Hitachi Cable America Inc.

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PREMISE & FIBER OPTIC CABLE CATALOG

Since 1986, Hitachi Cable 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, Hitachi Cable has established itself as a leader in the industry. These products and the others found in this catalog are the result of Hitachi Cable's relentless desire to manufacture the finest communication cables in the world. After using our products, we are confident you will agree.

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UTP Copper

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S/FTP Copper

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F/UTP Copper

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Special Applications Copper

Cross-Connect | Bonded Jacket

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Outdoor Copper

Category 5e & 6

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Indoor Fiber

Interconnect | SingleUnit | MultiUnit | NanoCore™

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Indoor Fiber

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Outdoor Fiber

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Hitachi Cable America has a long history

of designing innovation into our cables. All of our designs are carefully engineered for peak performance, ease of use, and reliability. No other cable manufacturer goes to the lengths that Hitachi Cable does to ensure our products surpass our customers expectations.

On-site Copper Extrusion

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

The Advantage of Hitachi's Cable Packaging

When it comes to the performance of our products, Hitachi doesn't just evaluate the cable, we also evaluate the package from which it is dispensed. Hitachi's easy-payout boxes for Category 5e and Category 6 cables consistently receive positive reviews from distributors and installers. Designed with direct input from users, our boxes feature dual reinforced handles, vibrant, easy-to-read graphics and have proven to be as durable as the cable they contain. The boxes also have a product specific conduit fill chart printed right on the back of the box. When it comes to reels, we only use the best sanded wooden reels and durable thick-gauge plastic reels. When transporting large reels, we go to great lengths to ensure our product arrives safely. We don't cut corners when it comes to packaging and it shows.

Hitachi's Manufacturing Advantage

Hitachi Cable never stops innovating. Whether it's installing the very latest in cable twist technology, or designing and building custom equipment for a one-of-a-kind cable, Hitachi Cable has the resources to maintain a technological edge over the competition. Our in-house staff of electrical engineers keep the pipeline full with new cable designs. With new equipment frequently being installed, we can confidently satisfy increasing customer demand.

New Products in Development

Hitachi Cable and its significant research and development team are constantly releasing new products and developing future ones. A wide selection of industrial Ethernet cables is now available from Hitachi Cable. Designs include high-temp cables with or without a shield, oil and chemical resistant cables, high flex cables that can accommodate millions of cycles and tactical cables designed for harsh environments. All cables are available in Category 5e and 6 designs. These cables and more can be found in our Industrial Ethernet Solution brochure and on our website. With dozens of cable constructions available, Hitachi Cable will have the solution you need.

Moving beyond just cable, Hitachi Cable is also manufacturing assemblies. New products include fiber optic assemblies from the Datashield line of custom assemblies. Datashield assemblies allow you to determine the length, glass type, connector type and more. The final custom product is an assembly that meets your specific needs. If you are cabling a data center and want 144 stands of OM4 optical fiber terminated on MPO connectors, we can make it for you.

Hitachi Cable also has cable and assemblies designed for the specific needs of SMPTE, like the SMPTE 311M assembly. This rugged assembly meant for outdoor applications can be custom tailored to a specific length and with the connector of your choice.

These products and more are now available and can be found at the Hitachi Cable America website.

Better Materials and Practices for a Better Earth

All the products manufactured at the Manchester facility are compliant to EU Directive 2002/95/EC, also known as the Restriction of Hazardous Substances (RoHS) which regulates the use of harmful materials such as lead, cadmium and mercury. All products are also REACH compliant. Reach (Registration, Evaluation, Authorization and Restriction of Chemicals), formerly referred to as EC 1907/2006, identifies multiple chemicals that have been found harmful to people and/or the environment. Hitachi Cable endeavors to be compliant to any and all environmental regulations as soon as possible and typically prior to their formal release.

Hitachi Cable has also made advancements in waste reduction in both the raw materials used and the packaging. In the past 8 years, the Manchester facility has reduced landfill bound waste by 90% and dramatically increased recycling efforts, including the implementation of an employee aluminum can and plastic bottle recycling program. Recently, Manchester converted its entire fork truck fleet from propane to electric, significantly reducing the facilities carbon footprint and eliminating the monthly use of over 1,800 pounds of propane.

Return to TOC

Return to TOC

Return to TOC

Hitachi Cable Puts You in Charge

In compliance with TIA and ISO standards, Hitachi Cable's Category 5e, 6 and 6A cables are engineered to perform flawlessly when mated to component compliant connecting hardware and patch cords.

