

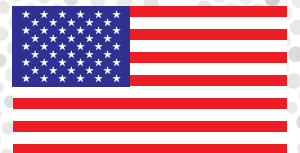
PROTERIAL

Proterial Cable America, Inc.

Copper Premise & Fiber Optic Catalog



Proudly Made in USA



Copper Premise & Fiber Optic Cable

Since 1986, Proterial Cable America has been developing technologically advanced copper and fiber optic communication cables. Our dedication to engineering perfection is evident in the consistent quality and performance of all the cable products we manufacture.

Through the development of high performance cable products, such as the world's first UL verified 10-gigabit Ethernet Category 6A cable, Proterial Cable has established itself as a leader in the industry. These products and the others found in this catalog are the result of Proterial Cable's relentless desire to manufacture the finest communication cables in the world. After using our products, we are confident you will agree.

Trademarks Referenced In This Catalog:

Power+™, Plus™, XS™, Supra™, Supra 10G™, Supra 10G-XE™ are trademarks of Proterial Cable America, Inc.

DryBit® and Nanocore® are registered trademarks of Proterial Cable America, Inc.

MTP® is a registered trademarks of US Conec Ltd.

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PROTERIAL

Quality Products Made in America.

Proterial's Manufacturing Advantage

We never stop innovating. Whether it's installing the very latest in cable manufacturing technology, or designing and building custom equipment for a one of a kind cable, we have the resources to maintain a technological edge over the competition. We're ISO certified 9001-2015, so you can be confident that all of our processes and materials are properly tracked and recorded.



On-Site Copper Extrusion

The Manchester, New Hampshire facility is one of a handful of cable manufacturing facilities in the U.S. that performs on-site drawing of copper. When drawing copper, PCA starts with 13 AWG solid copper conductor on custom built deploying devices, called Stems. The copper is pulled into drawing mills where it is reduced to the appropriate size, conditioned in what is called the annealing process, then insulated with the appropriate insulation. This allows us to better control the performance of the primary conductors and maximize overall cable performance.

Fully Compliant.

All the products manufactured within our facility are compliant to EU Directive 2011/65/ EU, also known as the Restriction of Hazardous Substances (RoHS3) which regulates the use of harmful materials such as lead, cadmium and mercury.

Packaging Engineered for Easy-Payout

Our easy-payout boxes for Category 5e and Category 6 cables were designed with direct input and feedback from users.

Our boxes feature dual reinforced handles and have proven to be as durable as the cable they contain.



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We Take the Worry out of Warranty.

The Open System Architecture Solution

Open System Architecture (OSA) from Proterial Cable America (PCA) provides world class performance using virtually any combination of PCA verified cables with verified connective hardware in the design of the network. The ANSI/TIA-568.2-D standard specifies the performance requirements of all network components and defines interoperability base-line limits to ensure that combinations of cable with connectivity will meet or exceed the system's intended application.

By employing a Proterial OSA solution, end users have the freedom to choose from a wide range of quality connectivity products that best meet their specific needs and be confident that the chosen solution will support all applications designed to operate over that solution and be backed by our industry-leading lifetime warranty*.

- Our open system architecture provides for standards-based verifiable cable performance
- Enables a range of connectivity options
- Opens up competitive solution offerings
- Delivers substantial benefits to the end user

Cable Quality Matters.

In cable based communication links, the cable determines the ultimate performance of that link, not the connectors.

With a growing list of applications for category cables, many of them critical to a facility's operations, selecting a high quality cable from an established manufacturer is imperative. Additionally, with an increase in counterfeit and unestablished brands flooding the market, it is important to protect your investment by sourcing only through trusted distribution channels.

- Cable is the highest cost component of passive infrastructures
- Cable determines margin of performance headroom in the link and channel
- Cable vendor should be the lead warranty provider

*Lifetime Warranty available only through Proterial certified installers.

Beyond-The-Link Building Systems



We offer a Lifetime Warranty

We are pleased to offer a lifetime warranty on all certified installations.

The lifetime warranty, which is only available through Proterial Cable Certified Installers, offers a product performance and application assurance warranty.

We guarantee that the solution will pass the appropriate category test for the life of the network as well as support all applications designed to operate over that solution. The warranty covers both the cables and all the connective hardware directly attached to our cable. This also includes any labor that could be associated with a warranty claim.

Our Warranty Systems Feature:

- Compliance to TIA and ISO Cabling Standards
- Lifetime Product Performance Warranty
- Lifetime Applications Support Warranty
- Open Architecture Connectivity Specification
- One Point-of-Contact for all Warranty Features





PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- UL Verified ANSI/TIA-568.2-D
- Low Smoke Plenum construction
- Guaranteed minimum performance
- Tested from 1 to 555 MHz
- No internal pair separator
- Standard Reelex™ package



APPLICATIONS

- 5 Gigabit Ethernet (IEEE 802.3bz)
- 2.5 Gigabit Ethernet (IEEE 802.3bz)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM
- 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)

PACKAGING

- 1,000 feet (305 m)
- Reverse sequential footage markings standard on each 1,000 foot package
- Unit/pallet: 48 Reels
CMP Carton Weight (lbs): 28.5
CMP Product Weight (lbs): 25.24



TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +60°C
(-40°F to +140°F)
- **Installation Temperature**
0°C to +60°C
(+32°F to +140°F)
- **Operation Temperature**
Plenum
-20°C to +90°C
(-4°F to +194°F)
Riser
-20°C to +75°C
(-4°F to +167°F)

*weight may vary

DIELECTRIC MATERIALS

Plenum

Primary Insulation: Plenum-rated fluoropolymer
Overall Jacket: Flame-retardant Thermoplastic

Riser

Primary Insulation: Polyolefin
Overall Jacket: Flame-retardant Thermoplastic

Cat 6 XS UTP Part Specifications





	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL) us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
PLENUM	30237-8-XXY	4	0.20	5.08	25.24	11.45	CMP (NFPA 262), CSA Type FT6

	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL) us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
*RISER	30238-8-XXY	4	0.21	5.33	23.12	10.5	CMR (UL 1666), CSA Type FT4

Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30237	8	XX	Y

Jacket Colors (XX):

			
BL Blue RAL 5012	GR Green RAL 6032	YE Yellow RAL 1032	WH White RAL 9003

Reel Type (Y):



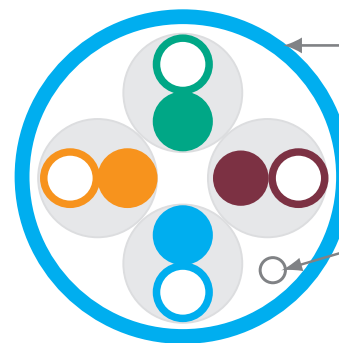
Reel 2: Reelex

*Riser only available in Blue or White

Primary Insulation



24 AWG
Bare Copper



Overall Jacket

Rip Cord pulled under Overall Jacket



Cat 6 XS UTP Transmission Specifications

ANSI/TIA-568.2-D Category 6 Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

Freq. (MHz)	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
	Std.	Max.	Std.	Min.	Std.	Min.	Cal.	Min.	Cal.	Min.	Std.	Min.	Std.	Min.	Std.	Min.
1	2.0	2.0	74.3	74.3	72.3	72.3	72.3	72.3	70.3	70.3	67.8	67.8	64.8	64.8	20.0	20.0
4	3.8	3.8	65.3	65.3	63.3	63.3	61.5	61.5	59.5	59.5	55.8	55.8	52.8	52.8	23.0	23.0
8	5.3	5.3	60.8	60.8	58.8	58.8	55.4	55.4	53.4	53.4	49.7	49.7	46.7	46.7	24.5	24.5
10	6.0	6.0	59.3	59.3	57.3	57.3	53.3	53.3	51.3	51.3	47.8	47.8	44.8	44.8	25.0	25.0
16	7.6	7.6	56.2	56.2	54.2	54.2	48.7	48.7	46.7	46.7	43.7	43.7	40.7	40.7	25.0	25.0
31.25	10.7	10.7	51.9	51.9	49.9	49.9	41.2	41.2	39.2	39.2	37.9	37.9	34.9	34.9	23.6	23.6
62.5	15.4	15.4	47.4	47.4	45.4	45.4	32.0	32.0	30.0	30.0	31.9	31.9	28.9	28.9	21.5	21.5
100	19.8	19.8	44.3	44.3	42.3	42.3	24.5	24.5	22.5	22.5	27.8	27.8	24.8	24.8	20.1	20.1
200	29.0	29.0	39.8	39.8	37.8	37.8	10.8	10.8	8.8	8.8	21.8	21.8	18.8	18.8	18.0	18.0
250	32.8	32.8	38.3	38.3	36.3	36.3	5.5	5.5	3.5	3.5	19.8	19.8	16.8	16.8	17.3	17.3
300*	-	36.4	-	37.1	-	35.1	-	-	-	-	-	18.3	-	15.3	-	16.8
350*	-	39.8	-	36.1	-	34.1	-	-	-	-	-	16.9	-	13.9	-	16.3
400*	-	43.0	-	35.3	-	33.3	-	-	-	-	-	15.8	-	12.8	-	15.9
500*	-	48.9	-	33.8	-	31.8	-	-	-	-	-	13.8	-	10.8	-	15.2
555*	-	52.0	-	33.1	-	31.1	-	-	-	-	-	12.9	-	9.9	-	14.9

*Frequencies beyond the TIA and ISO requirements are for information only. All values are dB/100m.

ELECTRICAL CHARACTERISTICS

Input Impedence:	100 ± 15Ω (1.0 to 100 MHz) 100 ± 20Ω (101 to 250 MHz)
Maximum Conductor Resistance:	9.38 Ω/100 meters @ 20°C
Maximum Resistance Unbalance:	5%
Maximum Capacitance Unbalance:	330 pF/100 meters
Maximum Delay Skew:	45 ns/100 meters
Nominal Velocity Of Propagation (Nvp):	70%, Plenum 68%, Riser
Voltage Rating:	300 Volts

CABLE AMPACITY CHART

Bundle Size	1	2-7	8-19	20-37	38-61	62-91	92-192
Cable Temp	75°C	75°C	75°C	75°C	75°C	75°C	75°C
24 AWG	2.0	1.4	1.0	0.7	0.6	0.5	0.4

The table above is derived from the one approved by the National Fire Protection Agency and used in the National Electrical Code, NFPA-70. The complete table can be found in sections 725.144 and 800 Communication Circuits of the code. The table identifies the ampacity of each conductor (in amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86°F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables. All cable temps are operational temp ratings. Cables with temp ratings above 90°C would deliver additional power handling capacity.

Proterial Cable America, Inc. is continuously improving the performance of our products and the accuracy of the information provided. Due to this, we reserve the right to modify, revise, correct, or change products without notice. Thank you for your understanding.

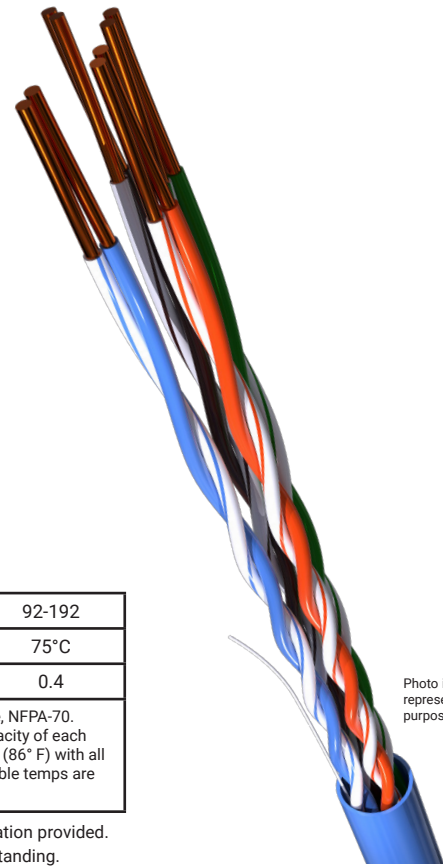


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PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- UL Verified ANSI/TIA-568.2-D
- Low Smoke Plenum construction
- Guaranteed minimum performance
- Enhanced performance beyond TIA Standard
- Tested from 1 to 555 MHz

APPLICATIONS

- HDBase-T A & B
- 5 Gigabit Ethernet (IEEE 802.3bz)
- 2.5 Gigabit Ethernet (IEEE 802.3bz)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM
- 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)
- 100W PoE++ (IEEE 802.3bt Type 4)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)

PACKAGING

- 1,000 feet (305 m)
- Reverse sequential footage markings standard on each 1,000 foot package
- Unit/pallet: 32 Reels
CMP Carton Weight (lbs): 29.04
CMP Product Weight (lbs): 25.74

*weight may vary

TIA Parameter	Guaranteed Headroom
PSANEXT loss	+3 dB
PSACRF	+3 dB
NEXT loss	+3 dB
ACRF	+3 dB

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +60°C
(-40°F to +140°F)
- **Installation Temperature**
0°C to +60°C
(+32°F to +140°F)
- **Operation Temperature**
-20°C to +75°C
(-4°F to +167°F)

DIELECTRIC MATERIALS

Plenum

Primary Insulation: Plenum-rated fluoropolymer

Overall Jacket: Low-smoke, flame-retardant thermoplastic

Star Filler: Plenum-rated polymer

Cat 6 Plus Enhanced UTP Parts Specifications

	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL)us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
PLENUM	30025-8-XXY	4	0.20	5.1	25.74	11.67	CMP (NFPA 262), CSA Type FT6

Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30025	8	XX	Y

Jacket Colors (XX):

BL Blue RAL 5012	GR Green RAL 6032	YE Yellow RAL 1032	WH White RAL 9003
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Reel Type (Y):

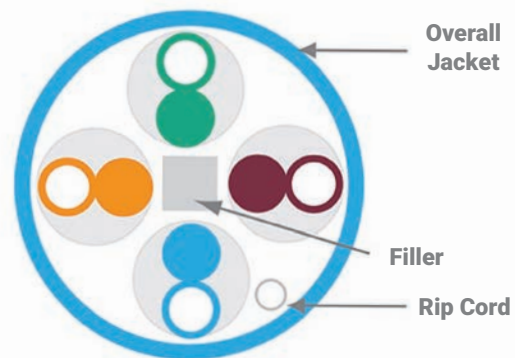


Reel 2: Reelex

Primary Insulation



23 AWG
Bare Copper



Overall Jacket

Filler

Rip Cord



Cat 6 Plus Enhanced UTP Transmission Specifications

ANSI/TIA-568.2-D Category 6 Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

Freq. (MHz)	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
	Std.	Max.	Std.	Min.	Std.	Min.	Cal.	Min.	Cal.	Min.	Std.	Min.	Std.	Min.	Std.	Min.
1	2.0	2.0	74.3	77.3	72.3	75.3	72.3	75.3	70.3	73.3	67.8	70.8	64.8	67.8	20.0	20.0
4	3.8	3.8	65.3	68.3	63.3	66.3	61.5	64.5	59.5	62.5	55.8	58.8	52.8	55.8	23.0	23.0
8	5.3	5.3	60.8	63.8	58.8	61.8	55.4	58.4	53.4	56.4	49.7	52.7	46.7	49.7	24.5	24.5
10	6.0	6.0	59.3	62.3	57.3	60.3	53.3	56.3	51.3	54.3	47.8	50.8	44.8	47.8	25.0	25.0
16	7.6	7.6	56.2	59.2	54.2	57.2	48.7	51.7	46.7	49.7	43.7	46.7	40.7	43.7	25.0	25.0
31.25	10.7	10.7	51.9	54.9	49.9	52.9	41.2	44.2	39.2	42.2	37.9	40.9	34.9	37.9	23.6	23.6
62.5	15.4	15.4	47.4	50.4	45.4	48.4	32.0	35.0	30.0	33.0	31.9	34.9	28.9	31.9	21.5	21.5
100	19.8	19.8	44.3	47.3	42.3	45.3	24.5	27.5	22.5	25.5	27.8	30.8	24.8	27.8	20.1	20.1
200	29.0	29.0	39.8	42.8	37.8	40.8	10.8	13.8	8.8	11.8	21.8	24.8	18.8	21.8	18.0	18.0
250	32.8	32.8	38.3	41.3	36.3	39.3	5.5	8.5	3.5	6.5	19.8	22.8	16.8	19.8	17.3	17.3
300*	-	36.4	-	40.1	-	38.1	-	3.7	-	1.7	-	21.3	-	18.3	-	16.8
350*	-	39.8	-	39.1	-	37.1	-	-	-	-	-	19.9	-	16.9	-	16.3
400*	-	43.0	-	39.3	-	36.3	-	-	-	-	-	18.8	-	15.8	-	15.9
500*	-	48.9	-	36.8	-	34.8	-	-	-	-	-	16.8	-	13.8	-	15.2
555*	-	52.0	-	36.1	-	34.1	-	-	-	-	-	15.9	-	12.9	-	14.9

*Frequencies beyond the TIA and ISO requirements are for information only. All values are dB/100m.

ELECTRICAL CHARACTERISTICS

Input Impedence:	100 ± 15Ω (1.0 to 250 MHz)
Maximum Conductor Resistance:	9.38 Ω/100 meters @ 20°C
Maximum Resistance Unbalance:	5%
Maximum Capacitance Unbalance:	330 pF/100 meters
Maximum Delay Skew:	45 ns/100 meters
Nominal Velocity Of Propagation (Nvp):	70% Plenum
Voltage Rating:	300 Volts

CABLE AMPACITY CHART

Bundle Size	1	2-7	8-19	20-37	38-61	62-91	92-192
Cable Temp	75°C	75°C	75°C	75°C	75°C	75°C	75°C
23 AWG	2.5	1.5	1.1	0.8	0.7	0.7	0.5

The table above is derived from the one approved by the National Fire Protection Agency and used in the National Electrical Code, NFPA-70. The complete table can be found in sections 725.144 and 800 Communication Circuits of the code. The table identifies the ampacity of each conductor (in amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86° F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables. All cable temps are operational temp ratings. Cables with temp ratings above 90°C would deliver additional power handling capacity.

