Test	100N Load	< 0.2 dB
Impact	1.5m drop, 8times	< 0.2 dB

Ordering Information
OM1 & OM2 Multimode Patch Cord

Part Number *	Description
LC Patch Cords	
AN-PCXXLCLCMY-ZZ	LC-LC Multimode Fiber Patch Cord
AN-PCXXLCSTMY-ZZ	LC-ST Multimode Fiber Patch Cord
AN-PCXXLCFCMY-ZZ	LC-FC Multimode Fiber Patch Cord
AN-PCXXLCSCMY-ZZ	LC-SC Multimode Fiber Patch Cord
SC Patch Cords	
AN-PCXXSCLCMY-ZZ	SC-LC Multimode Fiber Patch Cord
AN-PCXXSCSTMY-ZZ	SC-ST Multimode Fiber Patch Cord
AN-PCXXSCFCMY-ZZ	SC-FC Multimode Fiber Patch Cord
AN-PCXXSCSCMY-ZZ	SC-SC Multimode Fiber Patch Cord
ST Patch Cords	
AN-PCXXSTLCMY-ZZ	ST-LC Multimode Fiber Patch Cord
AN-PCXXSTSTMY-ZZ	ST-ST Multimode Fiber Patch Cord
AN-PCXXSTFCMY-ZZ	ST-FC Multimode Fiber Patch Cord
AN-PCXXSTSCMY-ZZ	ST-SC Multimode Fiber Patch Cord
FC Patch Cords	
AN-PCXXFCLCMY-ZZ	FC-LC Multimode Fiber Patch Cord
AN-PCXXFCSTMY-ZZ	FC-ST Multimode Fiber Patch Cord
AN-PCXXFCFCMY-ZZ	FC-FC Multimode Fiber Patch Cord
AN-PCXXFCSCMY-ZZ	FC-SC Multimode Fiber Patch Cord

* Replace
  XX with 62 for 62.5/125, 50 for 50/125
   Y with 1, 2, 3...10....30 Meters
  ZZ with SP for Simplex or DP for Duplex.

OM3 Multimode Patch Cords

Part Number *	Description
Patch Cords	
AN-OM3LCLC10G0X-YY	LC-LC Multimode Fiber Patch Cord
AN-OM3LCST10G0X-YY	LC-ST Multimode Fiber Patch Cord
AN-OM3LCFC10G0X-YY	LC-FC Multimode Fiber Patch Cord
AN-OM3LCSC10G0X-YY	LC-SC Multimode Fiber Patch Cord
SC Patch Cords	
AN-OM3SCLC10G0X-YY	SC-LC Multimode Fiber Patch Cord
AN-OM3SCST10G0X-YY	SC-ST Multimode Fiber Patch Cord
AN-OM3SCFC10G0X-YY	SC-FC Multimode Fiber Patch Cord
AN-OM3SCSC10G0X-YY	SC-SC Multimode Fiber Patch Cord
ST Patch Cords	
AN-OM3STLC10G0X-YY	ST-LC Multimode Fiber Patch Cord
AN-OM3STST10G0X-YY	ST-ST Multimode Fiber Patch Cord
AN-OM3STFC10G0X-YY	ST-FC Multimode Fiber Patch Cord
AN-OM3STSC10G0X-YY	ST-SC Multimode Fiber Patch Cord
FC Patch Cords	
AN-OM3FCLC10G0X-YY	FC-LC Multimode Fiber Patch Cord
AN-OM3FCST10G0X-YY	FC-ST Multimode Fiber Patch Cord
AN-OM3FCFC10G0X-YY	FC-FC Multimode Fiber Patch Cord
AN-OM3FCSC10G0X-YY	FC-SC Multimode Fiber Patch Cord
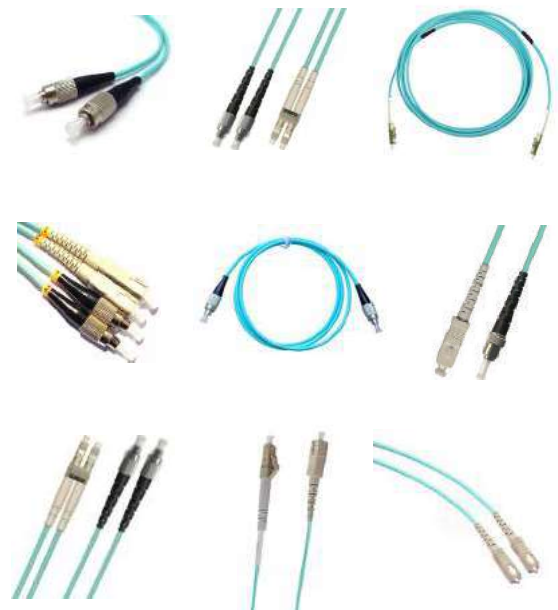
* Replace
  X with 1, 2, ...10....30 meters etc
 YY with SP for Simplex or DP for Duplex