The Hitachi Cable R&D Laboratory continuously evaluates and monitors connecting hardware quality and performance. Examples of manufacturers of copper and fiber optic connecting hardware recognized and approved for use in Hitachi Cable certified installations include:

ADC	Belden
Commscope	Corning
Hellerman Tyton	Hubbell
Leviton	OCC
Ortronics	Panduit
Siemon	Signamax
Systimax	TE
Uniprise	

Hitachi Cable Certified Cabling Systems are only offered through Hitachi Cable Certified Installers

Only Hitachi Cable Certified Installers can offer Hitachi Cable's lifetime warranty. Select contractors from around the country are evaluated and trained to ensure that the final product is of the highest quality and performs at or above expectations. Hitachi maintains this pool of certified contractors and since contractors must renew their certification every 3 years, Hitachi Cable is confident that they are being represented by the best installers in their markets. Contractors can also take advantage of Hitachi Cable's BICSI accredited training programs to learn more and, for those who need them, obtain valuable BICSI credits. Hitachi Cable offers accredited training programs for both copper and fiber optic cables. These training programs are also available for network designers, consultants and end-users.

Who benefits from Hitachi Cable Training?

- Cabling Designers
- Cabling Installers and Technicians
- Contractors and Consultants
- Purchasers/System Specifiers
- End-Users

Hitachi Cable Offers a LIFETIME WARRANTY

Hitachi Cable is pleased to offer a lifetime warranty on certified installations. The lifetime warranty, which is only available through Hitachi Cable Certified Installers and directly backed by Hitachi Cable, offers a product performance and application assurance warranty. This means that 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 the Hitachi cables. It also includes any labor that could be associated with a warranty claim. Only a manufacturer with exceptional confidence in their products would offer a warranty like this.

Hitachi Cable Warranted 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

Supra 10G™

UTP Category 6A

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Product Highlights

- REACH & RoHS compliant
- Low Smoke CMP construction
- Unique spline construction is installation and termination friendly
- Guaranteed minimum performance
- Tested from 1 to 660 Mhz
- UL Verified Category 6A
- Performance that exceeds TIA and ISO Category 6A requirements
- Patented non-concentric design increases Alien crosstalk performance

Packaging

- 1,000 foot (305m) reels

Options

- CMP-50 rated cables available
- Available in a 4-pair construction
- Low smoke zero halogen available; Part #30224-8

Applications

- Including:

10GBASE-T 10 Gigabit Ethernet
1000BASE-T Gigabit Ethernet
1000 Mbps ATM
622 Mbps ATM
100BASE-T Ethernet
Broadband Video
POE
POE+

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Supra 10G™ (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30218-8	4	.32	8.13	47.25	21.43

Supra 10G™ (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30222-8	4	.35	8.89	46.95	21.30

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Polyolefin	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic
Star Filler	Flame-retardant thermoplastic	Plenum-rated polymer

Hitachi Cable America reserves the right to revise any specifications.

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 @ 20C
Maximum resistance unbalance	3%
Maximum capacitance unbalance	330 pF/100 meters
Maximum delay skew	45 ns/100 meters
Nominal velocity of propagation (NVP)	riser, 68% plenum, 71%
Voltage Rating	300 Volts

Unique patented non-concentric design produces Alien Crosstalk performance that far exceeds the TIA standard.

Photo is for representation purposes only.

Transmission Specifications

ANSI/TIA 568-C.2 Category 6A Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

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

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

10G RD™

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Product Highlights

- RoHS & REACH compliant
- Low Smoke CMP construction
- Tested from 1 to 500 Mhz
- UL Verified Category 6
- Single Leg Performance that exceeds TIA and ISO Category 6A requirements
- Exceeds Alien Crosstalk requirements for 10 Gigabit Ethernet
- Standard construction is installation and termination friendly
- Reduced Diameter enables higher fill rates in conduit and trays

Packaging

- 1,000 foot (305m) reels

Applications

- Including:

10GBASE-T 10 Gigabit Ethernet
1000BASE-T Gigabit Ethernet
1000 Mbps ATM
622 Mbps ATM
100BASE-T Ethernet
Broadband Video
POE
POE+

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

10G RD™ (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30263-8	4	.29	7.36	43.6	19.78

10G RD™ (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30265-8	4	.29	7.36	37.1	16.83

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Polyolefin	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic
Star Filler	Flame-retardant thermoplastic	Plenum-rated polymer

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 @ 20C
Maximum resistance unbalance	3%
Maximum capacitance unbalance	330 pF/100 meters
Maximum delay skew	45 ns/100 meters
Nominal velocity of propagation (NVP)	riser, 68% plenum, 71%
Voltage Rating	300 Volts

Unique core design permits cables to be installed alongside other cables while still providing guaranteed 10 gigabit throughput. Graphic at right illustrates six-around-one, or worst case alien crosstalk scenario.