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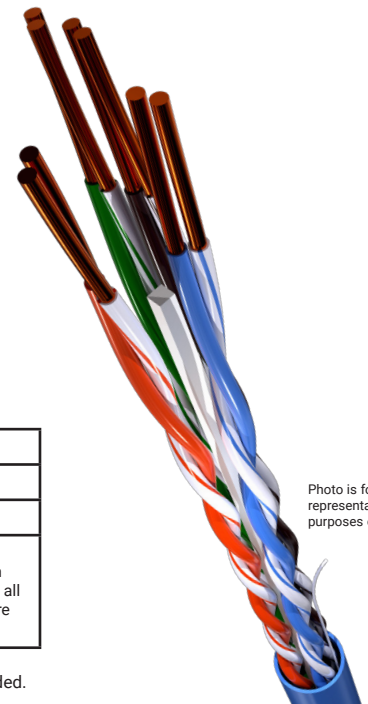


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PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- UL Verified
- Low Smoke Plenum construction
- Guaranteed minimum performance
- Enhanced performance beyond TIA Standard
- Tested from 1 to 660 MHz
- CMP-50 rated cables available

APPLICATIONS

- HDBase-T A & B
- 5 Gigabit Ethernet (IEEE 802.3bz)
- 2.5 Gigabit Ethernet (IEEE 802.3ab)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM
- 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)

PACKAGING

- 1,000 feet (305 m)
- Reverse sequential footgemarkings standard on each
- 1,000 foot package
- Unit/pallet: 32 Reels
- CMP Carton Weight (lbs): 29.04
- CMP Product Weight (lbs): 25.74

*weight may vary

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +60°C
(-40°F to +140°F)
- **Installation Temperature**
0°C to +60°C
(+32°F to +140°F)
- **Operation Temperature**
-20°C to +75°C
(-4°F to +167°F)

TIA Parameter	Guaranteed Headroom
NEXT loss	+5 dB
PSANEXT loss	+5 dB
ACRF	+6 dB
PSACRF	+6 dB

DIELECTRIC MATERIALS

Plenum

Primary Insulation: Plenum-rated fluoropolymer
Overall Jacket: Low-smoke, flame-retardant thermoplastic
Star Filler: Plenum-rated polymer





Cat 6 Premium Enhanced UTP Part Specifications

	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL) us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
PLENUM	30183-8-XXY	4	0.20	5.1	25.74	11.68	CMP (NFPA 262), CSA Type FT6

Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30183	8	XX	Y

Jacket Colors (XX):

 BL Blue RAL 5012	 GR Green RAL 6032	 YE Yellow RAL 1032	 WH White RAL 9003
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Reel Type (Y):



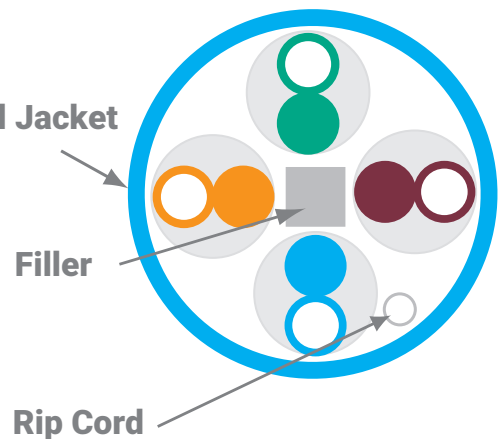
Reel 2: Reelex

Primary Insulation



23 AWG
Bare Copper

Overall Jacket



Cat 6 Premium Enhanced UTP Transmission Specifications

ANSI/TIA-568.2-D Category 6 Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

Freq. (MHz)	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
	Std.	Max.	Std.	Min.	Std.	Min.	Cal.	Min.	Cal.	Min.	Std.	Min.	Std.	Min.	Std.	Min.
1	2.0	2.0	74.3	83.3	72.3	81.3	72.3	81.3	70.3	79.3	67.8	75.8	64.8	72.8	20.0	20.0
4	3.8	3.7	65.3	74.3	63.3	72.3	61.5	70.6	59.5	68.6	55.8	63.8	52.8	60.8	23.0	24.2
8	5.3	5.2	60.8	69.8	58.8	67.8	55.4	64.6	53.4	62.6	49.7	57.7	46.7	54.7	24.5	26.3
10	6.0	5.8	59.3	68.3	57.3	66.3	53.3	62.5	51.3	60.5	47.8	55.8	44.8	52.8	25.0	27.0
16	7.6	7.3	56.2	65.2	54.2	63.2	48.7	57.9	46.7	55.9	43.7	51.7	40.7	48.7	25.0	27.0
31.25	10.7	10.4	51.9	60.9	49.9	58.9	41.2	50.5	39.2	48.5	37.9	45.9	34.9	42.9	23.6	25.9
62.5	15.4	14.9	47.4	56.4	45.4	54.4	32.0	41.4	30.0	39.4	31.9	39.9	28.9	36.9	21.5	24.2
100	19.8	19.2	44.3	53.3	42.3	51.3	24.5	34.1	22.5	32.1	27.8	35.8	24.8	32.8	20.1	23.1
155	25.2	24.4	41.1	50.4	39.4	48.4	15.9	26.0	14.3	24.0	24.0	32.0	21.0	29.0	18.8	22.0
200	29.0	28.1	39.8	48.8	37.8	46.8	10.8	20.7	8.8	18.7	21.8	29.8	18.8	26.8	18.0	21.4
250	32.8	31.9	38.3	47.3	36.3	45.3	5.5	15.5	3.5	13.5	19.8	27.8	16.8	24.8	17.3	20.9
300*	-	35.3	-	46.1	-	44.1	-	10.8	-	8.8	-	26.3	-	23.3	-	20.4
350*	-	38.6	-	45.1	-	43.1	-	6.5	-	4.5	-	24.9	-	21.9	-	20.1
400*	-	41.7	-	44.3	-	42.3	-	2.6	-	0.6	-	23.8	-	20.8	-	19.7
500*	-	47.5	-	42.8	-	40.8	-	-	-	-	-	21.8	-	18.8	-	19.2
555*	-	50.5	-	42.1	-	40.1	-	-	-	-	-	20.9	-	17.9	-	18.9
660*	-	55.9	-	41.0	-	39.0	-	-	-	-	-	19.4	-	16.4	-	18.5

*Frequencies beyond the TIA and ISO requirements are for information only. All values are dB/100m.

ELECTRICAL CHARACTERISTICS

Input Impedence:	100 ± 15Ω (1.0 to 100 MHz) 100 ± 20Ω (101 to 250 MHz)
Maximum Resistance Unbalance:	3%
Maximum Capacitance Unbalance:	330 pF/100 meters
Maximum Delay Skew:	35 ns/100 meters
Nominal Velocity Of Propagation (Nvp):	70% Plenum

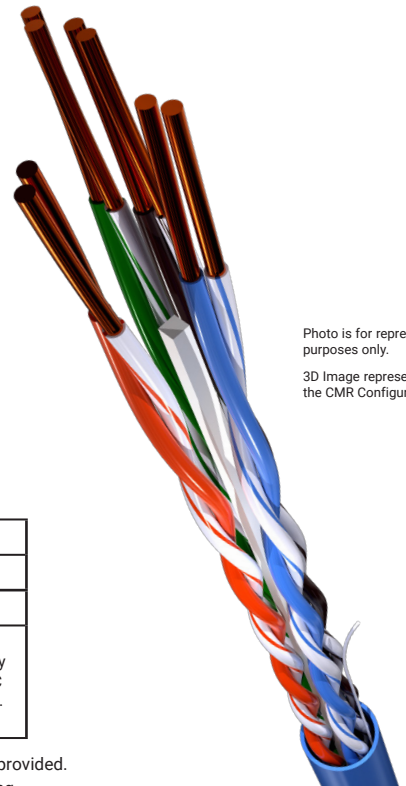


Photo is for representation purposes only.
3D Image represents the CMR Configuration

CABLE AMPACITY CHART

Bundle Size	1	2-7	8-19	20-37	38-61	62-91	92-192
Cable Temp	75°C	75°C	75°C	75°C	75°C	75°C	75°C
23 AWG	2.5	1.5	1.1	0.8	0.7	0.7	0.5

The table above is derived from the one approved by the National Fire Protection Agency and used in the National Electrical Code, NFPA-70. The complete table can be found in sections 725.144 and 800 Communication Circuits of the code. The table identifies the ampacity of each conductor (in amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86° F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables. All cable temps are operational temp ratings. Cables with temp ratings above 90°C would deliver additional power handling capacity.

Proterial Cable America, Inc. is continuously improving the performance of our products and the accuracy of the information provided. Due to this, we reserve the right to modify, revise, correct, or change products without notice. Thank you for your understanding.



PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- UL Verified
- Low Smoke Plenum construction
- Tested from 1 to 660 MHz
- Small O.D. allows more cables per conduit
- Proven shield technology improves RFI and EMI performance

APPLICATIONS

- 10 Gigabit Ethernet (IEEE 802.3an)
- 5 Gigabit Ethernet (IEEE 802.3bz)
- 2.5 Gigabit Ethernet (IEEE 802.3bz)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM
- 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)

PACKAGING

- 1,000 feet (305 m)
- Reverse sequential footage markings standard on each 1,000 foot package
- Unit/pallet: 12 Reels
 - CMP Carton Weight (lbs): 43.64
 - CMP Product Weight (lbs): 40.34

*weight may vary

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +60°C
(-40°F to +140°F)
- **Installation Temperature**
0°C to +60°C
(+32°F to +140°F)
- **Operation Temperature**
-20°C to +75°C
(-4°F to +167°F)

DIELECTRIC MATERIALS

Plenum

Primary Insulation: Plenum-rated fluoropolymer

Overall Jacket: Low-smoke, flame-retardant thermoplastic

Star Filler: Plenum-rated polymer





Cat 6 Shielded F/UTP Part Specifications

	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL) us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
PLENUM	30154-8-XXY	4	0.275	6.98	40.33	18.29	CMP (NFPA 262), CSA Type FT6

Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30154	8	XX	Y

Jacket Colors (XX):

 BL	 GR	 RD	 WH
Blue RAL 5012	Green RAL 6032	Red RAL 3001	White RAL 9003

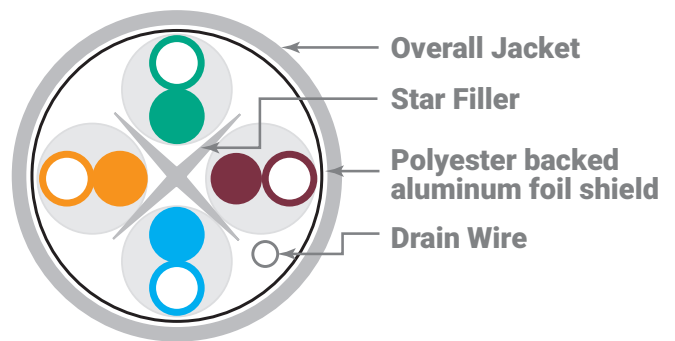
Reel Type (Y):



Primary Insulation



23 AWG
Bare Copper



Cat 6 Shielded F/UTP Transmission Specifications

ANSI/TIA-568.2-D Category 6 Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

Freq. (MHz)	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
	Std.	Max.	Std.	Min.	Std.	Min.	Cal.	Min.	Cal.	Min.	Std.	Min.	Std.	Min.	Std.	Min.
1	2.0	2.0	74.3	74.3	72.3	72.3	72.3	72.3	70.3	70.3	67.8	67.8	64.8	64.8	20.0	20.0
4	3.8	3.8	65.3	65.3	63.3	63.3	61.5	61.5	59.5	59.5	55.8	55.8	52.8	52.8	23.0	23.0
8	5.3	5.3	60.8	60.8	58.8	58.8	55.4	55.4	53.4	53.4	49.7	49.7	46.7	46.7	24.5	24.5
10	6.0	6.0	59.3	59.3	57.3	57.3	53.3	53.3	51.3	51.3	47.8	47.8	44.8	44.8	25.0	25.0
16	7.6	7.6	56.2	56.2	54.2	54.2	48.7	48.7	46.7	46.7	43.7	43.7	40.7	40.7	25.0	25.0
31.25	10.7	10.7	51.9	51.9	49.9	49.9	41.2	41.2	39.2	39.2	37.9	37.9	34.9	34.9	23.6	23.6
62.5	15.4	15.4	47.4	47.4	45.4	45.4	32.0	32.0	30.0	30.0	31.9	21.9	28.9	28.9	21.5	21.5
100	19.8	19.8	44.3	44.3	42.3	42.3	24.5	24.5	22.5	22.5	27.8	27.8	24.8	24.8	20.1	20.1
200	29.0	29.0	39.8	39.8	37.8	37.8	10.8	10.8	8.8	8.8	21.8	21.8	18.8	18.8	18.0	18.0
250	32.8	32.8	38.3	38.3	36.3	36.3	5.5	5.5	3.5	3.5	19.8	19.8	16.8	16.8	17.3	17.3
350*	-	39.8	-	36.1	-	34.1	-	-	-	-	-	16.9	-	13.9	-	16.3
555*	-	52.0	-	33.1	-	31.1	-	-	-	-	-	12.9	-	9.9	-	14.9
660*	-	57.7	-	32.0	-	30.0	-	-	-	-	-	11.4	-	8.4	-	14.4

*Frequencies beyond the TIA and ISO requirements are for information only. All values are dB/100m.

ELECTRICAL CHARACTERISTICS

Input Impedance:	100 ± 15Ω (1.0 to 100 MHz) 100 ± 20Ω (101 to 250 MHz)
Maximum Resistance Unbalance:	5%
Maximum Capacitance Unbalance:	330 pF/100 meters
Maximum Delay Skew:	45 ns/100 meters
Nominal Velocity Of Propagation (Nvp):	70% Plenum
Voltage Rating:	300 Volts

CABLE AMPACITY CHART

Bundle Size	1	2-7	8-19	20-37	38-61	62-91	92-192
Cable Temp	75°C	75°C	75°C	75°C	75°C	75°C	75°C
23 AWG	2.5	1.5	1.1	0.8	0.7	0.7	0.5

The table above is derived from the one approved by the National Fire Protection Agency and used in the National Electrical Code, NFPA-70. The complete table can be found in sections 725.144 and 800 Communication Circuits of the code. The table identifies the ampacity of each conductor (in amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86°F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables. All cable temps are operational temp ratings. Cables with temp ratings above 90°C would deliver additional power handling capacity.

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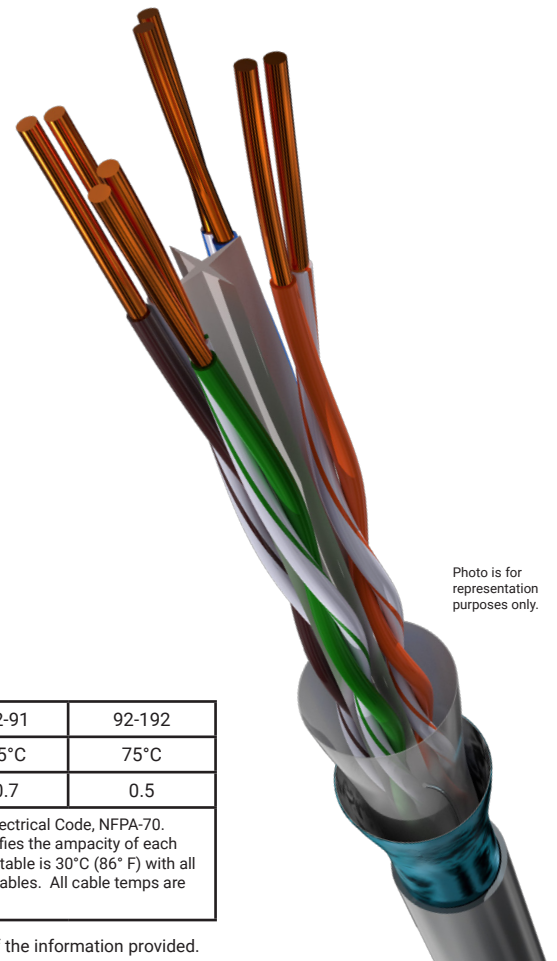


Photo is for representation purposes only.





PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- UL Verified ANSI/TIA-568.2-D
- Low Smoke Plenum construction
- Tested from 1 to 660 MHz
- Small O.D. allows more cables per conduit
- Noise Control Barrier (NCB™) technology allows for a reduced outside diameter and electrical performance that is superior to discontinuous shield designs
- UL Tested (LP) for maximum power support



APPLICATIONS

- HDBase-T A & B
- 10 Gigabit Ethernet (IEEE 802.3an)
- 5 Gigabit Ethernet (IEEE 802.3bz)
- 2.5 Gigabit Ethernet (IEEE 802.3bz)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM
- 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)

PACKAGING

- 1,000 feet (305 m)
- Reverse sequential footage markings standard on each 1,000 foot package
- Unit/pallet: 12 Reels
 - CMP Carton Weight (lbs): 43.64
 - CMP Product Weight (lbs): 40.34

*weight may vary



TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +60°C
(-40°F to +140°F)
- **Installation Temperature**
0°C to +60°C
(+32°F to +140°F)
- **Operation Temperature**
Plenum
-20°C to +90°C
(-4°F to +194°F)

Plenum

Primary Insulation: Plenum-rated fluoropolymer

Overall Jacket: Low-smoke, flame-retardant thermoplastic

Star Filler: Plenum-rated polymer

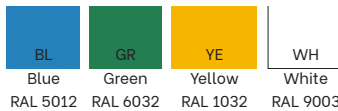
Cat 6A Supra 10G-XE UTP Part Specifications

	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL) us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
PLENUM	30303-8-XXY	4	0.270	6.858	40.34	18.29	CMP (NFPA 262), CSA Type FT6

Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30303	8	XX	Y

Jacket Colors (XX):

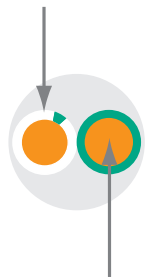


Reel Type (Y):

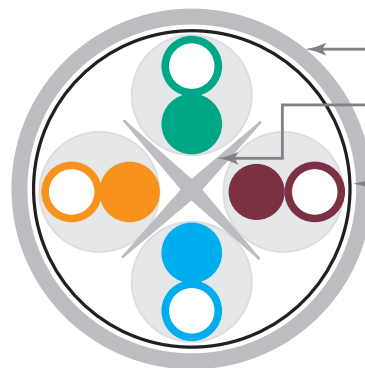


Reel 3: Reel

Primary Insulation



23 AWG
Bare Copper



Overall Jacket

Star Filler

Noise Control Barrier (NCB)™



Cat 6A Supra 10G-XE UTP Transmission Specifications

ANSI/TIA-568.2-D Category 6A Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

Freq. (MHz)	Ins. Loss	NEXT	PSNEXT	ACR	PSACR	ACRF	PSACRF	Return Loss	PSANEXT	PSANEXT	PSAACRF	PSAACRF
	Max.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	TIA Std.	Min	TIA Std.	Min
1	2.1	74.3	72.3	72.2	70.2	67.8	64.8	20.0	67.0	73.0	67.0	73.0
4	3.8	65.3	63.3	61.5	59.5	55.8	52.8	23.0	67.0	73.0	66.2	72.2
8	5.3	60.8	58.8	55.4	53.4	49.7	46.7	24.5	67.0	73.0	60.1	66.1
10	5.9	59.3	57.3	53.4	51.4	47.8	44.8	25.0	67.0	73.0	58.2	64.2
16	7.5	56.2	54.2	48.8	46.8	43.7	40.7	25.0	67.0	73.0	54.1	60.1
20	8.4	54.8	52.8	46.4	44.4	41.8	38.8	25.0	67.0	73.0	52.2	58.2
25	9.4	53.3	51.3	44.0	42.0	39.8	36.8	2.3	67.0	73.0	50.2	56.2
31.25	10.5	51.9	49.9	41.4	39.4	37.9	34.9	23.6	67.0	73.0	48.3	54.3
62.5	15.0	47.4	45.4	32.4	30.4	31.9	28.9	21.5	65.6	71.6	42.3	48.3
100	19.1	44.3	42.3	25.2	23.2	27.8	24.8	20.1	62.5	68.5	38.2	44.2
155	24.1	41.4	39.4	17.4	15.4	24.0	21.0	18.8	59.6	65.6	34.4	40.4
200	27.6	39.8	37.8	12.2	10.2	21.8	18.8	18.0	58.0	64.0	32.2	38.2
250	31.1	38.3	36.3	7.3	5.3	19.8	16.8	17.3	56.5	62.5	30.2	36.2
300	34.3	37.1	35.1	2.9	0.9	18.3	15.3	16.8	55.3	61.3	28.7	34.7
350	37.2	36.1	34.1	-	-	16.9	13.9	16.3	54.3	60.3	27.3	33.3
400	40.1	35.3	33.3	-	-	15.8	12.8	15.9	53.5	59.3	26.2	32.2
500	45.3	33.8	31.8	-	-	13.8	10.8	15.2	52.0	58.0	24.2	30.2
555*	47.9	33.1	31.1	-	-	12.9	9.9	14.9	51.3	57.3	23.3	29.3
660*	52.8	32.0	30.0	-	-	11.4	8.4	14.4	50.2	56.2	21.8	27.8

*Frequencies beyond the TIA and ISO requirements are for information only. All values are dB/100m.