Fiber Cabling

Single Mode Fiber Patch Cords

Part Number *	Description
LC Fiber Patch Cord	
AN-PCO9LCLCS00X-YY	LC-LC Singlemode Fiber Patch Cord
AN-PCO9LCSTS00X-YY	LC-ST Singlemode Fiber Patch Cord
AN-PCO9LCFCS00X-YY	LC-FC Singlemode Fiber Patch Cord
AN-PCO9LCSCS00X-YY	LC-SC Singlemode Fiber Patch Cord
SC Fiber Patch Cord	
AN-PCO9SCLCS00X-YY	SC-LC Singlemode Fiber Patch Cord
AN-PCO9SCSTS00X-YY	SC-ST Singlemode Fiber Patch Cord
AN-PCO9SCFCS00X-YY	SC-FC Singlemode Fiber Patch Cord
AN-PCO9SCSCS00X-YY	SC-SC Singlemode Fiber Patch Cord
ST Fiber Patch Cord	
AN-PCO9STLCS00X-YY	ST-LC Singlemode Fiber Patch Cord
AN-PCO9STSTS00X-YY	ST-ST Singlemode Fiber Patch Cord
AN-PCO9STFCS00X-YY	ST-FC Singlemode Fiber Patch Cord
AN-PCO9STSCS00X-YY	ST-SC Singlemode Fiber Patch Cord
FC Fiber Patch Cord	
AN-PCO9FCLCS00X-YY	FC-LC Singlemode Fiber Patch Cord
AN-PCO9FCSTSX00X-YY	FC-ST Singlemode Fiber Patch Cord
AN-PCO9FCFCS00X-YY	FC-FC Singlemode Fiber Patch Cord
AN-PCO9FCSCS00X-YY	FC-SC Singlemode Fiber Patch Cord

* Replace   X with 1, 2, 3, 5...10...15...30 Meters etc.
              YY with SP for Simplex or DP for Duplex

Fiber Optic Connectors

Avalon connectors are manufactured in accordance with ANSI/TIA/ EIA-604-2 standards. Each connector consists of a housing, a crimp sleeve and a strain relief boot. The types of fiber connectors available are FC, LC, SC, ST in Multimode (62.5/125, 50/125) and Singlemode (9/125). Avalon APC fiber connectors polishes the fiber at either an 8 or 9 degrees angle with a radius of curvature between 5 and 12mm. Through angle polishing at the end of the fiber, one ensures that the reflection at the fiber air interface is not captured by the fiber core. This reduces the reflection level in the fiber optic system and reduces feedback problems.

Specifications

Characteristics	Description	Value
Insertion Loss		< 0.2
Mating Durability	500 Time	< 0.2
Temperature Cycling	-40 — + 85	< 0.2
	(42 Cycles)	< 0.2
Humidity Cycling	75	< 0.2
	95% / 336hr	< 0.2
Vibration	10 — 55 Hz (2 Hrs)	
Impact	1.5m drop, 8 Times	< 0.2

FC Fiber Optic Connector

Avalon FC Connectors are specifically designed for telecom applications and provide a non-optical disconnect performance. This is designed with a threaded coupling for durable connection. The ferrule is UPC finished to a pre-radius, which ensures low back reflection. The Connector is available with Zirconia or stainless alloy ferrules.

