

FIBER OPTIC CABLE SOLUTIONS GUIDE



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FIBER OPTIC CABLE SOLUTIONS GUIDE

Outside Plant




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Loose Buffer Tube Fiber Optic Cable

FIBER COUNT	1 - 432		DIAMETER RANGE	0.40 in - 0.80 in /10.1 mm - 20.4 mm			FIBER COATING	250µm or 200µm		
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS							
JACKET	Polyethylene, UV Rated. 1-2 Layers.		AERIAL	Lashed construction, unless designed with integrated messenger (Figure-8) or ADSS.						
ARMOR	Corrugated steel tape Lite Armor. 1-2 Layers.		UNDERGROUND	Pulled or blown (jetted) into conduit. May be direct buried if armored.						
STRENGTH MEMBER	Central Fiberglass Rod		IN BUILDING	May install within 50 feet of building entrance.						
GROUPING	12F per Tube Typical		HARSH ENVIRONMENT	Not suitable for harsh environments such as steam tunnels, mines, airports, nuclear or chemical facilities.						
WATER BLOCKING	Dry Core/Gel or Dry Buffer Tube		GENERAL USES	Terrestrial network core, metro access, lateral and minimal drop.						
BRAND NAMES/ SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multi-mode Multiple Grades	
	Altos	ExpressLT/Flex-Link	Series 11/1G/12/1C	D-LA/D-LN/D-L2	LE Series	LD Series	DryBlock/Foretx DT			

Microduct Loose Buffer Tube Fiber Optic Cable

FIBER COUNT	1-288/432		DIAMETER RANGE	0.299 in - 0.496 in/7.6mm - 12.6mm			FIBER COATING	250µm or 200µm		
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS							
JACKET	Polyethylene, UV Rated Reduced Thickness Single Layer		AERIAL	Capable of lashed construction, with reduced tensile strength and loading considerations.						
ARMOR	Not available		UNDERGROUND	Designed to be blown (jetted) into Microduct Pathways. Not for direct burial.						
STRENGTH MEMBER	Central Fiberglass Rod		IN BUILDING	May install within 50 feet of building entrance.						
GROUPING	12F - 24F Per Tube Typical		HARSH ENVIRONMENT	Not suitable for harsh environments such as steam tunnels, mines, airports, nuclear or chemical facilities.						
WATER BLOCKING	Dry Core, Primarily Gel Buffer Tube		GENERAL USES	Terrestrial network core, metro access, lateral and minimal drop. Preferred product for override applications.						
BRAND NAMES/ SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multi-mode Multiple Grades	
	MiniXtend	ezMICRODUCT	LT Series	B-LN	MicroCore	FTX Series	MiaDia			

Central Tube Fiber Optic Cable

FIBER COUNT	1-24		DIAMETER RANGE	0.35 in - 0.41 in/8.8mm - 10.3mm			FIBER COATING	250µm		
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS							
JACKET	Polyethylene UV Rated. 1-2 Layers.		AERIAL	Lashed construction.						
ARMOR	Corrugated steel tape Lite Armor. 1-2 Layers.		UNDERGROUND	Pulled or blown (jetted) into conduit. May be direct buried if armored.						
STRENGTH MEMBER	Central Aramid or Radial FRP or Steel		IN BUILDING	May install within 50 feet of building entrance.						
GROUPING	Single tube		HARSH ENVIRONMENT	Not suitable for harsh environments such as steam tunnels, mines, airports, nuclear or chemical facilities.						
WATER BLOCKING	Gel or Dry Tube		GENERAL USES	Lateral and Drop applications as well as CATV node assemblies.						
BRAND NAMES/ SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multi-mode Multiple Grades	
	FREEDM Central Tube	ezMICROTUNITUBE/CentraLink	Series 513/52S	O-CN/O-CA	Uniflex	SL Series	Mini C2			

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Ribbon in Central Tube Fiber Optic Cable