ELECTRICAL CHARACTERISTICS

Input Impedence:	100 ± 15Ω (1.0 to 100 MHz) 100 ± 20Ω (100 to 250 MHz) 100 ± 25Ω (251 to 500 MHz)
Maximum Resistance Unbalance:	3%
Maximum Capacitance Unbalance:	330 pF/100 meters
Maximum Delay Skew:	45 ns/100 meters
Nominal Velocity Of Propagation (Nvp):	70% Plenum
Voltage Rating:	300 Volts
LP Rating (UL) - CMP	0.6 Amps/conductor

CABLE AMPACITY CHART

Bundle Size	1		2-7		8-19		20-37		38-61		62-91		92-192	
	75°C	90°C	75°C	90°C	75°C	90°C	75°C	90°C	75°C	90°C	75°C	90°C	75°C	90°C
23 AWG	2.5	2.5	1.5	1.7	1.1	1.7	0.8	0.9	0.7	0.8	0.7	0.8	0.5	0.6

The table above is derived from the one approved by the National Fire Protection Agency and used in the National Electrical Code, NFPA-70. The complete table can be found in sections 725.144 and 800 Communication Circuits of the code. The table identifies the ampacity of each conductor (in amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86° F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables. All cable temps are operational temp ratings. Cables with temp ratings above 90°C would deliver additional power handling capacity.

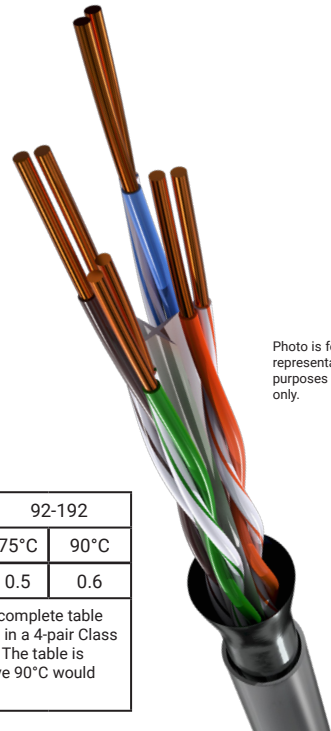


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PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- UL Verified ANSI/TIA-568.2-D
- Low Smoke Plenum construction
- Tested from 1 to 660 MHz
- UL Tested (LP) for maximum power support



APPLICATIONS

- HDBase-T A & B
- 10 Gigabit Ethernet (IEEE 802.3an)
- 5 Gigabit Ethernet (IEEE 802.3bz)
- 2.5 Gigabit Ethernet (IEEE 802.3bz)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM
- 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)

PACKAGING

- 1,000 feet (305 m)
- Reverse sequential footage markings standard on each 1,000 foot package
- Unit/pallet: 12 Reels
CMP Carton Weight (lbs): 43.64
CMP Product Weight (lbs): 40.34

*weight may vary



TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +60°C
(-40°F to +140°F)
- **Installation Temperature**
0°C to +60°C
(+32°F to +140°F)
- **Operation Temperature**
Plenum
-20°C to +90°C
(-4°F to +194°F)

DIELECTRIC MATERIALS

Plenum

Primary Insulation: Plenum-rated fluoropolymer

Overall Jacket: Low-smoke, flame-retardant thermoplastic

Star Filler: Plenum-rated polymer





Cat 6A Supra 10 Gigabit UTP Part Specifications

	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL) us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
PLENUM	30218-8-XXY	4	0.31	7.87	47.25	21.43	CMP (NFPA 262), CSA Type FT6

Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30218	8	XX	Y

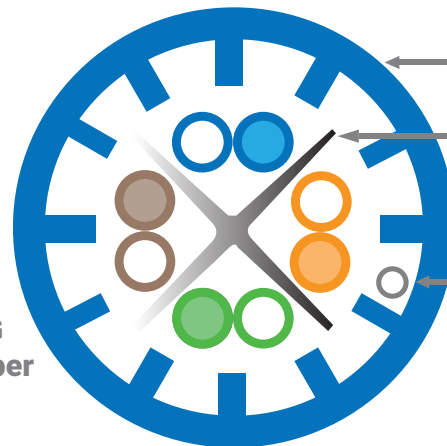
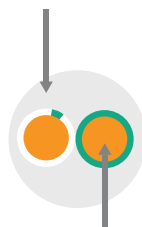
Jacket Colors (XX):

 BL Blue RAL 5012	 GR Green RAL 6032	 YE Yellow RAL 1032	 WH White RAL 9003
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Reel Type (Y):



Primary Insulation



Outer Jacket

Star Filler

Rip Cord



Cat 6A Supra 10 Gigabit UTP Transmission Specifications

ANSI/TIA-568.2-D Category 6A Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

Freq. (MHz)	Ins. Loss	NEXT	PSNEXT	ACR	PSACR	ACRF	PSACRF	Return Loss	PSANEXT	PSANEXT	PSAACRF
	Max.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	TIA Std.	Min	Min
1	2.1	74.3	72.3	72.2	70.2	67.8	64.8	20.0	67.0	73.0	67.0
4	3.8	65.3	63.3	61.5	59.5	55.8	52.8	23.0	67.0	73.0	66.2
8	5.3	60.8	58.8	55.4	53.4	49.7	46.7	24.5	67.0	73.0	60.1
10	5.9	59.3	57.3	53.4	51.4	47.8	44.8	25.0	67.0	73.0	58.2
16	7.5	56.2	54.2	48.8	46.8	43.7	40.7	25.0	67.0	73.0	54.1
20	8.4	54.8	52.8	46.4	44.4	41.8	38.8	25.0	67.0	73.0	52.2
25	9.4	53.3	51.3	44.0	42.0	39.8	36.8	2.3	67.0	73.0	50.2
31.25	10.5	51.9	49.9	41.4	39.4	37.9	34.9	23.6	67.0	73.0	48.3
62.5	15.0	47.4	45.4	32.4	30.4	31.9	28.9	21.5	65.6	71.6	42.3
100	19.1	44.3	42.3	25.2	23.2	27.8	24.8	20.1	62.5	68.5	38.2
155	24.1	41.4	39.4	17.4	15.4	24.0	21.0	18.8	59.6	65.6	34.4
200	27.6	39.8	37.8	12.2	10.2	21.8	18.8	18.0	58.0	64.0	32.2
250	31.1	38.3	36.3	7.3	5.3	19.8	16.8	17.3	56.5	62.5	30.2
300	34.3	37.1	35.1	2.9	0.9	18.3	15.3	16.8	55.3	61.3	28.7
350	37.2	36.1	34.1	-	-	16.9	13.9	16.3	54.3	60.3	27.3
400	40.1	35.3	33.3	-	-	15.8	12.8	15.9	53.5	59.3	26.2
500	45.3	33.8	31.8	-	-	13.8	10.8	15.2	52.0	58.0	24.2
555*	47.9	33.1	31.1	-	-	12.9	9.9	14.9	51.3	57.3	23.3
660*	52.8	32.0	30.0	-	-	11.4	8.4	14.4	50.2	56.2	21.8

*Frequencies beyond the TIA and ISO requirements are for information only. All values are dB/100m.

ELECTRICAL CHARACTERISTICS

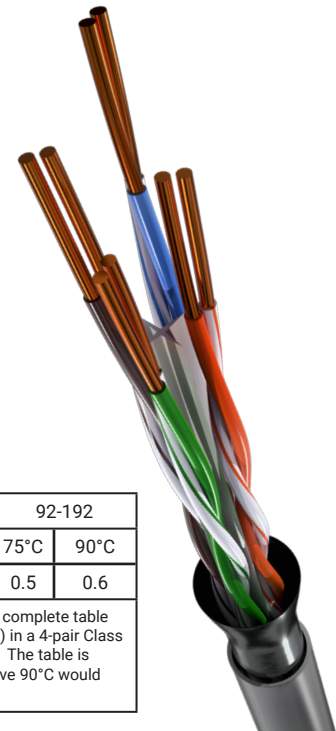
Input Impedence:	100 ± 15Ω (1.0 to 100 MHz) 100 ± 20Ω (100 to 250 MHz) 100 ± 25Ω (251 to 500 MHz)
Maximum Resistance Unbalance:	3%
Maximum Capacitance Unbalance:	330 pF/100 meters
Maximum Delay Skew:	45 ns/100 meters
Nominal Velocity Of Propagation (Nvp):	70% Plenum
Voltage Rating:	300 Volts
LP Rating (UL) - CMP	0.6 Amps/conductor

CABLE AMPACITY CHART

Bundle Size	1		2-7		8-19		20-37		38-61		62-91		92-192	
	75°C	90°C	75°C	90°C	75°C	90°C	75°C	90°C	75°C	90°C	75°C	90°C	75°C	90°C
23 AWG	2.5	2.5	1.5	1.7	1.1	1.7	0.8	0.9	0.7	0.8	0.7	0.8	0.5	0.6

The table above is derived from the one approved by the National Fire Protection Agency and used in the National Electrical Code, NFPA-70. The complete table can be found in sections 725.144 and 800 Communication Circuits of the code. The table identifies the ampacity of each conductor (in amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86° F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables. All cable temps are operational temp ratings. Cables with temp ratings above 90°C would deliver additional power handling capacity.

Proterial Cable America, Inc. is continuously improving the performance of our products and the accuracy of the information provided. Due to this, we reserve the right to modify, revise, correct, or change products without notice. Thank you for your understanding.





PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- UL Verified
- Low Smoke Plenum construction.
- Tested from 1 to 660 MHz
- Small O.D. allows more cables per conduit
- Proven shield technology improves RFI, EMI and alien crosstalk performance
- UL Tested (LP) for maximum power support.
- Supports up to 120 watts for Power Over Ethernet (PoE)



APPLICATIONS

- HDBase-T A & B
- 10 Gigabit Ethernet (IEEE 802.3an)
- 5 Gigabit Ethernet (IEEE 802.3bz)
- 2.5 Gigabit Ethernet (IEEE 802.3bz)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM
- 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)

PACKAGING

- 1,000 feet (305 m)
- Reverse sequential footage markings standard on each 1,000 foot package
- Unit/pallet: 12 Reels
CMP Carton Weight (lbs): 43.64
CMP Product Weight (lbs): 40.34

*weight may vary



TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +60°C
(-40°F to +140°F)
- **Installation Temperature**
0°C to +60°C
(+32°F to +140°F)
- **Operation Temperature**
Plenum
-20°C to +75°C
(-4°F to +167°F)

Plenum

Primary Insulation: Plenum-rated fluoropolymer

Overall Jacket: Low-smoke, flame-retardant thermoplastic

Star Filler: Plenum-rated polymer





Cat 6A Supra 10G Shielded F/UTP Part Specifications

	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL) us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
PLENUM	30233-8-XXY	4	0.275	6.98	40.34	18.29	CMP (NFPA 262), CSA Type FT6

Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30233	8	XX	Y

Jacket Colors (XX):

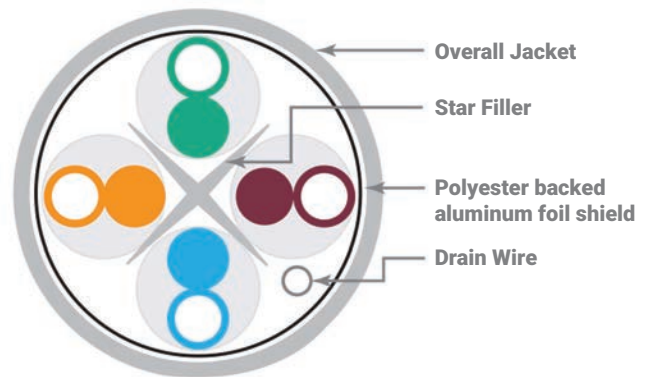
			
BL Blue RAL 5012	GA Gray RAL 7037	RD Red RAL 3001	WH White RAL 9003

Reel Type (Y):



Reel 3: Reel

Primary Insulation



Cat 6A Supra 10G Shielded F/UTP Transmission Specifications

ANSI/TIA-568.2-D Category 6A Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

Freq. (MHz)	Ins. Loss	NEXT	PSNEXT	ACR	PSACR	ACRF	PSACRF	Return Loss	PSANEXT	PSANEXT	PSAACRF	PSAACRF
	Max.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	TIA Std.	Min	TIA Std.	Min
1	2.1	74.3	72.3	72.2	70.2	67.8	64.8	20.0	67.0	73.0	67.0	73.0
4	3.8	65.3	63.3	61.5	59.5	55.8	52.8	23.0	67.0	73.0	66.2	72.2
8	5.3	60.8	58.8	55.4	53.4	49.7	46.7	24.5	67.0	73.0	60.1	66.1
10	5.9	59.3	57.3	53.4	51.4	47.8	44.8	25.0	67.0	73.0	58.2	64.2
16	7.5	56.2	54.2	48.8	46.8	43.7	40.7	25.0	67.0	73.0	54.1	60.1
20	8.4	54.8	52.8	46.4	44.4	41.8	38.8	25.0	67.0	73.0	52.2	58.2
25	9.4	53.3	51.3	44.0	42.0	39.8	36.8	24.3	67.0	73.0	50.2	56.2
31.25	10.5	51.9	49.9	41.4	39.4	37.9	34.9	23.6	67.0	73.0	48.3	54.3
62.5	15.0	47.4	45.4	32.4	30.4	31.9	28.9	21.5	65.6	71.6	42.3	48.3
100	19.1	44.3	42.3	25.2	23.2	27.8	24.8	20.1	62.5	68.5	38.2	44.2
155	24.1	41.4	39.4	17.4	15.4	24.0	21.0	18.8	59.6	65.6	34.4	40.4
200	27.6	39.8	37.8	12.2	10.2	21.8	18.8	18.0	58.0	64.0	32.2	38.2
250	31.1	39.3	36.3	7.3	5.3	19.8	16.8	17.3	56.5	62.5	30.2	36.2
300	34.3	37.1	35.1	2.9	0.9	18.3	15.3	16.8	55.3	61.3	28.7	34.7
350	37.2	36.1	34.1	-	-	16.9	13.9	16.3	54.3	60.3	27.3	33.3
400	40.1	35.3	33.3	-	-	15.8	12.8	15.9	53.5	59.3	26.2	32.2
500	45.3	33.8	31.8	-	-	13.8	10.8	15.2	52.0	58.0	24.2	30.2
555*	47.9	33.1	31.1	-	-	12.9	9.9	14.9	51.3	57.3	23.3	29.3
660*	52.8	32.0	30.0	-	-	11.4	8.4	14.4	50.2	56.2	21.8	27.8

*Frequencies beyond the TIA and ISO requirements are for information only. All values are dB/100m.

ELECTRICAL CHARACTERISTICS

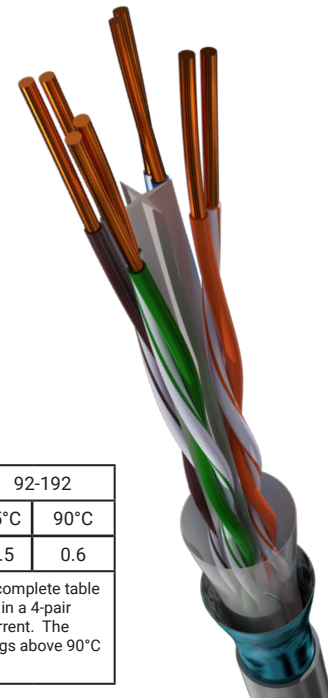
Input Impedence:	100 ± 15Ω (1.0 to 100 MHz) 100 ± 20Ω (100 to 250 MHz) 100 ± 25Ω (251 to 500 MHz)
Maximum Resistance Unbalance:	3%
Maximum Capacitance Unbalance:	330 pF/100 meters
Maximum Delay Skew:	45 ns/100 meters
Nominal Velocity Of Propagation (Nvp):	70%, Plenum
Voltage Rating:	300 Volts
LP Rating (UL) - CMP	0.6 Amps/conductor

CABLE AMPACITY CHART

Bundle Size	1		2-7		8-19		20-37		38-61		62-91		92-192	
	75°C	90°C	75°C	90°C	75°C	90°C	75°C	90°C	75°C	90°C	75°C	90°C	75°C	90°C
23 AWG	2.5	2.5	1.5	1.7	1.1	1.7	0.8	0.9	0.7	0.8	0.7	0.8	0.5	0.6

The table above is derived from the one approved by the National Fire Protection Agency and used in the National Electrical Code, NFPA-70. The complete table can be found in sections 725.144 and 800 Communication Circuits of the code. The table identifies the ampacity of each conductor (in amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86° F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables. All cable temps are operational temp ratings. Cables with temp ratings above 90°C would deliver additional power handling capacity.

Proterial Cable America, Inc. is continuously improving the performance of our products and the accuracy of the information provided. Due to this, we reserve the right to modify, revise, correct, or change products without notice. Thank you for your understanding.



PRODUCT HIGHLIGHTS

- RoHS 3 compliant.
- Made in USA.
- Guaranteed minimum performance.
- Tested from 1 to 555 MHz.
- UL Verified ANSI/TIA-568.2-D Category 6.
- UL Verified (UL B627696) for long term water submersion.
- UL Listed for use in plenum areas.
- UV resistant jacket.
- Specifically designed for below-grade conduit or other environments where water is likely to infiltrate.
- Resistant to over 2,000 chemicals.
- No-gel construction simplifies termination.
- Drybit Barrier ensures optimum electrical performance even in harsh environments.
- Available in both UTP and FUTP.
- Standard jacket color is black.