Transmission Specifications

ANSI/TIA 568-C.2 Category 6 Verified. Category 6A Compliant
Alien Crosstalk performance per TSB-155A Guaranteed.

Single Cable Performance — ***Alien Crosstalk Performance****

	Ins. Loss	NEXT	PS NEXT	ACR	PSACR	ACRF	PS ACRF	Return Loss		PSANEXT	PSAACRF
Freq. (MHz)	Max	Min	Min	Min	Min	Min	Min	Min		Min	Min
1	2.1	74.3	72.3	72.2	70.2	67.8	64.8	20.0		67.0	62.0
4	3.8	65.3	63.3	61.5	59.5	55.8	52.8	23.0		66.3	50.2
8	5.3	60.8	58.8	55.4	53.4	49.7	46.7	24.5		63.3	44.2
10	5.9	59.3	57.3	53.4	51.4	47.8	44.8	25.0		62.3	42.2
16	7.5	56.2	54.2	48.8	46.8	43.7	40.7	25.0		60.3	38.1
20	8.4	54.8	52.8	46.4	44.4	41.8	38.8	25.0		59.3	36.2
25	9.4	53.3	51.3	44.0	42.0	39.8	36.8	24.3		58.3	35.3
31.25	10.5	51.9	49.9	41.4	39.4	37.9	34.9	23.6		57.3	32.3
62.5	15.0	47.4	45.4	32.4	30.4	31.9	28.9	21.5		54.3	26.3
100	19.1	44.3	42.3	25.2	23.2	27.8	24.8	20.1		52.3	22.2
200	27.6	39.8	37.8	12.2	10.2	21.8	18.8	18.0		49.3	18.3
250	31.1	38.3	36.3	7.3	5.3	19.8	16.8	17.3		46.3	14.3
300	34.3	37.1	35.1	2.9	0.9	18.3	15.3	16.8		44.2	12.1
400	40.1	35.3	33.3	-	-	15.8	12.8	15.9		42.5	10.5
500	45.3	33.8	31.8	-	-	13.8	10.8	15.2		41.8	8.2

*Performance Values for Alien Crosstalk guaranteed in channel configurations up to 90 meters.

UTP Copper
Return to TOC

Supra™ 660

Enhanced UTP **Category 6**

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Product Highlights

- REACH & RoHS compliant
- Low Smoke CMP construction
- Guaranteed minimum performance
- Enhanced Performance beyond TIA Standard
- Tested from 1 to 660 MHz
- UL Verified Category 6

TIA PARAMETER	GUARANTEED HEADROOM
Insertion loss	+3%
NEXT loss	+9 dB
PSNEXT loss	+9 dB
ACRF	+8 dB
PSACRF	+8 dB

Packaging

- 1,000 foot (305m) reels

Options

- CMP-50 rated cables available
- Available in a 4-pair construction

Applications

- Including:

10G BASE-T 10 Gigabit Ethernet (limited distance)
1000 BASE-T Gigabit Ethernet
1000 Mbps ATM
622 Mbps ATM
100 BASE-T Ethernet
Broadband Video
POE
POE+

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Supra™ 660 (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30016-8	4	.22	5.59	25.49	11.56

Supra™ 660 (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30022-8	4	.24	6.09	26.93	12.22

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Polyolefin	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic
Star Filler	Flame-retardant thermoplastic	Plenum-rated polymer

Hitachi Cable America reserves the right to revise any specifications.

Electrical Characteristics

Input Impedance	100 ± 15Ω (1.0 to 100 MHz) 100 ± 20Ω (100 to 250 MHz)
Maximum conductor resistance	9.38 Ω/100 meters @ 20C
Maximum resistance unbalance	3%
Maximum capacitance unbalance	330 pF/100 meters
Maximum delay skew	35 ns/100 meters (CMP) | 45 ns/100 meters (CMR)
Nominal velocity of propagation (NVP)	riser, 68%, plenum, 70%
Voltage Rating	300 Volts

Hitachi Supra 660 cables offer +9 dB of NEXT loss and PSNEXT loss margin over Category 6 requirements.