FIBER COUNT	12 - 432		DIAMETER RANGE	0.50 in - 0.90 in/12.6mm - 22.9mm			FIBER COATING	250µm				
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS									
JACKET	Polyethylene UV Rated.		AERIAL	Lashed construction. Coupling loops are typically required for central tube ribbon.								
ARMOR	Corrugated steel tape Lite Armor.		UNDERGROUND	Primarily designed for pulling into conduit, and may be direct buried if armored.								
STRENGTH MEMBER	Radial Fiberglass or Steel Rod Pair		IN BUILDING	May install within 50 feet of building entrance.								
GROUPING	12 or 24 Fiber Ribbon Matrices		HARSH ENVIRONMENT	Not suitable for harsh environments such as steam tunnels, mines, airports, nuclear or chemical facilities.								
WATER BLOCKING	Dry or Gel Central Tube		GENERAL USES	Terrestrial network core and metro access networks.								
BRAND NAMES/ SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode Multiple Grades			
	SST	FusionLink	Series R1D/R2D	None	None	None	AccuRibbon					

Ribbon in Loose Tube Fiber Optic Cable

FIBER COUNT	432 - 1728		DIAMETER RANGE	0.84 in - 1.38 in/21.3mm - 35.1			FIBER COATING	250µm				
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS									
JACKET	Polyethylene UV Rated.		AERIAL	Lashed construction.								
ARMOR	Corrugated steel tape Lite Armor.		UNDERGROUND	Pulled or blown (jetted) into conduit. May be direct buried if armored.								
STRENGTH MEMBER	Central Fiberglass Rod		IN BUILDING	May install within 50 feet of building entrance.								
GROUPING	12 or 24 Fiber Ribbon Matrices		HARSH ENVIRONMENT	Not suitable for harsh environments such as steam tunnels, mines, airports, nuclear or chemical facilities.								
WATER BLOCKING	Dry Core, Dry or Gel Tube		GENERAL USES	Terrestrial network core and metro access networks.								
BRAND NAMES/ SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode Multiple Grades			
	None	MassLink	Series S2	None	None	None	AccuTube					

Ultra High Fiber Count Rollable Type Ribbon

FIBER COUNT	144-864 1152/1728/3456/5184/6192		DIAMETER RANGE	0.41 in - 1.182 in / 1.32 in / 1.34 in			FIBER COATING	250µm or 200µm				
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS									
JACKET	Polyethylene UV Rated.		AERIAL	Lashed construction.								
ARMOR	Corrugated steel tape Lite Armor.		UNDERGROUND	Pulled or blown (jetted) into conduit. May be direct buried if armored.								
STRENGTH MEMBER	Varies by manufacturer. Central or radial designs.		IN BUILDING	May install within 50 feet of building entrance.								
GROUPING	Varies by manufacturer and fiber count. Slotted core, buffer tube and colored binders available.		HARSH ENVIRONMENT	Not suitable for harsh environments such as steam tunnels, mines, airports, nuclear or chemical facilities.								
WATER BLOCKING	Dry only.		GENERAL USES	Data center interconnect and head end upgrades. Could also be for major terrestrial capacity.								
BRAND NAMES/ SERIES	AFL		SUMITOMO	PRYSMIAN	OFS	NOTES Ribbon bonding methods may differ amongst suppliers. Sumitomo uses slotted core design, and AFL uses colored binders for subgroup identification. Prysmian and OFS use buffer tubes.						
	Wrapping Tube Cable (WTC) w/ Spider Web Ribbon (SWR)		High Fiber Count Cable Freeform Ribbon	MassLink w/ Flex-Ribbon	AccuTube+ Rollable Ribbon							

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All Dielectric Self Supporting ADSS Fiber Optic Cable