APPLICATIONS

- HDBase-T A & B
- 5 Gigabit Ethernet (IEEE 802.3bz)
- 2.5 Gigabit Ethernet (IEEE 802.3bz)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM
- 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)

PACKAGING

- 1,000 feet (305 m)
- Unit/pallet: 12 Reels
CMP Carton Weight (lbs): 23.66
CMP Product Weight (lbs): 20.36

*weight may vary

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +60°C
(-40°F to +140°F)
- **Installation Temperature**
0°C to +60°C
(+32°F to +140°F)
- **Operation Temperature**
-40°C to +90°C
(-40°F to +194°F)

Plenum

Primary Insulation: Plenum-rated fluoropolymer

Overall Jacket: Low-smoke, flame-retardant thermoplastic

Star Filler: Plenum-rated polymer

Cat 6 DryBit® Indoor-Outdoor CMP Part Specifications

	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL)us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
PLENUM CMP UTP	30315-8-BK3	4	0.31	7.87	54.7	24.8	c(UL)us Listed Type CMP (UL 910), CSA Type FT6

Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30315	8	XX	Y

Jacket Colors (XX):

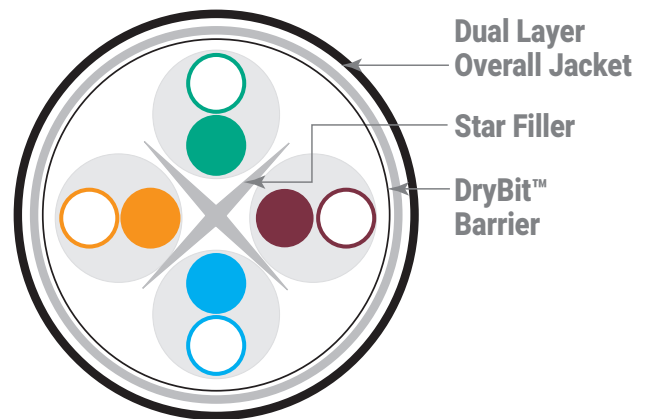


Reel 3: Reel

Primary Insulation



23 AWG
Bare Copper



Cat 6 DryBit® Indoor-Outdoor CMP Transmission Specifications

ANSI/TIA-568.2-D Category 6 Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

Freq. (MHz)	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
	Std.	Max.	Std.	Min.	Std.	Min.	Cal.	Min.	Cal.	Min.	Std.	Min.	Std.	Min.	Std.	Min.
1	2.0	2.0	74.3	74.3	72.3	72.3	72.3	72.3	70.3	70.3	67.8	67.8	64.8	64.8	20.0	20.0
4	3.8	3.8	65.3	65.3	63.3	63.3	61.5	61.5	59.5	59.5	55.8	55.8	52.8	52.8	23.0	23.0
8	5.3	5.3	60.8	60.8	58.8	58.8	55.4	55.4	53.4	53.4	49.7	49.7	46.7	46.7	24.5	24.5
10	6.0	6.0	59.3	59.3	57.3	57.3	53.3	53.3	51.3	51.3	47.8	47.8	44.8	44.8	25.0	25.0
16	7.6	7.6	56.2	56.2	54.2	54.2	48.7	48.7	46.7	46.7	43.7	43.7	40.7	40.7	25.0	25.0
31.25	10.7	10.7	51.9	51.9	49.9	49.9	41.2	41.2	39.2	39.2	37.9	37.9	34.9	34.9	23.6	23.6
62.5	15.4	15.4	47.4	47.4	45.4	45.4	32.0	32.0	30.0	30.0	31.9	31.9	28.9	28.9	21.5	21.5
100	19.8	19.8	44.3	44.3	42.3	42.3	24.5	24.5	22.5	22.5	27.8	27.8	24.8	24.8	20.1	20.1
200	29.0	29.0	39.8	39.8	37.8	37.8	10.8	10.8	8.8	8.8	21.8	21.8	18.8	18.8	18.0	18.0
250	32.8	32.8	38.3	38.3	36.3	36.3	5.5	5.5	3.5	3.5	19.8	19.8	16.8	16.8	17.3	17.3
300*	-	36.4	-	37.1	-	35.1	-	-	-	-	-	18.3	-	15.3	-	16.8
350*	-	39.8	-	36.1	-	34.1	-	-	-	-	-	16.9	-	13.9	-	16.3
400*	-	43.0	-	35.3	-	33.3	-	-	-	-	-	15.8	-	12.8	-	15.9
500*	-	48.9	-	33.8	-	31.8	-	-	-	-	-	13.8	-	10.8	-	15.2
555*	-	52.0	-	33.1	-	31.1	-	-	-	-	-	12.9	-	9.9	-	14.9



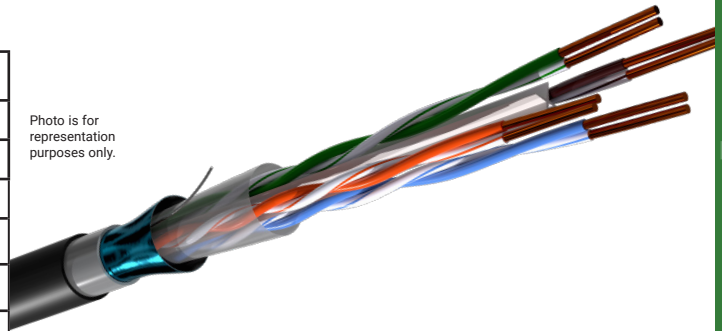
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ELECTRICAL CHARACTERISTICS

Input Impedence:	100 ± 15Ω (1.0 to 250 MHz)
Maximum Conductor Resistance:	9.38 Ω/100 meters @ 20°C
Maximum Resistance Unbalance:	5%
Maximum Capacitance Unbalance:	330 pF/100 meters
Maximum Delay Skew:	45 ns/100 meters
Nominal Velocity Of Propagation (Nvp):	70% Plenum
Voltage Rating:	300 Volts

Photo is for representation purposes only.



CABLE AMPACITY CHART

Bundle Size	1	2-7	8-19	20-37	38-61	62-91	92-192
Cable Temp	90°C	90°C	90°C	90°C	90°C	90°C	90°C
23 AWG	2.5	1.7	1.2	0.9	0.8	0.8	0.6

The table above is derived from the one approved by the National Fire Protection Agency and used in the National Electrical Code, NFPA-70. The complete table can be found in sections 725.144 and 800 Communication Circuits of the code. The table identifies the ampacity of each conductor (in amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86° F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables. All cable temps are operational temp ratings. Cables with temp ratings above 90°C would deliver additional power handling capacity.

Installation Notes: To ensure safe operation, install cables according to all applicable local and national electrical codes.

During installation, take precautions to ensure any water present in pathway does not enter the open end of the cable. Water infiltration via the open ends of the cable will negatively impact cable performance and void any applicable product warranty.

Proterial Cable America, Inc. is continuously improving the performance of our products and the accuracy of the information provided. Due to this, we reserve the right to modify, revise, correct, or change products without notice. Thank you for your understanding.





PRODUCT HIGHLIGHTS

- RoHS 3 compliant.
- Made in USA.
- Guaranteed minimum performance.
- Tested from 1 to 660 MHz.
- UL Verified ANSI/TIA-568.2-D Category 6A.
- UL Verified (UL B627696) for long term water submersion.
- UL Listed for use in plenum areas.
- UV resistant jacket.
- Specifically designed for below-grade conduit or other environments where water is likely to infiltrate.
- Resistant to over 2,000 chemicals.
- No-gel construction simplifies termination.
- DryBit® Barrier ensures optimum electrical performance even in harsh environments.
- Available in both UTP and FUTP.



APPLICATIONS

- 10 Gigabit Ethernet (IEEE 802.3an)
- 5 Gigabit Ethernet (IEEE 802.3bz)
- 2.5 Gigabit Ethernet (IEEE 802.3bz)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM
- 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)

PACKAGING

- 1,000 feet (305 m)
- Unit/pallet: 12 Reels
CMP Carton Weight (lbs): 23.66
CMP Product Weight (lbs): 20.36

*weight may vary



TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +70°C
(-40°F to +158°F)
- **Installation Temperature**
0°C to +60°C
(+32°F to +140°F)
- **Operation Temperature**
-40°C to +75°C
(-40°F to +167°F)

Plenum

Primary Insulation: Plenum-rated fluoropolymer

Overall Jacket: Low-smoke, flame-retardant thermoplastic

Star Filler: Flame-retardant thermoplastic

Cat 6A DryBit® Indoor-Outdoor CMP Part Specifications

	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL)us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
PLENUM CMP UTP	30323-8-BK3	4	0.31	7.87	54.7	24.8	c(UL)us Listed Type CMP (UL 910), CSA Type FT6

Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30323	8	XX	Y

Jacket Colors (XX):



Reel Type (Y):

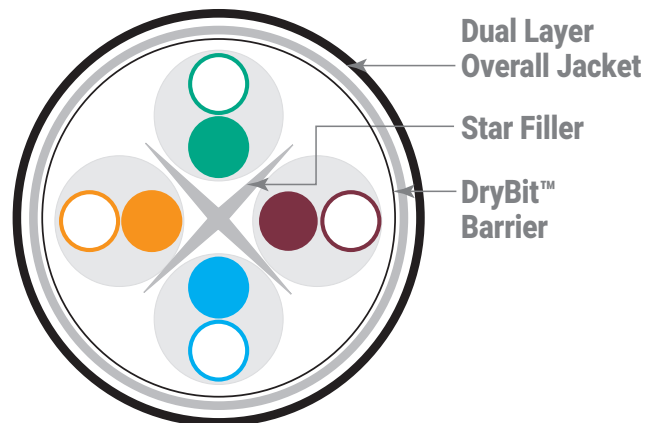


Reel 3: Reel

Primary Insulation



23 AWG
Bare Copper



Cat 6A DryBit® Indoor-Outdoor CMP Transmission Specs

ANSI/TIA-568.2-D Category 6A Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

Freq. (MHz)	Ins. Loss	NEXT	PSNEXT	ACR	PSACR	ACRF	PSACRF	Return Loss	PSANEXT	PSANEXT	PSAACRF	PSAACRF
	Max.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	TIA Std.	Min	TIA Std.	Min
1	2.1	74.3	72.3	72.2	70.2	67.8	64.8	20.0	67.0	73.0	67.0	73.0
4	3.8	65.3	63.3	61.5	59.5	55.8	52.8	23.0	67.0	73.0	66.2	72.2
8	5.3	60.8	58.8	55.4	53.4	49.7	46.7	24.5	67.0	73.0	60.1	66.1
10	5.9	59.3	57.3	53.4	51.4	47.8	44.8	25.0	67.0	73.0	58.2	64.2
16	7.5	56.2	54.2	48.8	46.8	43.7	40.7	25.0	67.0	73.0	54.1	60.1
20	8.4	54.8	52.8	46.4	44.4	41.8	38.8	25.0	67.0	73.0	52.2	58.2
25	9.4	53.3	51.3	44.0	42.0	39.8	36.8	2.3	67.0	73.0	50.2	56.2
31.25	10.5	51.9	49.9	41.4	39.4	37.9	34.9	23.6	67.0	73.0	48.3	54.3
62.5	15.0	47.4	45.4	32.4	30.4	31.9	28.9	21.5	65.6	71.6	42.3	48.3
100	19.1	44.3	42.3	25.2	23.2	27.8	24.8	20.1	62.5	68.5	38.2	44.2
155	24.1	41.4	39.4	17.4	15.4	24.0	21.0	18.8	59.6	65.6	34.4	40.4
200	27.6	39.8	37.8	12.2	10.2	21.8	18.8	18.0	58.0	64.0	32.2	38.2
250	31.1	38.3	36.3	7.3	5.3	19.8	16.8	17.3	56.5	62.5	30.2	36.2
300	34.3	37.1	35.1	2.9	0.9	18.3	15.3	16.8	55.3	61.3	28.7	34.7
350	37.2	36.1	34.1	-	-	16.9	13.9	16.3	54.3	60.3	27.3	33.3
400	40.1	35.3	33.3	-	-	15.8	12.8	15.9	53.5	59.3	26.2	32.2
500	45.3	33.8	31.8	-	-	13.8	10.8	15.2	52.0	58.0	24.2	30.2
555*	47.9	33.1	31.1	-	-	12.9	9.9	14.9	51.3	3	23.3	29.3
660*	52.8	32.0	30.0	-	-	11.4	8.4	14.4	50.2	56.2	21.8	27.8



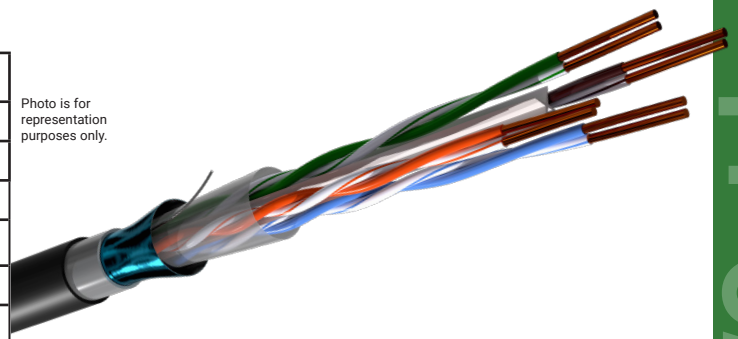
Photo is for representation purposes only.

*Frequencies beyond the TIA and ISO requirements are for information only. All values are dB/100m.

ELECTRICAL CHARACTERISTICS

Input Impedance:	100 ± 15Ω (1.0 to 250 MHz)
Maximum Conductor Resistance:	9.38 Ω/100 meters @ 20°C
Maximum Resistance Unbalance:	5%
Maximum Capacitance Unbalance:	330 pF/100 meters
Maximum Delay Skew:	45 ns/100 meters
Nominal Velocity Of Propagation (Nvp):	70%, Plenum
Voltage Rating:	300 Volts

Photo is for representation purposes only.



CABLE AMPACITY CHART

Bundle Size	1	2-7	8-19	20-37	38-61	62-91	92-192
Cable Temp	90°C	90°C	90°C	90°C	90°C	90°C	90°C
23 AWG	2.5	1.7	1.2	0.9	0.8	0.8	0.6

The table above is derived from the one approved by the National Fire Protection Agency and used in the National Electrical Code, NFPA-70. The complete table can be found in sections 725.144 and 800 Communication Circuits of the code. The table identifies the ampacity of each conductor (in amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86° F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables. All cable temps are operational temp ratings. Cables with temp ratings above 90°C would deliver additional power handling capacity.

Installation Notes: To ensure safe operation, install cables according to all applicable local and national electrical codes.

During installation, take precautions to ensure any water present in pathway does not enter the open end of the cable. Water infiltration via the open ends of the cable will negatively impact cable performance and void any applicable product warranty.

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PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- Cable Rated for Outdoor Use
- Suitable for direct burial, lashed aerial, duct and underground conduit applications
- Cable core is filled with non-conductive, water-blocking gel
- Tested from 1 to 400 MHz.
- Rugged black polyolefin jacket
- UV resistant jacket

APPLICATIONS

- HDBase-T A & B (Cat 6)
- 5 Gigabit Ethernet (IEEE 802.3bz)(Cat 6)
- 2.5 Gigabit Ethernet (IEEE 802.3bz)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM
- 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)

PACKAGING

- 1,000 foot (305 m) reels
- Reverse sequential footage markings standard on each 1,000 foot package
- Unit/pallet: 12 Reels

*weight may vary

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +70°C
(-40°F to +158°F)
- **Installation Temperature**
-20°C to +70°C
(-4°F to +158°F)
- **Operation Temperature**
-40°C to +70°C
(-40°F to +158°F)

Cat 5e Outside Plant UTP Part Specifications

	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL) us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
OUTDOOR F/UTP	30145-8-XXY	4	0.23	5.8	25.75	11.68	PO, CSA Type FT6

Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30145	8	XX	Y

Jacket Colors (XX):



Reel Type (Y):

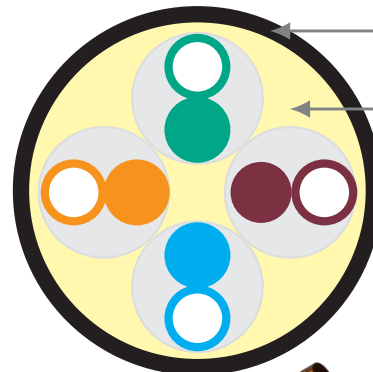


Reel 3: Reel

Primary Insulation

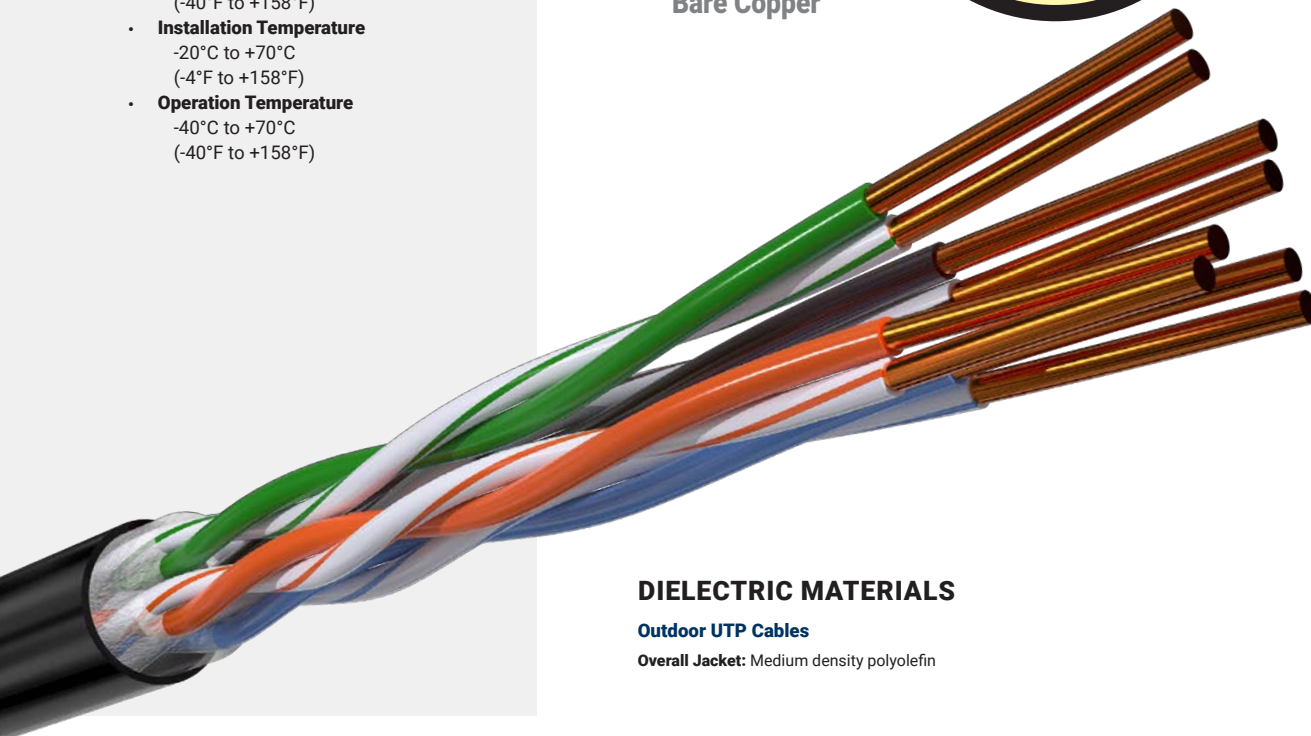


24 AWG Bare Copper



Rugged Polyolefin Overall Jacket

Non-conductive, water-blocking gel



DIELECTRIC MATERIALS

Outdoor UTP Cables

Overall Jacket: Medium density polyolefin



Cat 5e Outside Plant UTP Transmission Specifications

ANSI/TIA-568.2-D Category 5e Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

Freq. (MHz)	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
	Std.	Max.	Std.	Min.	Std.	Min.	Cal.	Min.	Cal.	Min.	Std.	Min.	Std.	Min.	Std.	Min.
1	2.0	2.0	65.3	65.3	62.3	62.3	63.3	63.3	60.3	60.3	63.8	63.8	60.8	60.8	20.0	20.0
4	4.1	4.1	56.3	56.3	53.3	53.3	52.2	52.2	49.2	49.2	51.8	51.8	48.8	48.8	23.0	23.0
8	5.8	5.8	51.8	51.8	48.8	48.8	46.0	46.0	43.0	43.0	45.7	45.7	42.7	42.7	24.5	24.5
10	6.5	6.5	50.3	50.3	47.3	47.3	43.8	43.8	40.8	40.8	43.8	43.8	40.8	40.8	25.0	25.0
16	8.2	8.2	47.2	47.2	44.2	44.2	39.0	39.0	36.0	36.0	39.7	39.7	36.7	36.7	25.0	25.0
31.25	11.7	11.7	42.9	42.9	39.9	39.9	31.2	31.2	28.2	28.2	33.9	33.9	30.9	30.9	23.6	23.6
62.5	17.0	17.0	38.4	38.4	35.4	35.4	21.4	21.4	18.4	18.4	27.9	27.9	24.9	24.9	21.5	21.5
100	22.0	22.0	35.3	35.3	32.3	32.3	13.3	13.3	10.3	10.3	23.8	23.8	20.8	20.8	20.1	20.1
155*	-	28.1	-	32.4	-	29.4	4.4	4.4	1.4	1.4	-	20.0	-	17.0	-	18.8
200*	-	32.4	-	30.8	-	27.8	-	-	-	-	-	17.8	-	14.8	-	18.0
250*	-	36.9	-	29.3	-	26.3	-	-	-	-	-	15.8	-	12.8	-	17.3
400*	-	48.5	-	26.3	-	23.3	-	-	-	-	-	11.8	-	8.8	-	15.9
555*	-	52.0	-	33.1	-	31.1	-	-	-	-	-	12.9	-	9.9	-	14.9

All values are dB/100m.