LC Fiber Optic Connector

Avalon LC connectors provide a pull-proof design and small size perfect for high density applications. The connector comes with Zirconia ferrule about half the size of a standard SC ferrule.The LC fiber optic connector provides a good performance and can be ordered either for singlemode or multimode fiber optic applications. The connector also incorporates a unique latching mechanism that provides stability in the system rack mounts.

SC Fiber Optic Connector

Avalon SC connectors are non-optical disconnect connector with a 3.0 mm pre-radiused Zirconia ferrule. Available in simplex and duplex styles, this connector features a push – pull connection design for quick patching of cables into rack or wall mounts.

ST Fiber Optic Connector

Avalon ST connectors utilize a bayonet twist-lock connection with 3.0mm ferrule. Available in singlemode and multimode versions, the ST connector features reliable and durable field installation. The design of the ST connector enables installers to crimp the back of the body directly onto the cable jacket.

Ordering Information

UPC

Part Number	Description
AN-CNSMLC3MM	LC Connector Singlemode 3.0mm Boot
AN-CNMMLC3MM	LC Connector Multimode 3.0mm Boot
AN-CNSMFC3MM	FC Connector Singlemode 3.0mm Boot
AN-CNMMFC3MM	FC Connector Multimode 3.0mm Boot
AN-CNSMST3MM	ST Connector Singlemode 3.0mm Boot
AN-CNMMST3MM	ST Connector Multimode 3.0mm Boot
AN-CNSMSC3MM	SC Connector Singlemode 3.0mm Boot
AN-CNMMSC3MM	SC Connector Multimode 3.0mm Boot

APC

Part Number	Description
AN-CNSMLC3MM/APC	LC Connector Singlemode 3.0mm Boot
AN-CNMMLC3MM/APC	LC Connector Multimode 3.0mm Boot
AN-CNSMFC3MM/APC	FC Connector Singlemode 3.0mm Boot
AN-CNMMFC3MM/APC	FC Connector Multimode 3.0mm Boot
AN-CNSMST3MM/APC	ST Connector Singlemode 3.0mm Boot
AN-CNMMST3MM/APC	ST Connector Multimode 3.0mm Boot
AN-CNSMSC3MM/APC	SC Connector Singlemode 3.0mm Boot
AN-CNMMSC3MM/APC	SC Connector Multimode 3.0mm Boot

Fiber Cabling

Fiber Optic Pigtails

Avalon fiber optic pigtails come with 0.2mm or 0.9mm fiber cable diameter and are usually installed inside the ODF unit. Avalon offers different types of pigtails such as SC, ST, FC and LC with microns such as 62.5/125 (OM1) , 50/125 (OM2), 50/125 (0M3) for multimode and 09/125 for singlemode types. These pigtails are commonly used for splicing on to outside plant or riser rated fiber optic cables. All pigtails are jacketed as PVC or LSZH and comply with the latest ITU-T recommendation G.652D and G.657A. The angle polished (APC) pigtails are made by polishing the fiber either at 8 or 9 degrees angle with a curvature between 5mm and 1 2mm. The fiber has a typical insertion loss of 0.2 dB per connection and APC polished end faces at 65dB minimum return loss. These pigtails have passed the international standards of TIA/EIA-568-B.3, ISO/IEC 11801 OS1 and comply with the UL 1666 flame rating.

SC Fiber Optic Pigtails

Avalon SC fiber optic pigtail connectors compose of single-mode and multimode types, they are premium grade connectors with 0.2mm or 0.9mm outer diameter cables either of a simplex or duplex construction. It is a single piece construction and full proof design. The SC type pigtail is a low cost but high performance pigtail.