FIBER COUNT	6 - 432		DIAMETER RANGE	Varies greatly by design			FIBER COATING	250µm		
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS							
JACKET	Polyethylene UV Resistant Track-Resistant Available		AERIAL	Stringing aerial construction method.						
ARMOR	Not available		UNDERGROUND	Can be used underground, but not price advantageous to do so.						
STRENGTH MEMBER	Aramid (Kevlar) cabled with Central Fiberglass Rod		IN BUILDING	May install within 50 feet of building entrance.						
GROUPING	12F per Buffer Tube Typical		HARSH ENVIRONMENT	Not suitable for harsh environments such as steam tunnels, mines, airports, nuclear or chemical facilities.						
WATER BLOCKING	Dry core, Gel Tube		GENERAL USES	For installation in the secondary and primary space on utility poles. Primarily for core network and metro access.						
BRAND NAMES/ SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multi- mode Multiple Grades	
	SOLO	ezSPAN/ADSS Long Span	ADSS 100/200/400	None	MiniSpan/Flex- Span/Standard	ADS Series	PowerGuide			

Flat Drop Fiber Optic Cable

FIBER COUNT	1 - 24		DIAMETER RANGE	0.18 in x 0.40 in max w/ tone wire			FIBER COATING	250µm		
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS							
JACKET	Polyethylene UV Rated.		AERIAL	Self supporting cable using wedge deadend (P-Clamps) or helical attachments.						
ARMOR	Not available, but it available with tone wire.		UNDERGROUND	Suitable for direct burial or installation in conduit.						
STRENGTH MEMBER	Radial Fiberglass Rod		IN BUILDING	May install within 50 feet of building entrance.						
GROUPING	Up to 24F per Tube		HARSH ENVIRONMENT	Not suitable for harsh environments such as steam tunnels, mines, airports, nuclear or chemical facilities.						
WATER BLOCKING	Gel Buffer Tube		GENERAL USES	Access network connections. Laterals and drops to the demarcation point.						
BRAND NAMES/ SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multi- mode Multiple Grades	
	SST-Drop/ROC Drop	ezDROP/ResiLink	Series 6/W7x	DF/DF/LC	None	None	Mini LT			

Air Blown Fiber Optic Cable

FIBER COUNT	1-24 Primary TiniFiber to 144F		DIAMETER RANGE	3mm - 13mm			FIBER COATING	250µm		
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS							
JACKET	Polyethylene, Polymer, Acrylite or Polybutylene		AERIAL	Lashed installation or blown into aerial support microduct with messenger.						
ARMOR	Only available with TiniFiber		UNDERGROUND	Blown into microducts						
STRENGTH MEMBER	Kevlar, Fiberglass rod or none.		IN BUILDING	May install within 50 feet of building entrance unless using an FR version.						
GROUPING	Varies by manufacturer		HARSH ENVIRONMENT	Not suitable for harsh environments such as steam tunnels, mines, airports, nuclear or chemical facilities.						
WATER BLOCKING	Most have no waterblock except AFL and Belden.		GENERAL USES	Last mile or campus, enterprise, commercial or industrial builds. Could also use for laterals and drops.						
BRAND NAMES/ SERIES	BELDEN PPC	PRYSMIAN	AFL	OFS	TINIFIBER	SUMITOMO	OPTICAL FIBER TYPES		Singlemode & Multi- mode Multiple Grades	
	Miniflex	Sirroco (Not in US)	MicroDrop	AccuBreeze FX	Micro Armored Fiber	FutureFLEX				

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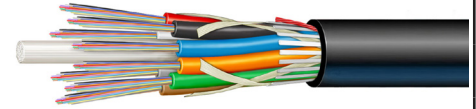
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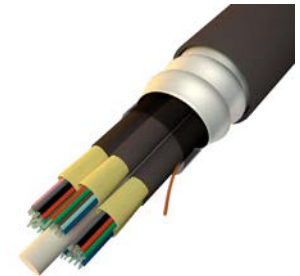
Indoor/Outdoor Loose Tube Fiber Optic Cable