ELECTRICAL CHARACTERISTICS

Input Impedance:	100 ± 15Ω (1.0 to 100 MHz) 100 ± 15Ω (101 to 250 MHz)
Maximum Resistance Unbalance:	5%
Maximum Capacitance Unbalance:	330 pF/100 meters
Maximum Delay Skew:	45 ns/100 meters
Nominal Velocity Of Propagation (Nvp):	63%
Voltage Rating:	300 Volts

CABLE AMPACITY CHART

Bundle Size	1	2-7	8-19	20-37	38-61	62-91	92-192
Cable Temp	60°C	60°C	60°C	60°C	60°C	60°C	60°C
24 AWG	2.0	1.0	0.8	0.6	0.5	0.4	0.3

The table above is derived from the one approved by the National Fire Protection Agency and used in the National Electrical Code, NFPA-70. The complete table can be found in sections 725.144 and 800 Communication Circuits of the code. The table identifies the ampacity of each conductor (in amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86°F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables. All cable temps are operational temp ratings. Cables with temp ratings above 90c would deliver additional power handling capacity.

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PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- Cable Rated for Outdoor Use
- Suitable for direct burial, lashed aerial, duct and underground conduit applications
- Tested from 1 to 660 MHz.
- Cable core is filled with non-conductive, water-blocking gel
- Rugged black polyolefin jacket
- UV resistant jacket

APPLICATIONS

- HDBase-T A & B (Cat 6)
- 5 Gigabit Ethernet (IEEE 802.3bz)(Cat 6)
- 2.5 Gigabit Ethernet (IEEE 802.3bz)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM
- 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)

PACKAGING

- 1,000 foot (305 m) reels
- Reverse sequential footage markings standard on each 1,000 foot package
- Unit/pallet: 12 Reels

*weight may vary

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +70°C
(-40°F to +158°F)
- **Installation Temperature**
-20°C to +70°C
(-4°F to +158°F)
- **Operation Temperature**
-40°C to +70°C
(-40°F to +158°F)

Cat 6 Outside Plant UTP Part Specifications

	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL) us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
OUTDOOR UTP	30180-8-XXY	4	0.270	6.858	34.65	15.72	PO, CSA Type FT6

Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30180	8	XX	Y

Jacket Colors (XX):



Reel Type (Y):

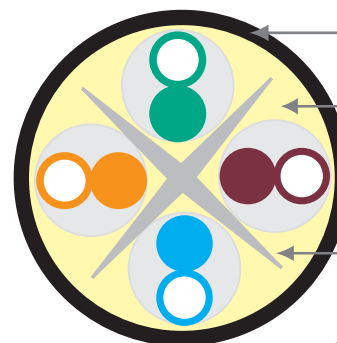


Reel 3: Reel

Primary Insulation



24 AWG
Bare Copper



Rugged Polyolefin
Overall Jacket

Non-conductive,
water-blocking gel

Star Filler

DIELECTRIC MATERIALS

Outdoor UTP Cables

Overall Jacket: Medium density polyolefin



Cat 6 Outside Plant UTP Transmission Specifications

ANSI/TIA-568.2-D Category 6 Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

Freq. (MHz)	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
	Std.	Max.	Std.	Min.	Std.	Min.	Cal.	Min.	Cal.	Min.	Std.	Min.	Std.	Min.	Std.	Min.
1	2.0	2.0	74.3	74.3	72.3	72.3	72.3	72.3	70.3	70.3	67.8	67.8	64.8	64.8	20.0	20.0
4	3.8	3.8	65.3	65.3	63.3	63.3	61.5	61.5	59.5	59.5	55.8	55.8	52.8	52.8	23.0	23.0
8	5.3	5.3	60.8	60.8	58.8	58.8	55.4	55.4	53.4	53.4	49.7	49.7	46.7	46.7	24.5	24.5
10	6.0	6.0	59.3	59.3	57.3	57.3	53.3	53.3	51.3	51.3	47.8	47.8	44.8	44.8	25.0	25.0
16	7.6	7.6	56.2	56.2	54.2	54.2	48.7	48.7	46.7	46.7	43.7	43.7	40.7	40.7	25.0	25.0
31.25	10.7	10.7	51.9	51.9	49.9	49.9	41.2	41.2	39.2	39.2	37.9	37.9	34.9	34.9	23.6	23.6
62.5	15.4	15.4	47.4	47.4	45.4	45.4	32.0	32.0	30.0	30.0	31.9	21.9	28.9	28.9	21.5	21.5
100	19.8	19.8	44.3	44.3	42.3	42.3	24.5	24.5	22.5	22.5	27.8	27.8	24.8	24.8	20.1	20.1
155	25.2	25.2	41.1	41.1	39.4	39.4	16.3	16.3	14.3	14.3	24.0	24.0	21.0	21.0	18.8	18.8
200	29.0	29.0	39.8	39.8	37.8	37.8	10.8	10.8	8.8	8.8	21.8	21.8	18.8	18.8	18.0	18.0
250	32.8	32.8	38.3	38.3	36.3	36.3	5.5	5.5	3.5	3.5	19.8	19.8	16.8	16.8	17.3	17.3
350*	-	39.8	-	36.1	-	34.1	-	-	-	-	-	16.9	-	13.9	-	16.3
555*	-	52.0	-	33.1	-	31.1	-	-	-	-	-	12.9	-	9.9	-	14.9
660*	-	57.7	-	32.0	-	30.0	-	-	-	-	-	11.4	-	8.4	-	14.4

All values are dB/100m.

ELECTRICAL CHARACTERISTICS

Input Impedence:	100 ± 15Ω (1.0 to 100 MHz) 100 ± 15Ω (101 to 250 MHz)
Maximum Resistance Unbalance:	5%
Maximum Capacitance Unbalance:	330 pF/100 meters
Maximum Delay Skew:	45 ns/100 meters
Nominal Velocity Of Propagation (Nvp):	67%
Voltage Rating:	300 Volts

CABLE AMPACITY CHART

Bundle Size	1	2-7	8-19	20-37	38-61	62-91	92-192
Cable Temp	60°C	60°C	60°C	60°C	60°C	60°C	60°C
24 AWG	2.5	1.0	0.8	0.6	0.5	0.5	0.3

The table above is derived from the one approved by the National Fire Protection Agency and used in the National Electrical Code, NFPA-70. The complete table can be found in sections 725.144 and 800 Communication Circuits of the code. The table identifies the ampacity of each conductor (in amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86° F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables. All cable temps are operational temp ratings. Cables with temp ratings above 90c would deliver additional power handling capacity.

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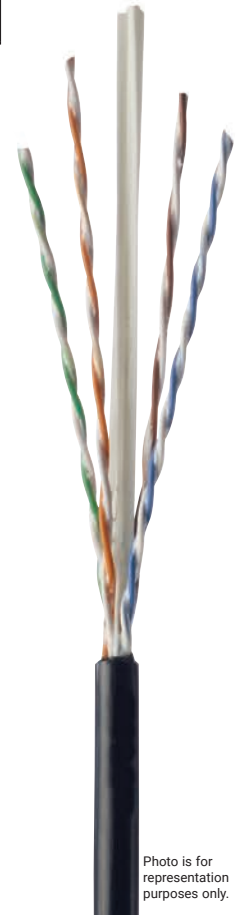


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PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- Cable Rated for Outdoor Use
- Suitable for direct burial, lashed aerial, duct and underground conduit applications
- Cable core is filled with non-conductive, water-blocking gel
- Tested from 1 to 660 MHz.
- Rugged black polyolefin jacket
- UV resistant jacket
- Proven shield technology improves RFI and EMI performance

APPLICATIONS

- 10 Gigabit Ethernet (IEEE 802.3an)
- 5 Gigabit Ethernet (IEEE 802.3bz)
- 2.5 Gigabit Ethernet (IEEE 802.3bz)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM
- 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)

PACKAGING

- 1,000 foot (305 m) reels
- Reverse sequential footage markings standard on each 1,000 foot package
- Unit/pallet: 12 Reels
- CMP Carton Weight (lbs): 47.0
- CMP Product Weight (lbs): 43.7

*weight may vary, call for CMR information

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +70°C
(-40°F to +158°F)
- **Installation Temperature**
-20°C to +70°C
(-4°F to +158°F)
- **Operation Temperature**
-40°C to +70°C
(-40°F to +158°F)

Cat 6A Shielded Outside Plant F/UTP Single Jacket

	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL) us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
OUTDOOR F/UTP	30348-8-XXY	4	0.320	8.128	40.6	18.4	CMP (NFPA 262), CSA Type FT6

Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30348	8	XX	Y

Jacket Colors (XX):



Reel Type (Y):

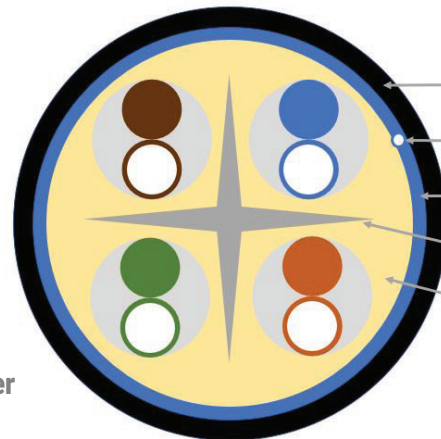


Reel 3: Reel

Primary Insulation



24 AWG
Bare Copper



Rugged Polyolefin Jacket

Drain Wire

Polyester backed aluminum foil shield
Star Filler

Non-conductive, water-blocking gel

DIELECTRIC MATERIALS

Outdoor F/UTP Cables

Primary Insulation: Polyolefin and/or Fluoropolymer

Overall Jacket: Medium density polyolefin



Cat 6A Shielded Outside Plant F/UTP Single Jacket

ANSI/TIA-568.2-D Category 6A Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

Frequency (MHz)	Insertion Loss Max. (dB/100m)	NEXT Loss Min. (dB / 100 m)		ACR Min. (dB / 100 m)		ACRF Min. (dB / 100 m)		Return Loss Min. (dB/100m)	Delay Max. (ns/100m)
		WP	PS	WP	PS	WP	PS		
1	2.1	74.3	72.3	72.2	70.2	67.8	64.8	20.0	599
4	3.8	65.3	63.3	61.5	59.5	55.8	52.8	23.0	580
8	5.3	60.8	58.8	55.4	53.4	49.7	46.7	24.5	574
10	5.9	59.3	57.3	53.4	51.4	47.8	44.8	25.0	573
16	7.5	56.2	54.2	48.8	46.8	43.7	40.7	25.0	570
20	8.4	54.8	52.8	46.4	44.4	41.8	38.8	25.0	569
25	9.4	53.3	51.3	44.0	42.0	39.8	36.8	24.3	568
31.25	10.5	51.9	49.9	41.4	39.4	37.9	34.9	23.6	567
62.5	15.0	47.4	45.4	32.4	30.4	31.9	28.9	21.5	565
100	19.1	44.3	42.3	25.2	23.2	27.8	24.8	20.1	564
155	24.1	41.4	39.4	17.4	15.4	24.0	21.0	18.8	564
200	27.6	39.8	37.8	12.2	10.2	21.8	18.8	18.0	563
250	31.1	38.3	36.3	7.3	5.3	19.8	16.8	17.3	563
300	34.3	37.1	35.1	2.9	0.9	18.3	15.3	16.8	563
350	37.2	36.1	34.1	-	-	16.9	13.9	16.3	563
400	40.1	35.3	33.3	-	-	15.8	12.8	15.9	563
500	45.3	33.8	31.8	-	-	13.8	10.8	15.2	562
555*	47.9	33.1	31.1	-	-	12.9	9.9	14.9	562
660*	52.8	32.0	30.0	-	-	11.4	8.4	14.4	562

ELECTRICAL CHARACTERISTICS

Input Impedance:	100 ± 15Ω (1.0 to 100 MHz) 100 ± 20Ω (100 to 250 MHz) 100 ± 25Ω (251 to 500 MHz)
Maximum Conductor Resistance:	9.38 Ω /100 Meters @ 20°C
Maximum Resistance Unbalance:	3%
Maximum Mutual Capacitance:	5.6 nF/100 Meters @ 1 kHz
Maximum Capacitance Unbalance:	330 pF/100 meters
Maximum Delay Skew:	45 ns/100 meters
Nominal Velocity Of Propagation (Nvp):	67%

CABLE AMPACITY CHART

Bundle Size	1	2-7	8-19	20-37	38-61	62-91	92-192
Cable Temp	60°C	60°C	60°C	60°C	60°C	60°C	60°C
23 AWG	2.5	1.2	0.8	0.6	0.5	0.5	0.4

The table above is derived from the one approved by the National Fire Protection Agency and used in the National Electrical Code, NFPA-70. The complete table can be found in sections 725.144 and 800 Communication Circuits of the code. The table identifies the ampacity of each conductor (in amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86°F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables. All cable temps are operational temp ratings. Cables with temp ratings above 90c would deliver additional power handling capacity.



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PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- Suitable for direct burial, lashed aerial, duct and underground conduit applications
- Tested from 1 to 660 MHz.
- Cable core is filled with non-conductive, water-blocking gel
- Rugged black polyolefin jacket
- UV resistant jacket.
- Proven shield technology improves RF and EMI performance

APPLICATIONS

- 10 Gigabit Ethernet (IEEE 802.3an)
- 5 Gigabit Ethernet (IEEE 802.3bz)
- 2.5 Gigabit Ethernet (IEEE 802.3bz)
- Gigabit Ethernet (IEEE 802.3ab)
- 100 Mbps Ethernet (IEEE 802.3u)
- 1000 Mbps ATM
- 622 Mbps ATM
- 15W PoE (IEEE 802.3af)
- 30W PoE+ (IEEE 802.3at)
- 60W PoE++ (IEEE 802.3bt Type 3)
- 100W PoE++ (IEEE 802.3bt Type 4)

PACKAGING

- 1,000 foot (305 m) reels
- Reverse sequential footage markings standard on each 1,000 foot package
- Unit/pallet: 12

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +70°C
(-40°F to +158°F)
- **Installation Temperature**
-20°C to +70°C
(-4°F to +158°F)
- **Operation Temperature**
-40°C to +70°C
(-40°F to +158°F)

Cat 6A Shielded Outside Plant F/UTP Dual Jacket

	Part Number	# of Pairs	Calculated Cable O.D.		Cable Weight		c(UL)us Listed Type
			inches	mm	lbs/1000ft	kg/305 m	
OUTDOOR F/UTP	30287-8-XXY	4	0.360	9.144	56.87	25.8	PO (NFPA 262), CSA Type FT6

Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30287	8	XX	Y

Jacket Colors (XX):



Reel Type (Y):

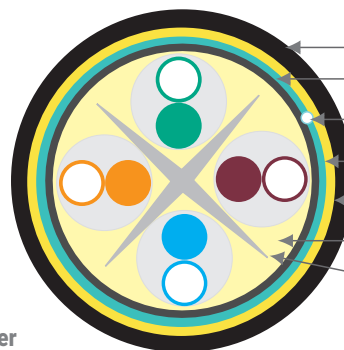


Reel 3: Reel

Primary Insulation



24 AWG
Bare Copper



- Rugged Polyolefin Jacket
- Polyolefin Inner Jacket
- Drain Wire
- Polyester backed aluminum foil shield
- SAP Impregnated Aramid Yarns
- Non-Conductive/Water-blocking Gel
- Star Filler

DIELECTRIC MATERIALS

Outdoor F/UTP Cables

Primary Insulation: Polyolefin and/or Fluoropolymer

Overall Jacket: Medium density polyolefin



Cat 6A Shielded Outside Plant F/UTP Dual Jacket

ANSI/TIA-568.2-D Category 6A Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

Frequency (MHz)	Insertion Loss Max. (dB/100m)	NEXT Loss Min. (dB / 100 m)		ACR Min. (dB / 100 m)		ACRF Min. (dB / 100 m)		Return Loss Min. (dB/100m)	Delay Max. (ns/100m)
		WP	PS	WP	PS	WP	PS		
1	2.1	74.3	72.3	72.2	70.2	67.8	64.8	20.0	599
4	3.8	65.3	63.3	61.5	59.5	55.8	52.8	23.0	580
8	5.3	60.8	58.8	55.4	53.4	49.7	46.7	24.5	574
10	5.9	59.3	57.3	53.4	51.4	47.8	44.8	25.0	573
16	7.5	56.2	54.2	48.8	46.8	43.7	40.7	25.0	570
20	8.4	54.8	52.8	46.4	44.4	41.8	38.8	25.0	569
25	9.4	53.3	51.3	44.0	42.0	39.8	36.8	24.3	568
31.25	10.5	51.9	49.9	41.4	39.4	37.9	34.9	23.6	567
62.5	15.0	47.4	45.4	32.4	30.4	31.9	28.9	21.5	565
100	19.1	44.3	42.3	25.2	23.2	27.8	24.8	20.1	564
155	24.1	41.4	39.4	17.4	15.4	24.0	21.0	18.8	564
200	27.6	39.8	37.8	12.2	10.2	21.8	18.8	18.0	563
250	31.1	38.3	36.3	7.3	5.3	19.8	16.8	17.3	563
300	34.3	37.1	35.1	2.9	0.9	18.3	15.3	16.8	563
350	37.2	36.1	34.1	-	-	16.9	13.9	16.3	563
400	40.1	35.3	33.3	-	-	15.8	12.8	15.9	563
500	45.3	33.8	31.8	-	-	13.8	10.8	15.2	562
555*	47.9	33.1	31.1	-	-	12.9	9.9	14.9	562
660*	52.8	32.0	30.0	-	-	11.4	8.4	14.4	562



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ELECTRICAL CHARACTERISTICS

Input Impedence:	100 ± 15Ω (1.0 to 100 MHz) 100 ± 20Ω (100 to 250 MHz) 100 ± 25Ω (251 to 500 MHz)
Maximum Conductor Resistance:	9.38 Ω /100 Meters @ 20°C
Maximum Resistance Unbalance:	3%
Maximum Mutual Capacitance:	5.6 nF/100 Meters @ 1 kHz
Maximum Capacitance Unbalance:	330 pF/100 meters
Maximum Delay Skew:	45 ns/100 meters
Nominal Velocity Of Propagation (Nvp):	67%

*Frequencies beyond the TIA and ISO requirements are for information only. All values are dB/100m.