ST Fiber Optic Pigtails

Avalon ST fiber optic pigtail comes with 0.2mm or 0.9mm outer diameter cable. It has a metal outer body and a long spring loaded ferrule that holds the optical fiber. The ST cable can be 9/125 single mode or 50/125 or 62.5/125 multimode. This connector is of the older generation, but it is still widely used in fiber optic communications especially for multimode networks.

LC Fiber Optic Pigtails

Avalon LC fiber pigtails come with premium grade connectors come with 0.2mm or 0.9mm outer diameter cables either in simplex or duplex construction. It features the RJ-45 style interface with low insertion loss and low back refl - - ection with a high precision alignment. The connector comes with Zirconia ceramic ferrule.

FC Fiber Optic Pigtails

Avalon FC fiber optic pigtail composes of singlemode and multimode types and comes with a Zirconia ceramic ferrule. The FC connector has a low back reflection and optical loss while ensuring maximum repeatability.

Specifications

Characteristics	Conditions	Value
Insertion Loss Return Loss	Against Reference Connector	< 0.2 dB
	SPC	> 40 dB
	UPC	> 50 dB
	APC	> 60 dB
Durability	1000 Matings	< 0.2 dB
Temperature	—40 — +80 degrees Celsius	< 0.2 dB
Cycling	(42 Cycles)	
Humidity	75 degrees Celsius, 95%/336hr	< 0.2 dB
Vibration	10 — 55 HZ (2 hours)	< 0.2 dB
Flex Test	0 to 90 degrees to 0 to 90, 5kgf (100 cycles)	< 0.2 dB
Twist Test	0.9mm : 0.75kgf, 2.0mm:1.53 kg	< 0.2 dB
Straight Pull Test	100 N Load	< 0.2 dB
Impact	1.5m drop, 8 times	< 0.2 dB

Ordering Information

Singlemode Part Number *	Description
AN-OPC-G652-XX/YYY-Z.Z-M.M	Single Mode Pigtail

Multimode Part Number *	Description
AN-OPC-XXX-YY-Z.Z-M.M	Multimode Pigtail

* Replace
XX with LC, FC, SC or ST. YYY with UPC or APC.
Z.Z with1.5 or 2.5 meter length. M.M with 0.2 or 0.9

* Replace
XXX with OM1, OM2 or OM3. YY with LC, FC, SC or ST.
Z.Z with 1.5 or 2.5 meter length. M.M with 0.2 or 0.9

AVALON
Network Products

Fiber Optic Adaptors

Avalon fiber optic adapters compose of FC, SC, ST, LC, and hybrid fiber optic adapters either singlemode or multimode including simplex and duplex types. The Avalon adapters are used to load in a fiber patch panel or work outlets. It complies with the international standards of TIA/EIA 568-0.3. Avalon APC Adapters are mechanical devices designed to align optical fiber connectors.

SC Fiber Optic Adapter

Avalon fiber optic adapters consist of plastic housing. The singlemode SC UPC is labelled as blue color whereas the multimode SC comes in beige color. The adapters generally come with ceramic sleeves and bronze sleeves which are multimode types.

LC Fiber Optic Adapter

Avalon LC fiber optic adapters come as simplex or duplex and in single mode and multimode versions with plastic housing and Zirconia sleeve. The optional bronze sleeve adapters are for multimode version.

ST Fiber Optic Adapter

Avalon ST fiber optic adapters come as simplex or duplex and in single mode and multimode versions with plastic housing and Zirconia sleeve. The optional bronze sleeve adapters are for multimode version.

FC Fiber Optic Adapter

Avalon FC square fiber optic adapter has a standard body style with nickel plated brass or nickel plated zinc housing. The FC round fiber optic adapters come with a choice of D Flange (08.85 x 7.95mm) or double D flange (9.35 x 7.65mm), and feature nickel plated brass housing for corrosion resistance.