FIBER COUNT	1-288 (Plenum max 144)		DIAMETER RANGE	0.40 in - 1.20 in (10.2mm - 30.5mm)			FIBER COATING	250µm		
CABLE DESIGN OPTIONS				CONSTRUCTION APPLICATIONS						
JACKET	Flame retardant, UV-Resistant Polyvinyl Based.		AERIAL	Aerial lashed construction.						
ARMOR	Limited armor options. Steel tape or interlocking available.		UNDERGROUND	Pulled or blown (jetted) into conduit. May be direct buried if armored.						
STRENGTH MEMBER	Central Fiberglass Rod		IN BUILDING	Designed for use inside the building past 50 feet with the appropriately rated jacket (LSZH, plenum or riser).						
GROUPING	12F per Tube Typical		HARSH ENVIRONMENT	Base cable options are not designed for harsh environment, but specialized types are available in this category.						
WATER BLOCKING	Dry or gel options available		GENERAL USES	Lateral, local loop access network and service drop applications. Campus environments.						
BRAND NAMES/ SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multi-mode Multiple Grades	
	Freedm	ExpressLT/ CampusLink	Series 13/13i	R-OD/P-OD/R-LZ/P-LZ	LV Series	LD Series	OPTION 1 DT/ PlenumXcel			



Tight Buffered Distribution Fiber Optic Cable

FIBER COUNT	2-144		DIAMETER RANGE	0.19 in - 1.19 in (4.8mm - 30.2mm)			FIBER COATING	900µm		
CABLE DESIGN OPTIONS				CONSTRUCTION APPLICATIONS						
JACKET	Flame Retardant LSZH, Plenum or Riser		AERIAL	Not designed for use in aerial construction, but could be run in aerial conduit if necessary.						
ARMOR	Interlocking armor available. Limitations on fiber counts.		UNDERGROUND	May be used in conduit. Not economical over long distances.						
STRENGTH MEMBER	Kevlar/Aramid Strands		IN BUILDING	Designed for use in-building with the appropriate flame rating for where it is installed (plenum or riser).						
GROUPING	Stranded, single unit with 12F Subunits in larger designs		HARSH ENVIRONMENT	Base cable options are not designed for harsh environment, but specialized types are available in this category.						
WATER BLOCKING	None		GENERAL USES	In building trunking, fiber termination back plane interconnect. 900µm tight buffer suitable for direct termination.						
BRAND NAMES/ SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multi-mode Multiple Grades	
	MIC	ezDISTRIBUTION	Series 43/44/ L3/L4	Distribution	Multi-Unit CPC (CR/CP Series)	MT Series	ACCUMAX			



Micro Distribution Fiber Optic Cable

FIBER COUNT	1-144		DIAMETER RANGE	0.08 in - 0.70 in (2mm - 17.9mm)			FIBER COATING	250µm		
CABLE DESIGN OPTIONS				CONSTRUCTION APPLICATIONS						
JACKET	Flame Retardant LSZH, Plenum or Riser		AERIAL	Not designed for use in aerial construction, but could be run in aerial conduit if necessary.						
ARMOR	Interlocking armor available		UNDERGROUND	May be used in conduit. Not economical over long distances.						
STRENGTH MEMBER	Kevlar/Aramid Strands		IN BUILDING	Designed for use in-building with the appropriate flame rating for where it is installed (plenum or riser).						
GROUPING	Stranded single units, 12F Subunits in some designs		HARSH ENVIRONMENT	Base cable options are not designed for harsh environment, but specialized types are available in this category.						
WATER BLOCKING	None		GENERAL USES	In building trunking, fiber termination back plane interconnect.						
BRAND NAMES/ SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multi-mode Multiple Grades	
	MIC 250 & 250 2.0	MFC Indoor	MicroLite/Microarray DCI		Sub-Unitized MicroCore		AccuPack			



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Ribbon Fiber Distribution Cable