CABLE AMPACITY CHART

Bundle Size	1	2-7	8-19	20-37	38-61	62-91	92-192
Cable Temp	60°C	60°C	60°C	60°C	60°C	60°C	60°C
23 AWG	2.5	1.2	0.8	0.6	0.5	0.5	0.4

The table above is derived from the one approved by the National Fire Protection Agency and used in the National Electrical Code, NFPA-70. The complete table can be found in sections 725.144 and 800 Communication Circuits of the code. The table identifies the ampacity of each conductor (in amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86°F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables. All cable temps are operational temp ratings. Cables with temp ratings above 90c would deliver additional power handling capacity.

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PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- 900 micron buffered design recommended for easy termination
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- Ideal for patch cords, interconnections, and short runs
- Easy to strip and terminate
- Lightweight, flexible aramid yarns enhance strength

OPTIONS

- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3 & G.657.A2)
 - Standard jacket colors are:
 - Yellow: OS2
 - Orange: OM1
 - Aqua: OM3 & OM4
- Note: Erika Violet for OM4 is available.*

APPLICATIONS

- Applications include 10, 40 & 100 gigabit Ethernet, Fiber Channel, Video, Security, Automation

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to 70°C
(-40°F to 158°F)
- **Installation Temperature**
0°C to 60°C
(32°F to 140°F)
- **Operation Temperature**
0°C to 70°C
(32°F to 158°F)

DIELECTRIC MATERIALS

- **Plenum**
Overall Jacket: Flame-retardant Thermoplastic

Indoor Tight Buffered Interconnect - Plenum

Fibers	Cable O.D. inches / mm	62.5 μm OM1	50 μm OM3	50 μm OM4	8.3 μm OS2
2	0.114" / 2.9mm	60042-2	60472-2	61851-2	60044-2
zip	.079" x .170" / 2.0mm x 4.3mm	61379-2	61457-2	61986-2	61378-2
zip	.113" x .235" / 2.9mm x 6.0mm	60023-2	60502-2	61857-2	60030-2

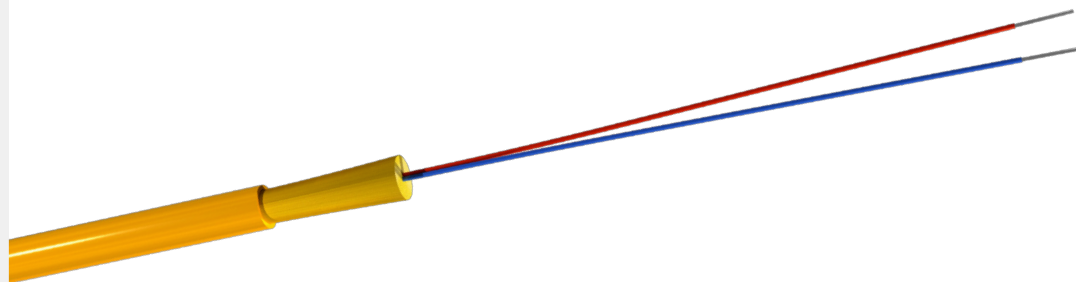
Standard Jacket Colors



Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.



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Specifications by Fiber Count

Fibers	Max Install Load Lbs.	Max Install Load Newtons	Operating Max Load Lbs	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
2	96	427	29	128	6.4	9.5
zip	96	427	48	213	6.27	9.3
zip	128	569	64	284	13.2	19.6

MECHANICAL SPECS

- Bend radius, no load = 10x cable overall diameter
- Bend radius, load = 15x cable overall diameter

ASSEMBLY DETAIL

*These cable designs utilize color-coded binders to separate subunits
DJ = Dual jacket design

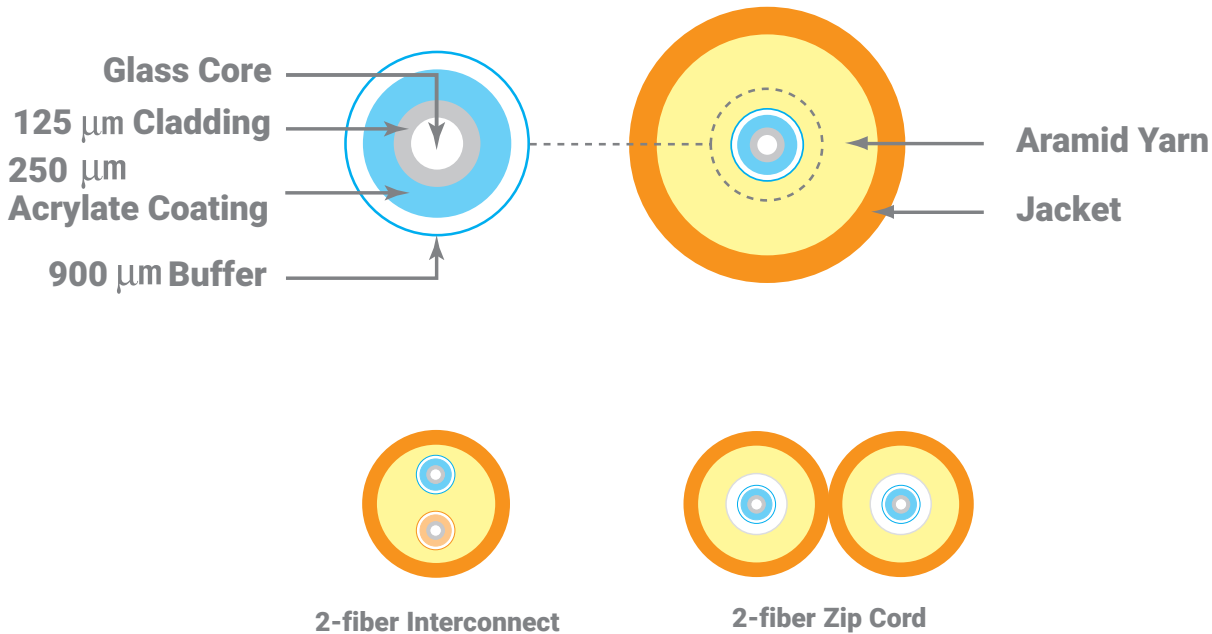


Diagram scale approx. 5:1



Photo is for representation purposes only.



PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- 900 micron buffered design recommended for easy termination
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- Each fiber is color coded for easy identification
- Ideal intra-building cable solution
- Flexible and easy to handle.
- Lightweight, flexible aramid yarns enhance strength.

OPTIONS

- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3 & G.657.A2)
 - Standard jacket colors are:
 - Yellow: OS2
 - Orange: OM1
 - Aqua: OM3 & OM4
- Note: Erika Violet for OM4 is available.*

APPLICATIONS

- Applications include 10, 40 & 100 gigabit Ethernet, Fiber Channel, Video, Security, Automation

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to 70°C
(-40°F to 158°F)
- **Installation Temperature**
0°C to 60°C
(32°F to 140°F)
- **Operation Temperature**
0°C to 70°C
(32°F to 158°F)

DIELECTRIC MATERIALS

- **Plenum**
Overall Jacket: Flame-retardant Thermoplastic

Indoor Tight Buffered Single-Unit Plenum

Fibers	Cable O.D. inches / mm	62.5 μm OM1	50 μm OM3	50 μm OM4	8.3 μm OS2
4	0.190" / 4.8mm	60517-4	60522-4	61868-4	60029-4
6	0.190" / 4.8mm	60517-6	60522-6	61868-6	60029-6
12	0.230" / 5.8mm	60517-12	60522-12	61868-12	60029-12
24	0.330" / 8.4mm	60517-24	60522-24	61868-24	60029-24

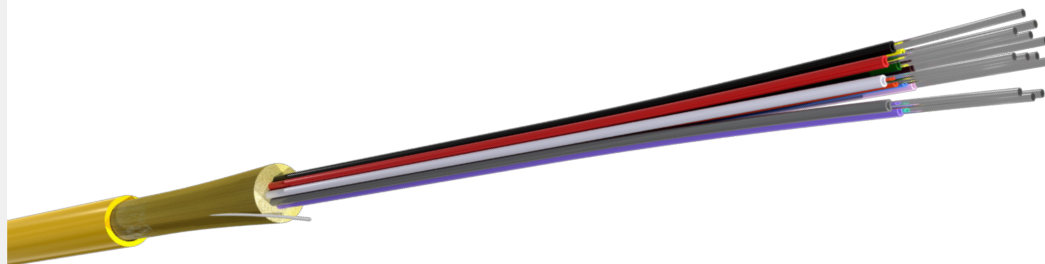
Standard Jacket Colors



Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.



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PROTERIAL Indoor Tight Buffered Single-Unit Plenum

Multimode & Singlemode - 4 through 24 fibers
(UL) OFNP c(UL) OFNP FT6

Specifications by Fiber Count

Fibers	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
4	128	569	38	171	14.5	21.6
6	128	569	38	171	15.7	23.4
12	160	712	48	214	23.0	34.3
24	288	1282	86	385	50.3	74.9

MECHANICAL SPECS

- Bend radius, no load
= 10x cable overall diameter
- Bend radius, load
= 15x cable overall diameter

ASSEMBLY DETAIL

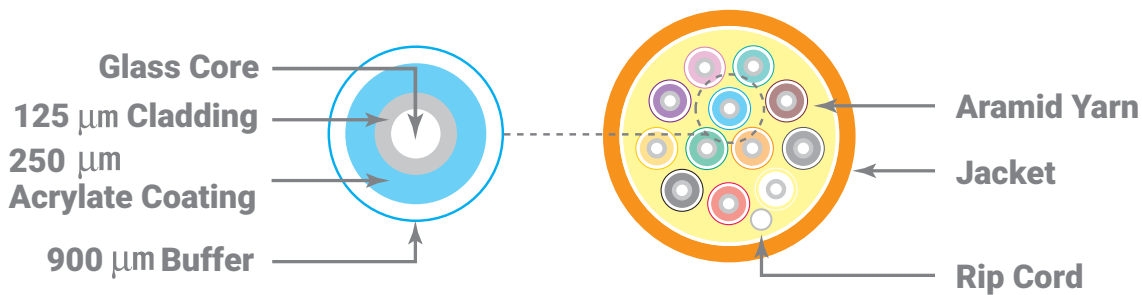


Diagram scale approx. 2:1



Photo is for representation purposes only.



PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- 900 micron buffered design recommended for easy termination
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- Each fiber is color coded for easy identification
- Ideal intra-building cable solution
- Flexible and easy to handle
- Compact distribution design
- Lightweight, flexible aramid yarns enhance strength.

OPTIONS

- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3 & G.657.A2)
- Standard jacket colors are:
Yellow: OS2
Orange: OM1
Aqua: OM3 & OM4

Note: Erika Violet for OM4 is available.

APPLICATIONS

- Applications include 10, 40 & 100 gigabit Ethernet, Fiber Channel, Video, Security, Automation

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to 70°C
(-40°F to 158°F)
- **Installation Temperature**
0°C to 60°C
(32°F to 140°F)
- **Operation Temperature**
0°C to 70°C
(32°F to 158°F)

DIELECTRIC MATERIALS

- **Plenum**
Overall Jacket: Flame-retardant Thermoplastic

Indoor Tight Buffered Multi-Unit - Plenum

Fibers	Cables O.D. inches / mm	62.5 μm OM1	50 μm OM3	50 μm OM4	8.3 μm OS2
24	0.518" / 13.1mm	60258-24	60598-24	61877-24	60634-24
48	0.614" / 15.5mm	60027-48	60614-48	61879-48	60033-48
72	0.750" / 19.0mm	60027-72	60614-72	61879-72	60033-72

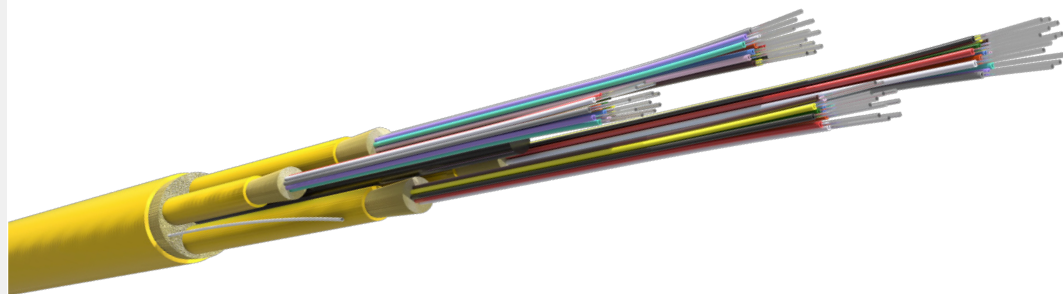
Standard Jacket Colors



Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.



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Specifications by Fiber Count

Fibers	Fibers/Tube	Tube Layout	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
24	6	4xCMS	512	2279	154	684	97.0	144.5
48	12	4xCMS	640	2848	192	854	139.0	207.1
72	12	6xCMS	960	4272	288	1282	216.0	321.8

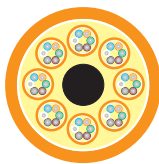
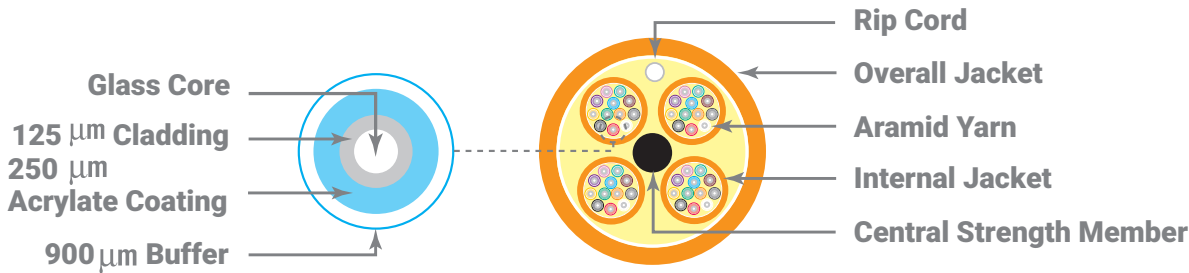
CMS = Central Strength Member

MECHANICAL SPECS

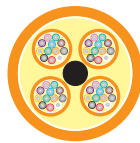
- Bend radius, no load
= 10x cable overall diameter
- Bend radius, load
= 15x cable overall diameter

ASSEMBLY DETAIL

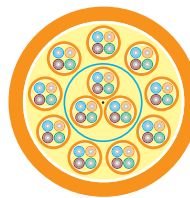
*These cable designs utilize color-coded binders to separate subunits
DJ = Dual jacket design



48-fibers
(8 tubes of 6-fibers)



48-fibers
(4 tubes of 12-fibers)



48-fibers
(12 tubes of 4-fibers)

Diagram scale approx. 1:1



Photo is for representation purposes only.



PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- 900 um buffered design recom-mended for easy termination
- Eliminates need for inner duct or conduit
- Aluminum interlock armor.
- Each fiber is color coded for easy identification
- Ideal intra-building cable solution.
- Flexible and easy to handle
- Lightweight, flexible aramid yarns enhance strength

OPTIONS

- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3 & G.657.A2)
 - Standard jacket colors are:
Yellow: OS2
Orange: OM1
Aqua: OM3 & OM4
- Note: Erika Violet for OM4 is available.*

APPLICATIONS

- Applications include 10, 40 & 100 gigabit Ethernet, Fiber Channel, Video, Security, Automation

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to 70°C
(-40°F to 158°F)
- **Installation Temperature**
0°C to 60°C
(32°F to 140°F)
- **Operation Temperature**
0°C to 70°C
(32°F to 158°F)

DIELECTRIC MATERIALS

- **Riser**
Overall Jacket: Flame-retardant Thermoplastic

Indoor Armored Tight Buffered Plenum

Fibers	Cable O.D. inches / mm	62.5 μm OM1	50 μm OM3	50 μm OM4	8.3 μm OS2
6	0.520" / 13.21mm	60405-6	61337-6	61897-6	61433-6
12	0.520" / 13.21mm	60405-12	61337-12	61897-12	61433-12
24	0.643" / 16.33mm	60405-24	61337-24	61897-24	61433-24
48	0.964" / 24.49mm	62183-48	62185-48	62186-48	62187-48

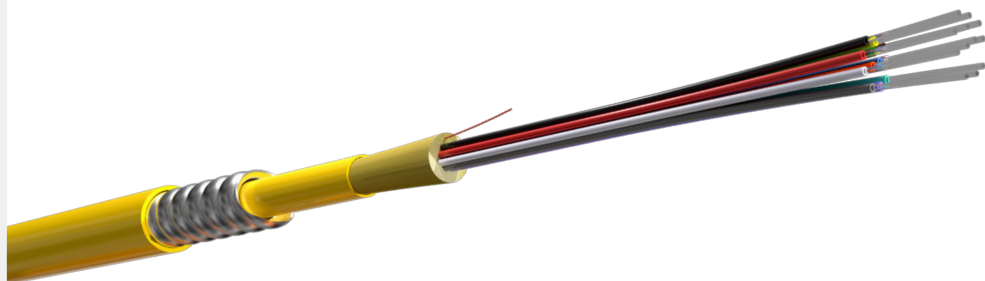
Standard Jacket Colors



Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.