Photo is for representation purposes only.

Transmission Specifications

ANSI/TIA 568-C.2 Category 6 Verified
ISO/IEC 11801, 2nd ed. Class E Compliant

	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
Freq. (MHz)	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	16.3	26.0	14.3	24.0	24.0	32.	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	15.5	13.5	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	-	-	-	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.

Premium

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Product Highlights

- REACH & RoHS compliant
- Low Smoke CMP construction
- Guaranteed minimum performance
- Enhanced Performance beyond TIA Standard
- Tested from 1 to 660 MHz
- UL Verified Category 6

TIA PARAMETER	GUARANTEED HEADROOM
NEXT loss	+5 dB
PSNEXT loss	+5 dB
ACRF	+6 dB
PSACRF	+6 dB

Packaging

- 1,000 foot (305m) reels
- 1,000 foot (305m) Reelex (featuring reverse sequential numbering)
- 1,000 foot (305m) Reel-in-a-Box

Options

- CMP-50 rated cables available
- Available in a 4-pair construction

Applications

- Including:

10G BASE-T 10 Gigabit Ethernet (limited distance)
1000 BASE-T Gigabit Ethernet
1000 Mbps ATM
622 Mbps ATM
100 BASE-T Ethernet
Broadband Video
POE
POE+

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Premium (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30183-8	4	.20	5.1	25.74	11.68

Premium (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30212-8	4	.24	6.22	26.93	12.22

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Polyolefin	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic
Star Filler	Flame-retardant thermoplastic	Plenum-rated polymer

Hitachi Cable America reserves the right to revise any specifications.

Electrical Characteristics

Input Impedance	100 ± 15Ω (1.0 to 100 MHz) 100 ± 20Ω (101 to 160 MHz) 100 ± 22Ω (161 to 250 MHz)
Maximum conductor resistance	9.38 Ω/100 meters @ 20C
Maximum resistance unbalance	3%
Maximum capacitance unbalance	330 pF/100 meters
Maximum delay skew	35 ns/100 meters (CMP) | 45 ns/100 meters (CMR)
Nominal velocity of propagation (NVP)	riser, 68% plenum, 70%
Voltage Rating	300 Volts

Photo is for representation purposes only.

Transmission Specifications

ANSI/TIA 568-C.2 Category 6 Verified
ISO/IEC 11801, 2nd ed. Class E Compliant

	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
Freq. (MHz)	Std.	Max.	Std.	Min.	Std.	Min.	Cal.	Min.	Cal.	Min.	Std.	Min.	Std.	Min.	Std.	Min.
1	2.0	2.0	74.3	79.3	72.3	77.3	72.3	77.3	70.3	75.3	67.8	73.8	64.8	70.8	20.0	20.0
4	3.8	3.8	65.3	70.3	63.3	68.7	61.5	66.5	59.5	64.5	55.8	61.8	52.8	58.8	23.0	23.0
8	5.3	5.3	60.8	65.8	58.8	63.8	55.4	60.4	53.4	58.4	49.7	55.7	46.7	52.7	24.5	24.5
10	6.0	6.0	59.3	64.3	57.3	62.3	53.3	58.3	51.3	56.3	47.8	53.8	44.8	50.8	25.0	25.0
16	7.6	7.6	56.2	61.2	54.2	59.2	48.7	53.7	46.7	51.7	43.7	49.7	40.7	46.7	25.0	25.0
31.25	10.7	10.7	51.9	56.9	49.9	54.9	41.2	46.2	39.2	44.2	37.9	43.9	34.9	40.9	23.6	23.6
62.50	15.4	15.4	47.4	52.4	45.4	50.4	32.0	37.0	30.0	35.0	31.9	37.9	28.9	34.9	21.5	21.5
100	19.8	19.8	44.3	49.3	42.3	47.3	24.5	29.5	22.5	27.5	27.8	33.8	24.8	30.8	20.1	20.1
155	25.2	25.2	41.1	46.4	39.4	44.4	16.3	21.3	14.3	19.2	24.0	30.0	21.0	27.0	18.8	18.8
200	29.0	29.0	39.8	44.8	37.8	42.8	10.8	15.8	8.8	13.8	21.8	27.8	18.8	24.8	18.0	18.0
250	32.8	32.8	38.3	43.3	36.3	41.3	5.5	10.5	3.5	8.5	19.8	25.8	16.8	22.8	17.3	17.3
300*	-	36.4	-	42.1	-	40.1	0.7	5.7	-	3.7	-	24.3	-	21.3	-	16.8
350*	-	39.8	-	41.1	-	39.1	-	1.4	-	-	-	22.9	-	19.9	-	16.3
400*	-	43.0	-	40.3	-	38.3	-	-	-	-	-	21.8	-	18.8	-	15.9
500*	-	48.9	-	38.8	-	36.8	-	-	-	-	-	19.8	-	16.8	-	15.2
555*	-	52.0	-	38.1	-	36.1	-	-		-	-	18.9	-	15.9	-	14.9
660*	-	57.7	-	37.0	-	35.0	-	-		-	-	17.4	-	14.4	-	14.4