Specifications

Characteristics	Condition	Value
Insertion Loss		>=0.2db
Return Loss		>=45db
Mating Durability	1000 times	0.20
Temperature	-40 — +85 (42 cycles)	0.20
Humidity Cycling	75 , 95%/336hr	0.20
Vibration	10-55Hz (2hr)	0.20
Impact	1.5m drop, 8 times	0.20

SC/UPC   FC/UPC   ST/UPC

FC/APC   ST/APC   SC/APC

Ordering Information

Part Number *	Condition
AN-OFA-XX-SC/UPC-SC/UPC-ZR-YY	SC/UPC Adaptor
AN-OFA-XX-LC/UPC-LC/UPC-ZR-YY	LC/UPC Adaptor
AN-OFA-XX-FC/UPC-FC/UPC-ZR-YY	FC/UPC Adaptor
AN-OFA-XX-ST/UPC-ST/UPC-ZR-YY	ST/UPC Adaptor
AN-OFA-XX-SC/SPC-SC/APC-ZR-YY	SC/APC Adaptor
AN-OFA-XX-LC/APC-LC/APC-ZR-YY	LC/APC Adaptor
AN-OFA-XX-FC/APC-FC/APC-ZR-YY	FC/APC Adaptor
AN-OFA-XX-ST/APC-ST/APC-ZR-YY	ST/APC Adaptor

* Replace XX for SM (Singlemode) or MM (Multimode),
YY for SP (Simplex) or DP (Duplex)

Multimode SC   Multimode LC   LC/UPC
Simplex   Duplex

LC/APC

Fiber Cabling
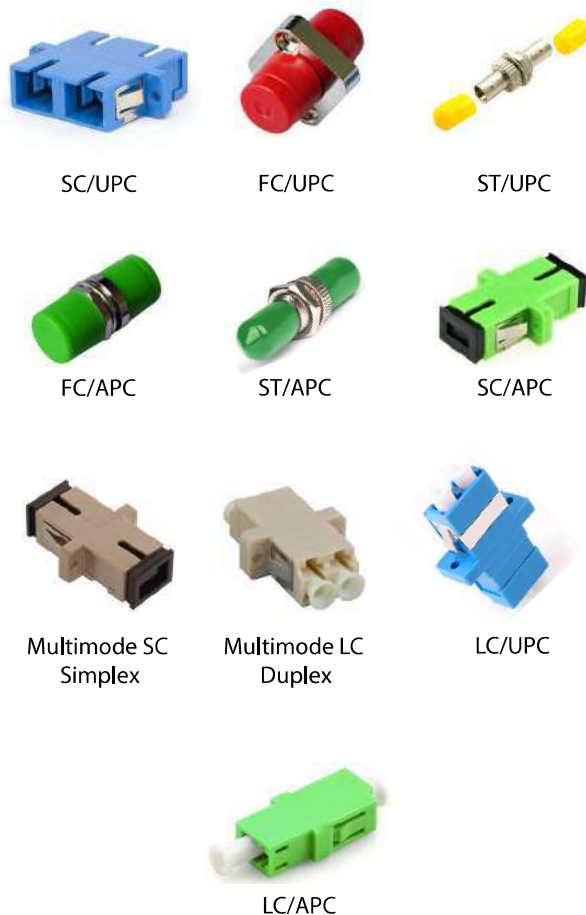
Fiber Optic Splitter

Avalon's PLC (Planar Lightwave Circuit) Splitters are branching devices that are used to distribute optical signals to multiple locations for processing. They are designed for FTTX passive optical networks, CWDM, DWDM and optical cable TV Systems etc. Our PLC splitter performs superbly across temperatures and wave lengths providing low insertion, low PDL, excellent uniformity and low return loss. They come in various configurations of 1X2, 1X4, 1X8.1X16 …upto 1X64. The Connectorized PLC Splitters are available with different choices of fiber optic connectors such as LC/UPC, LC/APC, SC/UPC, SC/APC, FC/UPC, FC/APC, and ST/UPC etc.