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Specifications by Fiber Count

Fibers	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
6	128	570	38	171	96.2	143.1
12	160	712	48	214	103.3	153.7
24	288	1282	86	385	158.1	235.3
48	640	2849	192	855	305.7	454.9

MECHANICAL SPECS

- Bend radius, no load = 10x cable overall diameter
- Bend radius, load = 15x cable overall diameter

ASSEMBLY DETAIL

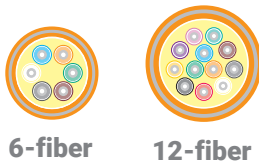
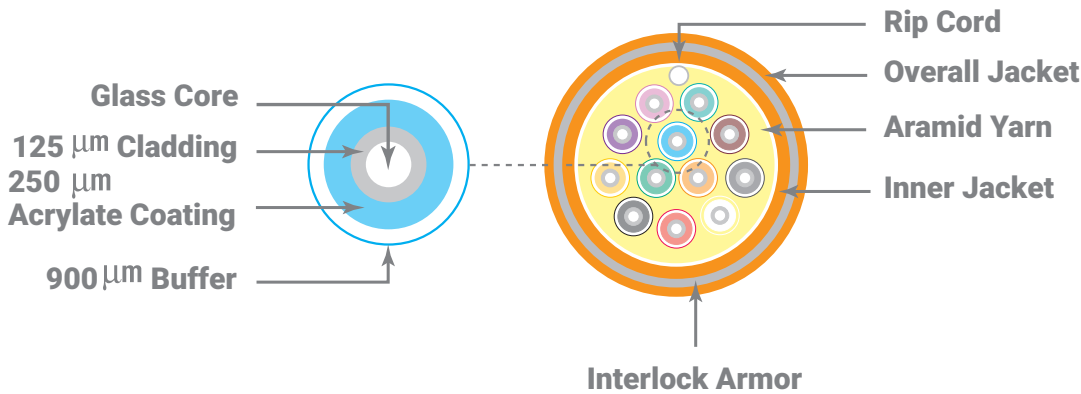


Diagram scale approx. 2:1

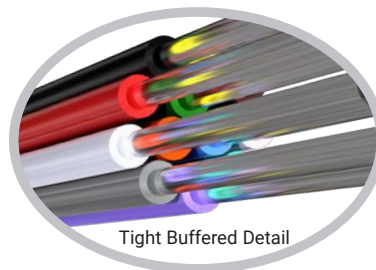


Photo is for representation purposes only.



PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- UV and fungus resistant jacket
- Tight buffered construction
- Easy to strip and terminate
- Each fiber is color coded for easy identification
- Dry, super absorbent polymers (SAPs) eliminate water migration in cable interstices
- Suitable for lashed aerial, duct, underground conduit and indoor plenum applications
- 900um buffered design recommended for easy termination
- Cables with more than 24 fibers have fibers segregated into 12-fiber sub-units

OPTIONS

- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3 & G.657.A2)

APPLICATIONS

- Applications include 10, 40 & 100 gigabit Ethernet, Fiber Channel, Video, Security, Automation

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to 70°C
(-40°F to 158°F)
- **Installation Temperature**
0°C to 60°C
(32°F to 140°F)
- **Operation Temperature**
-40°C to 70°C
(-40°F to 148°F)

DIELECTRIC MATERIALS

- **Plenum**
Overall Jacket: Flame-retardant Thermoplastic

Indoor / Outdoor Tight Buffered Plenum

Fibers	Cable O.D. inches / mm	62.5 μm OM1	50 μm OM3	50 μm OM4	8.3 μm OS2
2	0.190" / 4.8mm	61460-2	61468-2	61894-2	61459-2
6	0.190" / 4.8mm	61460-6	61468-6	61894-6	61459-6
12	0.230" / 5.8mm	61460-12	61468-12	61894-12	61459-12
24	0.330" / 8.4mm	61460-24	61468-24	61894-24	61459-24
48	0.627" / 15.9mm	61979-48	61959-48	61980-48	61480-48

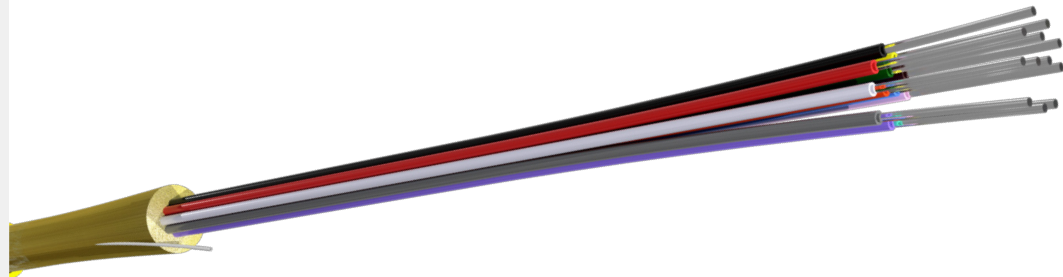
Standard Jacket Colors



Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.



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Specifications by Fiber Count

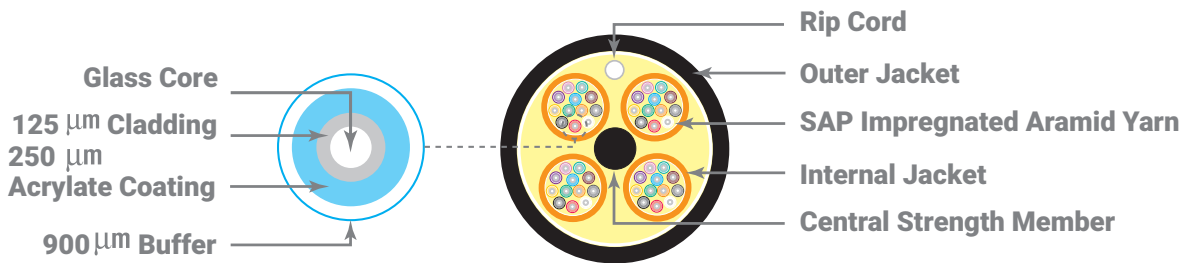
Fibers	Fibers / Tube	Tube Layout	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
2	2	x	128	570	38	171	12.6	18.8
6	5	x	128	570	38	171	15.1	22.5
12	12	x	160	712	48	214	22.5	33.5
24	24	x	288	1282	86	385	50.2	74.8
48	12	4xCSM	640	2849	192	855	135.1	201.1

CSM = Central Strength Member

MECHANICAL SPECS

- Bend radius, no load
= 10x cable overall diameter
- Bend radius, load
= 20x cable overall diameter

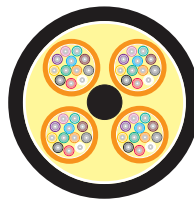
ASSEMBLY DETAIL



6-fiber

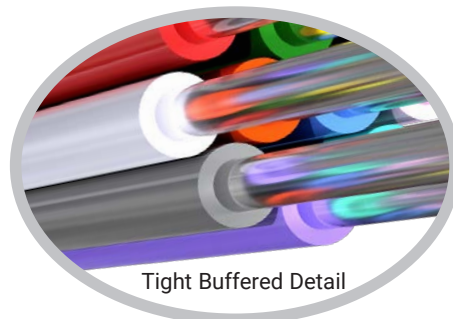


12-fiber



48-fibers (4 tubes of 12-fibers)

Diagram scale approx. 3:1



Tight Buffered Detail



Photo is for representation purposes only.



PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- Eliminates need for innerduct or conduit
- Aluminum interlock armor standard
- Each fiber is color coded for easy identification
- Ideal cable solution for campus environments
- Flexible and easy to handle
- UV and fungus resistant jacket
- Dry, super absorbent polymers (SAPs) eliminate water migration in cable interstices
- Suitable for lashed aerial, duct, underground conduit and indoor plenum applications
- 900um buffered design recommended for easy termination

OPTIONS

- Standard color configuration is a black outer jacket with a black inner jacket.
- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3 & G.657.A2)

APPLICATIONS

- Applications include 10, 40 & 100 gigabit Ethernet, Fiber Channel, Video, Security, Automation

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to 70°C
(-40°F to 158°F)
- **Installation Temperature**
0°C to 60°C
(32°F to 140°F)
- **Operation Temperature**
-40°C to 70°C
(-40°F to 158°F)

DIELECTRIC MATERIALS

- **Plenum**
Overall Jacket: Low smoke, Flame retardant thermoplastic

Indoor / Outdoor Armored Tight Buffered Plenum

Fibers	Cable O.D. inches / mm	62.5 μm OM1	50 μm OM3	50 μm OM4	8.3 μm OS2
6	0.48" / 12.192mm	61580-6	61578-6	62068-6	61579-6
12	0.52" / 13.208mm	61580-12	61578-12	62068-12	61579-12
24	0.64" / 16.26mm	61580-24	61578-24	62068-24	61579-24

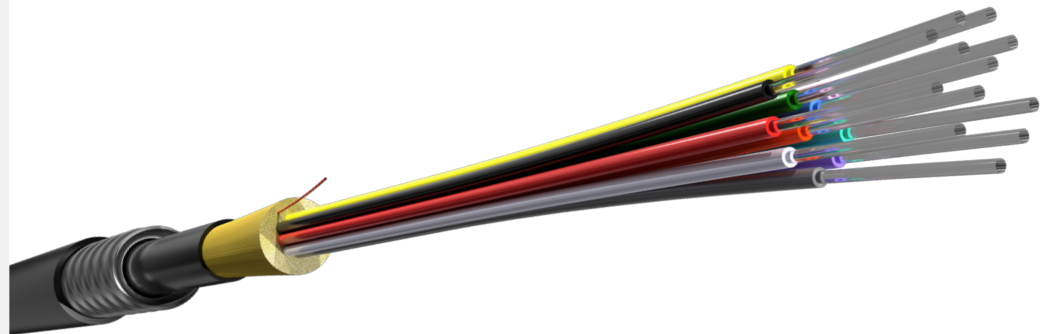
Standard Jacket Colors



Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBC Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.



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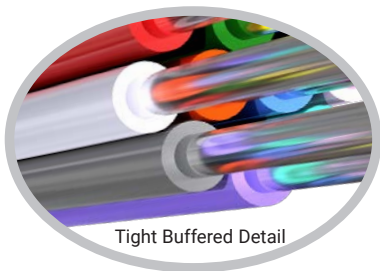
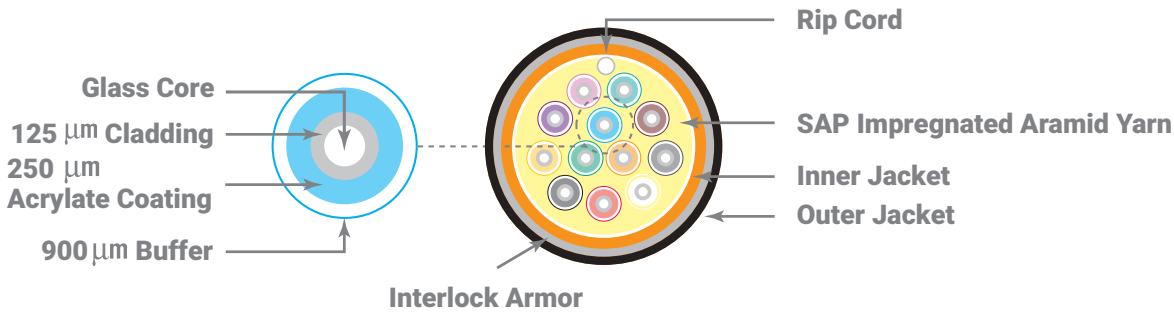
Specifications by Fiber Count

Fibers	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
6	300	1335	100	445	103.0	153.3
12	300	1335	100	445	111.8	166.4
24	300	1335	100	445	164.1	244.2

MECHANICAL SPECS

- Bend radius, no load = 15x cable overall diameter
- Bend radius, load = 20x cable overall diameter

ASSEMBLY DETAIL



12-fiber

Diagram scale approx. 2:1



Photo is for representation purposes only.





PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- Extending PoE and Limited Power SELV data transmission beyond 100 meters.
- Provides immunity from electro magnetic and radio frequency interference.
- Choice of separate power conductors heat generation and length derating calculations as required by TIA 568 and NEC.
- Plenum and outdoor rating permits
- Dry, super absorbent polymers (SAPs)
- Suitable for lashed aerial, duct
- All multimode and singlemode cables (except OM1) utilize bend-insensitive optical fibers.



OPTIONS

- Available with 2, 6 or 12 strands of fiber.
- Available with 1 pair of 12, 14, 16, 18, or 20 AWG stranded conductors.



APPLICATIONS

- High noise areas and extended distance.
- Security CCTV Cameras.
- Wireless Access Points.
- Distributed Antenna Systems (DAS).



STANDARDS

- NEC CL2P-OF, CL3P-OF and CMP-OF rating, compliant with
- Class 2 SELV (Safety Extra Low Voltage).
- NFPA 262.
- ANSI/TIA-568.3-D



TEMPERATURE RANGE

- **Storage Temperature**
-40°C to +70°C
(-40°F to +158°F)
- **Installation Temperature**
0°C to +60°C
(+32°F to +140°F)
- **Operation Temperature**
-40°C to +70°C
(-40°F to +158°F)

Power+ FO Cable Part Numbers 20 AWG

Fibers	Cable O.D. inches / mm	50 μm OM4	8.3 μm OS2
2	0.22" / 6.2mm	42368-4	42367-4
6	0.33" / 8.4mm	42368-8	42367-8
12	0.41" / 10.5mm	43268-14	42367-14

Power+ FO Cable Part Numbers 18 AWG

Fibers	Cable O.D. mm inches / mm	50 μm OM4	8.3 μm OS2
2	0.27" / 6.8mm	42370-4	42369-4
6	0.33" / 8.4mm	42370-8	42369-8
12	0.40" / 10.2mm	42370-14	42369-14

Power+ FO Cable Part Numbers 16 AWG

Fibers	Cable O.D. mm inches / mm	50 μm OM4	8.3 μm OS2
2	0.28" / 7.1mm	42372-4	42371-4
6	0.33" / 8.4mm	42372-8	42371-8
12	0.41" / 10.5mm	42372-14	42371-14

Power+ FO Cable Part Numbers 14 AWG

Fibers	Cable O.D. mm inches / mm	50 μm OM4	8.3 μm OS2
2	0.29" / 7.4mm	42378-4	42373-4
6	0.36" / 9.2mm	42378-8	42373-8
12	0.43" / 10.8mm	42378-14	42373-14

Power+ FO Cable Part Numbers 12 AWG

Fibers	Cable O.D. mm inches / mm	50 μm OM4	8.3 μm OS2
2	0.30" / 7.7mm	42379-4	42376-4
6	0.40" / 10.1mm	42379-8	42376-8
12	0.44" / 11.3mm	42379-14	42376-14

Standard Jacket Color



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Safety Extra Low Voltage (SELV) 48Vdc PSE / 43Vdc PD

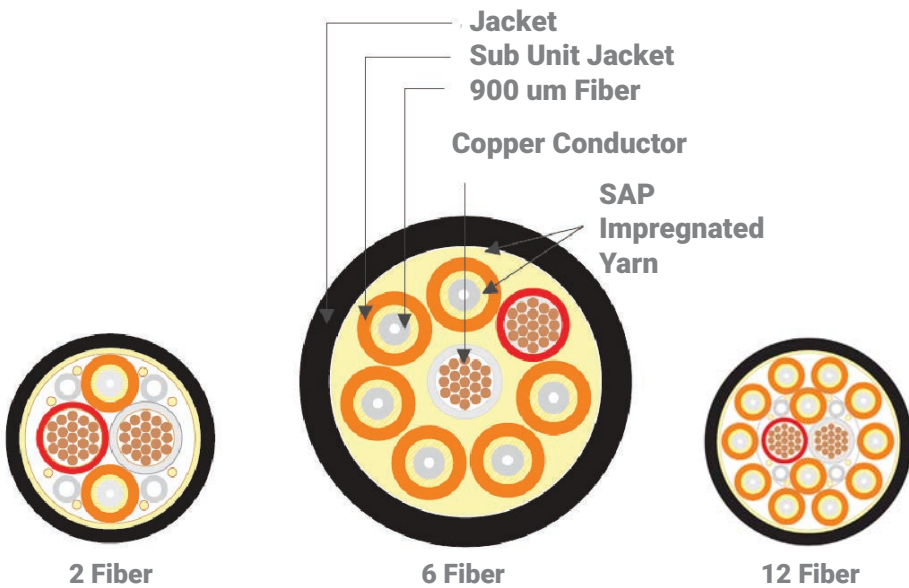
Safety Extra Low Voltage (SELV) 56Vdc PSE / 48Vdc PD

AWG	Powered Device at Load (Watts)				
	6.49W	12.95W	25.5W	51W	71W
Remote Power Distance (feet)					
20	1,574	789	401	200	144
18	2,500	1,253	636	318	229
16	3,974	1,992	1,011	506	363
14	6,339	3,177	1,683	807	579
12	10,047	5,035	2,557	1,279	918

AWG	Powered Device at Load (Watts)				
	6.49W	12.95W	25.5W	51W	71W
Remote Power Distance (feet)					
20	2,915	1,461	742	371	266
18	4,630	2,320	7,178	589	423
16	7,359	3,688	1,873	936	673
14	11,740	5,883	2,988	1,498	1,073
12	18,606	9,325	4,735	2,368	1,701

TIA/EIA-568-D.3 | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000



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PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- 250 micron loose tube design allows for higher fiber strand counts in a smaller overall diameter cable
- Ideal for MPO (MTP®) style connectors
- Each fiber is color coded for easy identification
- Flexible and easy to handle
- Lightweight, flexible Aramid yarns enhance strength
- Now available with a smaller outside diameter
- When necessary, color-coded binders separate fiber strands into bundles of 12



OPTIONS

- Enhanced bend insensitive OS2 optical fiber available (ITU-T G.657.B3 & G.657.A2)
- 16 Fiber colors available
- Colored threads are used to bundle fibers
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- OM4+ and OM5 Available



STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE
- OS2 glass is compliant to ITU-T G.657.A1



TEMPERATURE RANGE

- **Storage Temperature**
-40°C to 70°C
(-40°F to 158°F)
- **Installation Temperature**
0°C to 60°C
(32°F to 140°F)
- **Operation Temperature**
0°C to 70°C
(32°F to 158°F)

DIELECTRIC MATERIALS

- **Plenum**
Overall Jacket: Flame-retardant Thermoplastic

NanoCore Interconnect (Single Jacket) Micro Distribution

Fibers	Fibers / Bundle / Tube	Cable O.D. inches / mm	50 µm OM3	50 µm OM4	8.3 µm OS2
2	-	0.078" / 2.0mm	62243-2	62244-2	62239-2
2	-	0.118" / 3.0mm	61507-2	61883-2	61538-2
4	-	0.118" / 3.0mm	61507-4	61883-4	61538-4
12	-	0.078" / 2.0mm	62243-12	62244-12	62239-12
12	-	0.118" / 3.0mm	61507-12	61883-12	61538-12
12	-	0.150" / 3.8mm	62374-12	62375-12	62371-12
12 DJ	-	0.189" / 4.8mm	62449-12	62450-12	62460-12
16	-	0.118" / 3.0mm	62685-16	62686-16	62689-16
16*	8 X 2	0.118" / 3.0mm	62694-16	62695-16	62698-16
24*	12 X 2	0.118" / 3.0mm	62243-24	62244-24	62239-24
24*	12 X 2	0.150" / 3.8mm	62374-24	62375-24	62371-24
24*	12 X 2	0.177" / 4.5mm	61507-24	61883-24	61538-24
24-zip	12	0.118" / 3.0mm 0.255" / 6.47mm	61539-24	61882-24	61547-24

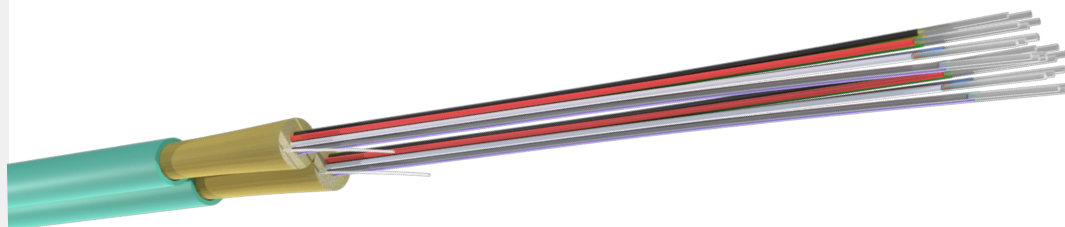
Standard Jacket Colors



Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBC Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.