FIBER COUNT	12-432/576/864/1728		DIAMETER RANGE	0.58 in - 1.12 in (14.7mm - 28.5mm)			FIBER COATING	250µm			
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS								
JACKET	Flame Retardant LSZH, Plenum or Riser. UV in I/O.		AERIAL	Indoor/outdoor versions may be lashed or run in aerial conduit.							
ARMOR	Interlocking armor available		UNDERGROUND	May be installed in conduit.							
STRENGTH MEMBER	Central or Radial Fiberglass Rod or Strength Yarns		IN BUILDING	Designed for use in-building with the appropriate flame rating for where it is installed (plenum or riser).							
GROUPING	12F and 24F Ribbon Matrices or 12F Rollable Ribbons		HARSH ENVIRONMENT	Not designed for harsh environment applications outside of flame rated/LSZH ratings.							
WATER BLOCKING	None unless indoor/outdoor.		GENERAL USES	Indoor trunking or backbone in central offices, large scale enterprise and data centers.							
BRAND NAMES/SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	SUMITOMO	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multimode Multiple Grades		
	UltraRibbon Indoor	COLink RCLT	Ribbon Distribution	PureRibbon and Freeform Ribbon	Sub-Unitized MicroCore SWR	None	AccuFlex and AccuRiser				

Breakout Distribution Fiber Optic Cable

FIBER COUNT	2 - 36/48/72		DIAMETER RANGE	0.29 in - 0.98 in (7.4mm - 24.9mm)			FIBER COATING	900µm in 1.2/1.6/2/3mm Single Units			
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS								
JACKET	Flame Retardant LSZH, Plenum or Riser.		AERIAL	Not suitable for aerial construction.							
ARMOR	None offered		UNDERGROUND	Not economical for underground construction.							
STRENGTH MEMBER	Kevlar/Aramid Strength Yarns		IN BUILDING	Designed for use in-building with the appropriate flame rating for where it is installed (plenum or riser).							
GROUPING	Single up-jacketed units.		HARSH ENVIRONMENT	Not designed for harsh environments outside of flame/heat ratings. Tactical designs are similar to this construction.							
WATER BLOCKING	None		GENERAL USES	Indoor trunking cables with direct terminations for use in front-plane patching applications.							
BRAND NAMES/SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multimode Multiple Grades		
	Fan-Out	ezBREAKOUT	Breakout OFNR		Breakout Cable (BR/BP Series)	SD Series	MiniCord/Micro-Cord				

Interconnect Fiber Optic Cordage

FIBER COUNT	1 or 2		DIAMETER RANGE	1.2mm/1.6mm/2mm/3mm			FIBER COATING	900µm			
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS								
JACKET	Flame Retardant LSZH, Riser or Plenum		AERIAL	Not suitable for outdoor use.							
ARMOR	None		UNDERGROUND	Not suitable for outdoor use.							
STRENGTH MEMBER	Kevlar/Aramid Yarns		IN BUILDING	Designed for use in-building with the appropriate flame rating for where it is installed (plenum or riser).							
GROUPING	Single Fiber Units		HARSH ENVIRONMENT	Not designed for harsh environments outside of flame/heat ratings.							
WATER BLOCKING	None		GENERAL USES	Front plane fiber termination and patching.							
BRAND NAMES/SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multimode Multiple Grades		
	Single, Zipcord, MIC, DFX	ezINTERCONNECT	Interconnect Round or Duplex	Simplex and Duplex	Simplex and Duplex	OptiLAN Interconnect	Interconnect Cordage, M-Pack				