Features

- Compact design
- Low insertion loss and low PDL High reliability
- High channel counts
- Wide wavelength range
- Wide operating temperature range
- Customized packaging and configuration

Applications

- FTTx Systems
- LAN, WAN and Metro Networks Analog/Digital
- Passive Optical Networks CAM/ Networks
- Other applications in fiber optic systems

Specifications

Port Configuration	Nx4	Nx8	Nx16	Nx32
Fiber	SMF-28 or SMF-28e			
Operation Wavelength (nm)	1260 — 1620			
Insertion Loss (dB)	7.4/7.2	10.7/10.5	13.7/13.5	16.9/16 .5
Uniformity (dB)	0.5	0.8	1.2	1.5
Polarization Dependent Loss (dB)	0.2	0.2	0.3	0.3
Return Loss (dB)		50		
Directivity (dB)		55		
Operating Temperature (°C)		–40 — +85		
Storage Temperature (°C)		–60 — +85		
Dimension (mm) - (L)(W)(H)		40 4 4		55 7 4

Ordering Information

Part Number *	Description
AN-PLCS-1*2*11 L 2 L 2 R - XX/YYY	SPLITTER 1X2
AN - PLCS-2*8*1 L 2 L 2 R –XX/YYY	SPLITTER 2X8
AN - PLCS-2*32*1 L-2 L-2 - R-XX/YYY	SPLITTER 2X32
AN - PLCS-2*64*1 L-2 L-2 - R-XX/YYY	SPLITTER 2X64

* Replace XX with SC, LC, FC or ST.
            YYY with APC or UPC.

2/4 Core FTTH Termination Box

Avalon's termination boxes come in different sizes. The smaller size fiber optic terminal box is used for fiber optic distribution and organization. Our typical fiber terminal boxes come with 4, 8 and 16 ports. We have different FTTH termination boxes which can be used for indoor or outdoor terminations and distribution. The fiber optic boxes are made of cold rolling steel and the surface of the box is made up of dim blowing plastic. This type of fiber optic box is available with a variety of adaptor cutouts. Additional splice trays can be stacked on top to increase the capacity. Each splice tray can install up to 24 single fiber splice protection sleeves (with diameter of 2.3mm) or 6 ribbon splice protection sleeves. These splice trays can be opened individually and removed from the box. Any excess lengths of cables/pigtails are stored as reels in the front panel.

Features

- Ability to allow cables to enter from rear or bottom of the unit.
- All fibers are positively managed to maintain a 30mm minimum bend radius.
- Optional removable rear entry cable management.
- Flip tray to allow access to connect tails and cable entry
- Compact, low profile, wall mounted unit used for small and large Business premises.
- Removable cover for easy access.
- Tamper proof cover .Security screws available as an option
- Unit manufactured from fire resistant UL94-V0 rated material.
- Patch cord exit unit on bottom face and are protected by two protection covers.
- Standard Colour white. Other colours available on request.

Technical Specifications

Characteristics	Value
Maximum input cable diameter (mm)	10mm
Maximum Capacity	4 Fibers
Maximum no. of customer feeds	4 Patch Cords
Operating temperature	-20 Degree C to + 50 Degree C (5 to 95% RH)
Material	
Cap	FR High Impact Polystyrene
Base	FR High Impact Polystyrene
Splitter trays	FR High Impact Polystyrene
Testing	
Optical	Tested 1310nm,1550nm and 1625nm
Dry heat	BS EN 60068-2-2 Test Bb
Damp heat	IEC 60068-2-3: 1969
Change of temperature	IEC 60068-2-14: 1984
Vibration	IEC 60068-2-6: 1995
Shock	IEC 60068-2-27: 1987

Ordering Information

Part Number	Description	Capacity Cores	Dimensions (mm)
ANFTTHPB-2P	FTTH Plastic box 2 Port	SC, E-2000 - 2 cores, LC - 4 Cores	80x 80x24
ANFTTHPB-4P	FTTH Plastic box 4 Port	SC, E-2000 – 4 cores, LC - 8 Cores	120x 80x24

Fiber Cabling