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Specifications by Fiber Count

Fibers	Max Install Load Lbs.	Max Install Load Newtons	Operating Max Load Lbs	Operating Max Load Newtons	Compression N/cm	Impact N-m	Cable Weight lbs/kft	Cable Weight Kg/Km
2	50	222	15	67	35	0.74	2.5	3.7
2	100	445	30	134	100	0.74	5.5	8.2
4	100	445	30	134	100	0.74	5.6	8.3
12	50	222	15	67	35	0.74	2.9	4.4
12	100	445	30	134	100	0.74	5.9	8.8
12	150	668	45	200	35	2.94	9.1	13.6
12 DJ	150	668	45	200	35	2.94	14.5	21.6
16	150	668	45	200	100	0.74	5.2	7.7
16*	150	668	45	200	100	0.74	5.2	7.7
24*	150	668	45	200	100	0.74	5.7	8.5
24*	150	668	45	200	35	2.94	9.7	14.5
24*	150	668	45	200	100	2.94	13.1	19.5
24-zip	128	569	38	171	128	2.94	11.4	17.0

MECHANICAL SPECS

- Bend radius, no load = 10x cable overall diameter
- Bend radius, load = 15x cable overall diameter

*These cable designs utilize color-coded binders to separate subunits.
DJ: Dual jacket design.

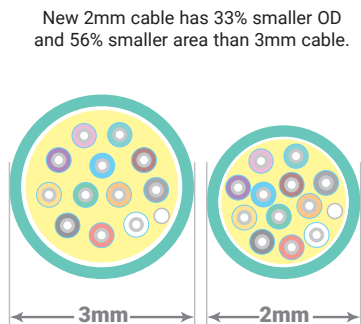
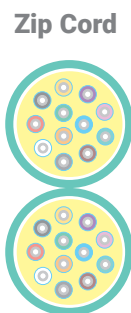
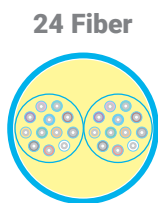
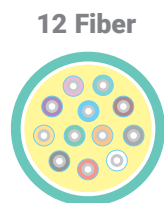
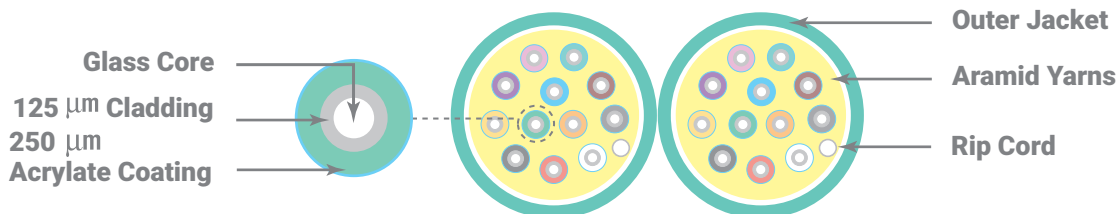


Diagram scale approx. 5:1



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PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- Small, lightweight construction suitable for installations where space is at a premium
- Ideal for MPO (MTP®) style connectors
- Each fiber is color coded for easy identification
- Flexible and easy to handle

OPTIONS

- 8 fibers per tube available for cables up to 96 strands
- 16 fibers per tube and 24 fibers per tube up to 144 fiber
- OS2 optical fibers with enhanced bend insensitive performance are available.
- OM4+ and OM5 Available

APPLICATIONS

- Ideal for high-density installations like data centers, central offices and overall premise applications where current or future data rates include 40 and 100 gigabits per second

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE
- OS2 glass is compliant to ITU-T G.657.A1

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to 70°C
(-40°F to 158°F)
- **Installation Temperature**
0°C to 60°C
(32°F to 140°F)
- **Operation Temperature**
0°C to 70°C
(32°F to 158°F)

DIELECTRIC MATERIALS

- **PLENUM**
Overall Jacket: Flame-retardant Thermoplastic

NanoCore Multi-Unit Micro Distribution (Plenum)

Fibers	Fibers Per Tube	Tube O.D. inches / mm	50 µm OM3	50 µm OM4	8.3 µm OS2
24	12	0.079" / 2.0mm	62216-24	62218-24	62205-24
36	12	0.079" / 2.0mm	62216-36	62218-36	62205-36
48	12	0.079" / 2.0mm	62216-48	62218-48	62205-48
72	12	0.079" / 2.0mm	62216-72	62218-72	62205-72
96	12	0.079" / 2.0mm	62216-96	62218-96	62205-96
144	12	0.079" / 2.0mm	62216-144	62218-144	62205-144

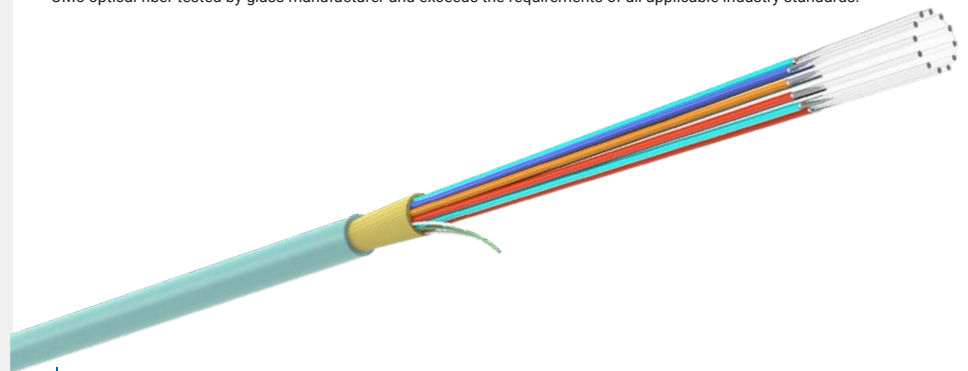
Standard Jacket Colors



Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.



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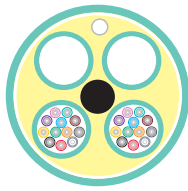
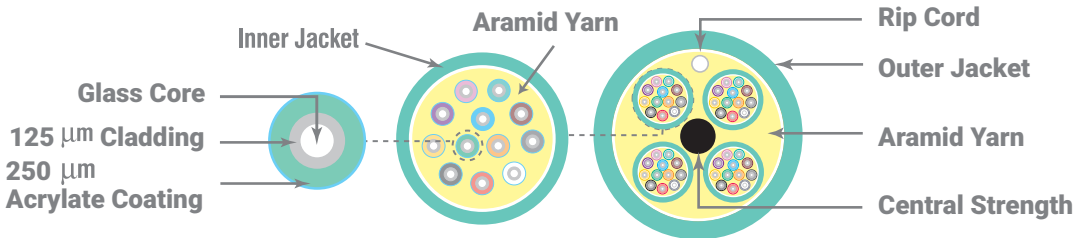
Specifications by Fiber Count

Fibers	Tube Layout	Cable O.D. inches / mm	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
24	2+2FxCSM	0.296" / 7.5mm	150	668	45	200	36.4	54.2
36	3+1FxCSM	0.296" / 7.5mm	150	668	45	200	37.4	55.7
48	4xCSM	0.296" / 7.5mm	150	668	45	200	38.3	57.0
72	6xCSM	0.355" / 9.0mm	150	668	45	200	48.3	71.9
96	8xCSM	0.433" / 11mm	150	668	45	200	83.8	124.7
144	9x3xCSM	0.458" / 11.6mm	150	668	45	200	88.9	132.3

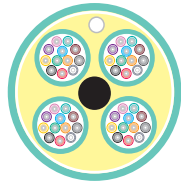
*These cable designs utilize color-coded binders to separate subunits
CSM = Central Strength Member
F = Filler

MECHANICAL SPECS

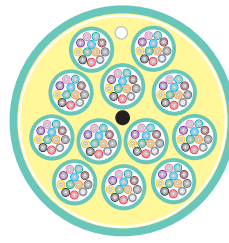
- Bend radius, no load
= 10x cable overall diameter
- Bend radius, load
= 15x cable overall diameter



24 fibers



48 fibers



144 fibers



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Photo is for representation purposes only.





PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- Eliminates need for inner duct or conduit
- Ideal for MPO (MTP®) style connectors
- Aluminum interlock armor
- Each fiber is color coded for easy identification
- Flexible and easy to handle



OPTIONS

- 8 fibers per tube available for cables up to 96 strands
- 16 fibers per tube and 24 fibers per tube up to 144 fiber
- OS2 optical fibers with enhanced bend insensitive performance are available.
- OM4+ and OM5 Available



APPLICATIONS

- Ideal for high-density installations like data centers, central offices and overall premise applications where current or future data rates include 40 and 100 gigabits per second



STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE
- OS2 glass is compliant to ITU-T G.657.A1



TEMPERATURE RANGE

- **Storage Temperature**
-40°C to 70°C
(-40°F to 158°F)
- **Installation Temperature**
0°C to 60°C
(32°F to 140°F)
- **Operation Temperature**
0°C to 70°C
(32°F to 158°F)

DIELECTRIC MATERIALS

- Overall Jacket: Flame-retardant Thermoplastic

NanoCore Armored Multi-Unit Micro Distribution (Plenum)

Fibers	Fibers Per Tube	Tube O.D. inches / mm	50 µm OM3	50 µm OM4	8.3 µm OS2
12	12	0.079" / 2.0mm	62251-12	62257-12	62255-12
24	12	0.079" / 2.0mm	62251-24	62257-24	62255-24
48	12	0.079" / 2.0mm	62251-48	62257-48	62255-48
72	12	0.079" / 2.0mm	62251-72	62257-72	62255-72
96	12	0.079" / 2.0mm	62251-96	62257-96	62255-96
144	12	0.079" / 2.0mm	62251-144	62257-144	62255-144

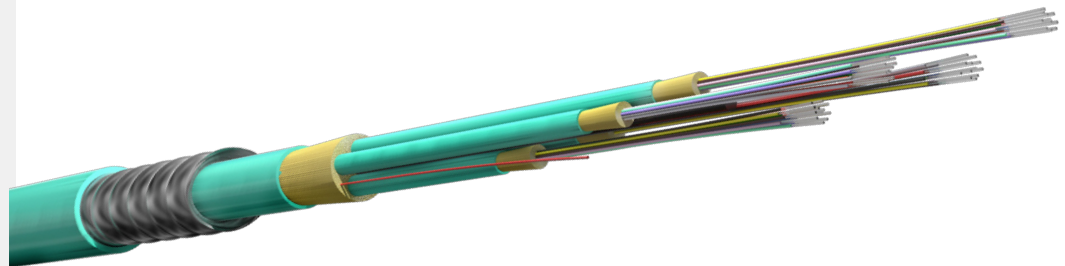
Standard Jacket Colors



Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.



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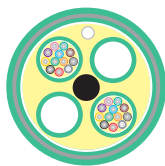
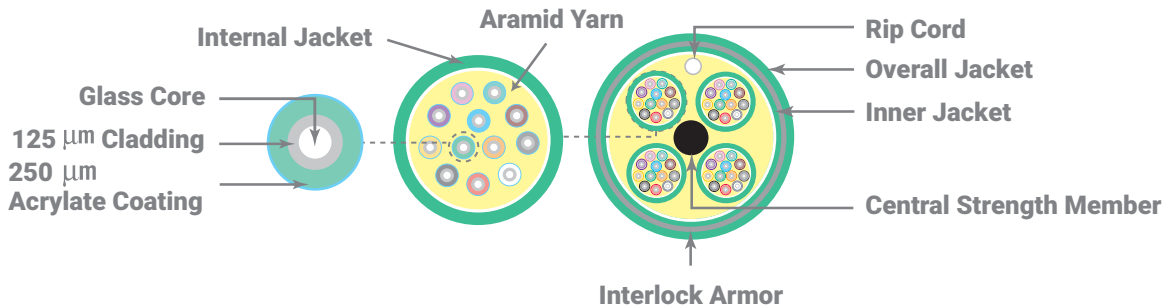
Specifications by Fiber Count

Fibers	Tube Layout	Cable O.D. inches / mm	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
12	2+2FxCSM	0.583" / 14.8mm	150	668	45	200	131.0	195.0
24	2+2FxCSM	0.583" / 14.8mm	150	668	45	200	132.0	197.5
48	4xCSM	0.583" / 14.8mm	150	668	45	200	133.0	197.9
72	6xCSM	0.647" / 16.4mm	150	668	45	200	154.0	229.2
96	8xCSM	0.675" / 17.1mm	150	668	45	200	183.0	272.3
144	9x3xCSM	0.723" / 18.4mm	150	668	45	200	194.0	288.7

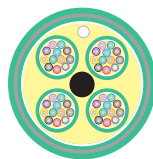
CSM = Central Strength Member
F = Filler

MECHANICAL SPECS

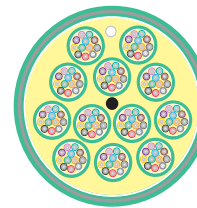
- Bend radius, no load
= 10x cable overall diameter
- Bend radius, load
= 15x cable overall diameter



24 fibers



48 fibers



144 fibers

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PRODUCT HIGHLIGHTS

- RoHS 3 compliant
- Made in U.S.A.
- 250 micron loose tube design allows for higher fiber strand counts in a smaller overall diameter cable
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- Ideal for MPO (MTP) style connectors
- Each fiber is color coded for easy identification
- Flexible and easy to handle
- Lightweight, flexible aramid yarns enhance strength
- Designed to support Very Small Form Factor (VSFF) multi-fiber optical connectors
- When necessary, color-coded binders separate fiber strands into bundles of 8

OPTIONS

- Enhanced bend insensitive SM optical fiber is available (ITU-T G.657.B3 & G.657.A2)
- 16 Fiber colors available
- Lime Green and Erika Violet Jacket Colors
- OM4+ and OM5 Available
- 190 µm OS2 optical fiber

APPLICATIONS

- Parallel optics in support of 40GbE, 100GbE, 400GbE, 800GbE, and 1.6TbE

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE

TEMPERATURE RANGE

- **Storage Temperature**
-40°C to 70°C
(-40°F to 158°F)
- **Installation Temperature**
0°C to 60°C
(32°F to 140°F)
- **Operation Temperature**
0°C to 70°C
(32°F to 158°F)

DIELECTRIC MATERIALS

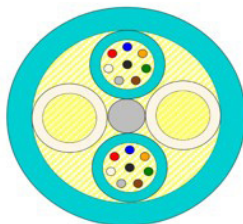
- **Plenum**
Overall Jacket: Flame-retardant Thermoplastic

BASE-8 8-Fiber 2.0mm Subunits

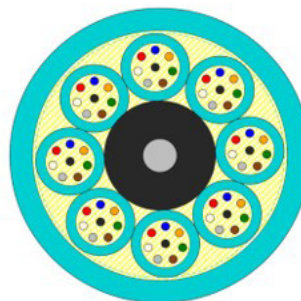
50 µm OM4	8.3 µm SM	FIBER COUNT	NO. OF SUBS	NO. OF FILLERS	Fibers Per Tube	NOMINAL DIAMETER inches	WEIGHT lbs/1000ft kg/km	
62369-16	62365-16	16	4	2	8	0.250	22	33
62369-32	62365-32	32	4	0	8	0.250	25	37
62369-48	62365-48	48	6	0	8	0.295	35	52
62369-64	62365-64	64	8	0	8	0.344	49	72
62369-72	62365-72	72	9	0	8	0.367	55	82
62369-96	62365-96	96	12	0	8	0.390	52	78



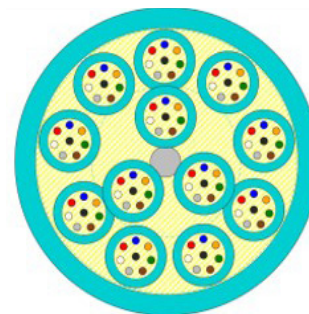
Base-8 16F



Base-8 64F



Base-8 96F



Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000



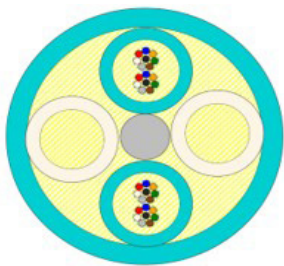
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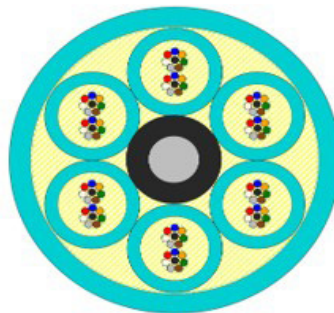
BASE-16 16 Fiber (2X8) 3.0mm Subunits

50 μ m OM4	8.3 μ m SM	FIBER COUNT	NO. OF SUBS	NO. OF FILLERS	Fibers Per Tube	NOMINAL DIAMETER inches	WEIGHT	
							lbs/1000ft	kg/km
63048-32	63051-32	32	2	2	16	0.352	39	58
63048-64	63051-64	64	4	0	16	0.352	44	66
63048-96	63051-96	96	6	0	16	0.410	61	90
63048-128	63051-128	128	8	0	16	0.480	88	131
63048-192	63051-192	192	12	0	16	0.624	149	222

Base-16 32F



Base-16 96F



Base-16 192F

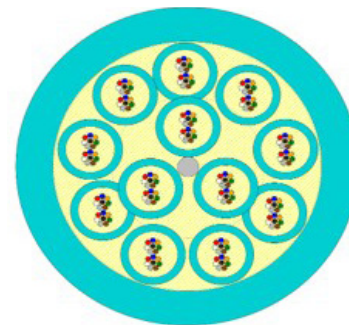


Diagram scale approx. 5:1



PROTERIAL



Performance Cable Division

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