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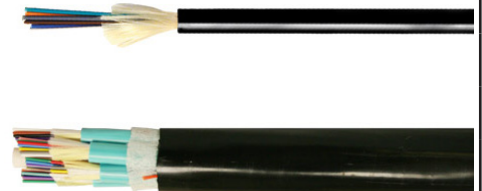
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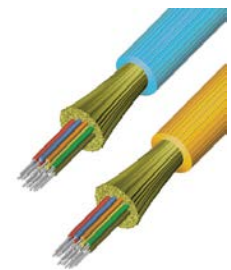
Indoor/Outdoor Tight Buffered Fiber Optic Cable										
FIBER COUNT	2-96/144		DIAMETER RANGE	0.19 in - 1.14 in (4.8mm - 28.9mm)			FIBER COATING	900µm		
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS							
JACKET	Flame and UV Resistant		AERIAL	May be installed in aerial duct or outdoor tray. May not be suitable for lashed construction.						
ARMOR	Available with Interlocking Armor		UNDERGROUND	For installation in conduits, cable tray						
STRENGTH MEMBER	Central strength member with sub-unitized cables.		IN BUILDING	Designed for use in-building with the appropriate flame rating for where it is installed (plenum or riser).						
GROUPING	Single unit or 12F Subunits		HARSH ENVIRONMENT	May be suitable for extreme temperature environments with LSZH, plenum or riser flame ratings.						
WATER BLOCKING	Waterblocked core		GENERAL USES	Backbone and trunk cables in industrial and campus facilities. 900µm suitable for backplane patching and splicing.						
BRAND NAMES/ SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multi-mode Multiple Grades	
	FREEDM One	ezDISTRIBUTION/ ezINTERLOCK	DryBlock OFNR		Indoor/Outdoor Tight Buffer	OptiLAN	AccuDry			



Indoor/Outdoor Interconnect Fiber Optic Cable										
FIBER COUNT	1		DIAMETER RANGE	3mm/4.2mm/4.8mm			FIBER COATING	900µm		
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS							
JACKET	Flame Retardant and UV Resistant		AERIAL	Aerial microduct recommended as cable is not self-supporting. Clips are available to attach to sides of structures.						
ARMOR	None. There is a tone option on some 4.8mm.		UNDERGROUND	Installed in microducts if going underground.						
STRENGTH MEMBER	Kevlar/Aramid Yarns		IN BUILDING	Designed for use in-building or outdoor secured by cable clips in areas applicable to its flame rating (Riser or Plenum).						
GROUPING	Single Fiber Unit		HARSH ENVIRONMENT	Not suitable for harsh environment outside of its flame and UV resistance.						
WATER BLOCKING	None		GENERAL USES	Used for drop fiber in Single Family Units (SFU) or Multiple Dwelling Units (MDU).						
BRAND NAMES/ SERIES	CORNING	PRYSMIAN	SUPERIOR ESSEX	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multi-mode Multiple Grades	
	ClearCurve	MDU Drop	Rugged MDU	RealFlex 3	Rugged Simplex		EZ-Bend			



Air Blown Fiber Optic Cable										
FIBER COUNT	1-96		DIAMETER RANGE	0.14 in - 0.18 in (3.6mm - 4.5mm)			FIBER COATING	250µm		
CABLE DESIGN OPTIONS			CONSTRUCTION APPLICATIONS							
JACKET	Flame retardant, designed for jetting.		AERIAL	May be installed in aerial microduct						
ARMOR	None		UNDERGROUND	May be installed in underground microduct pathways.						
STRENGTH MEMBER	None		IN BUILDING	Designed for use in-building with the appropriate flame rating for where it is installed (plenum or riser).						
GROUPING	Stranded Fiber		HARSH ENVIRONMENT	Not suitable for harsh environment applications outside of high temperature						
WATER BLOCKING	None		GENERAL USES	Campus networks designed with microduct pathways as well as in-building network distribution.						
BRAND NAMES/ SERIES	CORNING	PRYSMIAN	SUMITOMO	COMMSCOPE	AFL	TELDOR	OFS	OPTICAL FIBER TYPES	Singlemode & Multi-mode Multiple Grades	
		MFC Series	FutureFLEX		eABF					



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SINGLEMODE FIBER DESCRIPTION	ITU		CORNING	PRYSMIAN/ DRAKA	OFS	FUJIKURA	SUMITOMO
	TIA	IEC					
Standard Singlemode Fiber Non-Dispersion-Shifted Fiber (NDSF)	G.652.A/B		SMF-28	SSMF		FutureGuide-SM	SM
	OS1	B1.1					
Standard Singlemode Fiber Low/Zero Water Peak (LWP/ZWP) Non-Dispersion-Shifted Fiber (NDSF)	G.652.D		SMF-28e+	ESMF	AllWave AllWave LL	FutureGuide-LWP Future- Guide-LWP-RA	PureBand PureBand-Plus PureAdvance PureBand Subma- rine
	OS2	B1.3					
Dispersion Shifted Fiber	G.653	B2					
Cutoff Shifted Fiber	G.654		SMF-28 ULL TXF Vascade EX/L/ S1000 Vascade Leaf EP	LongLine	TeraWave TeraWave ULL		PureGuide Z Fiber Z-Plus Fiber Z-Plus Fiber 130/150
		B1.2					
Non-Zero Dispersion Shifted Fiber (NZ-DSF, NZDS)	G.655/G.656		Leaf Vascade Leaf EP	TeraLight TeraLight Ultra	TrueWave RS TrueWave LA TrueWave REACH	FutureGuide-LA FutureGuide-SS FutureGuide-USS	PureGuide-LA PureMetro
	492E(A)	B4					
Bend-Insensitive 10mm Radius	G.657.A1/G.652.D		SMF-28 Ultra SMF-28 Ultra 200 ClearCurve XB	BendBright	AllWave AllWave + AllWave FLEX	FutureGuide-SR15 FutureGuide-SR15 200 FutureGuide-ACE	PureBand-Plus PureAccess
	OS2	B1.3/B6A					
Bend Insensitive 7.5mm Radius	G.657.A2/G.652.D		ClearCurve LBL	BendBrightXS BendBrightXS 200um	AllWave FLEX + AllWave FLEX + 200	FutureGuide-BIS-B FutureGuide-BIS-B 200	PureAccess[A2]
	OS2	B1.3/ B6A/B					
Bend Insensitive 5mm Radius	G.657.B2/3 G.652.D*		ClearCurve LBL ClearCurve ZBL	BendBright Elite	AllWave FLEX MAX		PureAccess Ultra
		B6A&B					

For the past decade, Low Water Peak G.652.D singlemode fiber enjoyed the lion share of deployments for terrestrial metro and access networks. Increasing data rates and decreasing closure sizes compounded the need for bend insensitive fibers in the metro and access portions of the network.

Macrobends are under increased scrutiny today. Networks that ran well at 1Gbps speeds may have packet loss and other issues at 10Gbps and beyond when macrobends are present. Therefore the new de-facto standard singlemode fiber in most cables today is the G.657.A1 standard that is also G.652.D compliant.

This reduced radius optical fiber is designed to splice to standard G.652.D Fiber without issue, and it is more robust than traditional singlemode. The robust capability allow for cable to be maintained in smaller slack loops, smaller closures and reduced diameter cable designs without sacrificing network performance.

For reference purposes only. Refer to manufacturer's specifications for actual product information.

FIBER OPTIC CABLE SOLUTIONS GUIDE



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Optical Fiber

MULTIMODE FIBER DESCRIPTION	ITU		CORNING	PRYSMIAN/ DRAKA	OFS	FUJIKURA	SUMITOMO
	TIA	IEC					
62.5µm Graded Index Multimode Fiber	OM1	A1b	InfiniCor 300 InfiniCor CL1000	Legacy OM1 GI-MMF RadHard 62.5	PYRO Acrylate	FutureGuide-MM62.5	EG6
50µm Graded Index Multimode Fiber	OM2	A1a.1	InfiniCor 600 InfiniCor Sxi ClearCurve OM2	Legacy OM2 GI-MMF MaxCap-BB RadHard 50 OM2	PYRO Acrylate LaserWave FLEX G+	FutureGuide-MM50	PureEther Access1G
50µm GI Laser Optimized Multimode Fiber	OM3	A1a.2	InfiniCor SX InfiniCor eSX+ ClearCurve OM3	MaxCap-BB RadHard 50 OM3/4	PYRO Acrylate LaserWave FLEX	Future- Guide-MM10G/300	PureEther Access10G
50µm GI Laser Optimized Multimode Fiber	OM4	A1a.3	ClearCurve OM4	MaxCap-BB MaxCap-OM4-Plus RadHard 50 OM3/4	PYRO Acrylate LaserWave FLEX	Future- Guide-MM10G/300	PureEther Access 10G+
50µm Wideband Multimode Fiber (For SWDM)	OM5	A1a.4	ClearCurve OM5 Wide Band Fiber	WideCap OM5	LaserWave Flex WideBand		

FIBER SPECIFICATIONS					
FIBER CLASS	FIBER TYPE	1 GBE MAX DISTANCE 850NM/1300NM	10 GBE MAX DISTANCE 850NM/1300NM	BANDWIDTH MHZ-HM (OFL) 850NM/1300NM	INDOOR CABLE JACKET COLOR
62.5µm 200/500 MHz-km	OM1	275m/550m	36m/300m	200/500	
50µm 700/500 MHz-km	OM2	550m/550m	82m/300m	1500/500	
50µm 300	OM3	1000m/550m	300m/300m	1500/500	
50µm 550	OM4	1100m/550m	550m/300m	3500/500	
50µm	OM5	1100m/600m	550m/(N/A)	3500/500	
Singlemode	OS1 & OS2	5-40km @ 1310	10km @1310 40km @ 1550	N/A	
Bend-Insensitive Singlemode	OS2	50-40km @ 1310	10km @1310 40km @ 1550	N/A	













For reference purposes only. Refer to manufacturer's specifications for actual product information.



General Information







COLOR CODE GUIDE TIA-598

The TIA/EIA color code for fiber optics follows a munsell color scheme of 12 repeating colors found on the 250µm coating or the 900µm up-jacketing of distribution fibers.

1	2	3	4	5	6	7	8	9	10	11	12
											
Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Most manufacturers adhere to the unit position color code per TIA-598 specifications as shown below. Colors repeat the standard 12-color sequence in loose buffer tube cable designs. Individual tubes with 24 fibers typically use blue and orange colored binder thread separating the two 12 fiber groups.

UNIT POSITION COLOR CODE FOR LOOSE TUBE TIA-598

Position	Buffer Tube Color	Position	Buffer Tube Color	Position	Buffer Tube Color
1	 Blue	13	 Blue w/ Black Stripe	25	 Blue w/ Red Stripe
2	 Orange	14	 Orange w/ Black Stripe	26	 Orange w/ Red Stripe
3	 Green	15	 Green w/ Black Stripe	27	 Green w/ Red Stripe
4	 Brown	16	 Brown w/ Black Stripe	28	 Brown w/ Red Stripe
5	 Slate	17	 Slate w/ Black Stripe	29	 Slate w/ Red Stripe
6	 White	18	 White w/ Black Stripe	30	 White w/ Red Stripe
7	 Red	19	 Red w/ Black Stripe	31	 Red w/ Yellow Stripe
8	 Black	20	 Black w/ Yellow Stripe	32	 Black w/ Red Stripe
9	 Yellow	21	 Yellow w/ Black Stripe	33	 Yellow w/ Red Stripe
10	 Violet	22	 Violet w/ Black Stripe	34	 Violet w/ Red Stripe
11	 Rose	23	 Rose w/ Black Stripe	35	 Rose w/ Red Stripe
12	 Aqua	24	 Aqua w/ Black Stripe	36	 Aqua w/ Red Stripe
				37	 Blue w/ Green Stripe
				38	 Orange w/ Green Stripe

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Fiber Optic Cable information contained herein is for general reference only. Stated ranges of fiber counts and constructions may be limited by the manufacturers listed. Consult your Comstar sales representative for specific supplier information regarding the cable design(s) you are interested in. Availability of products in this document are subject to change. Additional cable designs are available for specific applications and harsh environments.

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