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

HITACHI
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Product Highlights

- REACH & RoHS compliant
- Low Smoke CMP construction
- Guaranteed minimum performance
- Enhanced Performance beyond TIA Standard
- Tested from 1 to 555 MHz
- UL Verified Category 6

TIA PARAMETER	GUARANTEED HEADROOM
NEXT loss	+3 dB
PSNEXT loss	+3 dB
ACRF	+3 dB
PSACRF	+3 dB

Packaging

- 1,000 foot (305m) reels
- 1,000 foot (305m) Reelex (featuring reverse sequential numbering)
- 1,000 foot (305m) Reel-in-a-Box

Options

- CMP-50 rated cables available
- Available in a 4-pair construction

Applications

- Including:

10G BASE-T 10 Gigabit Ethernet (limited distance)
1000 BASE-T Gigabit Ethernet
1000 Mbps ATM
622 Mbps ATM
100 BASE-T Ethernet
Broadband Video
POE
POE+

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Plus™ (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30025-8	4	.20	5.1	25.74	11.67

Plus™ (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30024-8	4	.23	5.84	22.87	10.37

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Polyolefin	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic
Filler	Flame-retardant thermoplastic	Plenum-rated polymer

Hitachi Cable America reserves the right to revise any specifications.

Electrical Characteristics

Input Impedance	100 ± 15Ω (1.0 to 250 MHz)
Maximum conductor resistance	9.38 Ω/100 meters @ 20C
Maximum resistance unbalance	5%
Maximum capacitance unbalance	330 pF/100 meters
Maximum delay skew	45 ns/100 meters
Nominal velocity of propagation (NVP)	riser, 68% plenum, 70%
Voltage Rating	300 Volts

Photo is for representation purposes only.

Transmission Specifications

ANSI/TIA 568-C.2 Category 6 Verified
ISO/IEC 11801, 2nd ed. Class E Compliant

	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
Freq. (MHz)	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.

HITACHI
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Product Highlights

- REACH & RoHS compliant
- Low Smoke CMP construction
- Guaranteed minimum performance
- Tested from 1 to 555 MHz
- UL Verified Category 6
- No internal pair separator
- Small outside diameter permits more cables per conduit than typical Category 6 cable
- Standard Reelex package made with 100% post consumer materials.

Packaging

- 1,000 foot (305m) reels
- 1,000 foot (305m) Reelex (featuring reverse sequential numbering)
- 1,000 foot (305m) Reel-in-a-Box

Applications

- Including:

10G BASE-T 10 Gigabit Ethernet (limited distance)
1000 BASE-T Gigabit Ethernet
1000 Mbps ATM
622 Mbps ATM
100 BASE-T Ethernet
Broadband Video
POE
POE+

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

ECO™ (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30237-8	4	.19	4.87	25.24	11.45

ECO™ (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30238-8	4	.21	5.48	23.12	10.5

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Polyolefin	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic

Hitachi Cable America reserves the right to revise any specifications.

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)	riser, 68% plenum, 70%
Voltage Rating	300 Volts

Photo is for representation purposes only.

Transmission Specifications

ANSI/TIA 568-C.2 Category 6 Verified
ISO/IEC 11801, 2nd ed. Class E Compliant

	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
Freq. (MHz)	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.

HITACHI
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Product Highlights

- REACH & RoHS compliant
- Tested from 1 to 250 MHz
- The industry's first Category 6 hybrid cable verified for conformance by an independent test lab.
- Component compliant to TIA and ISO Category 6 hybrid cable requirements
- Power sum compliance ensures minimum signal corruption due to alien crosstalk

Packaging

- 1,000 foot (305m) reels

Options

- Available in 2, 3, 4 and 6 leg constructions
- Custom internal jacket colors available

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Diagram scale approx. 2:1

Category 6 GoldLAN™ Hybrid (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF LEGS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30132-16	2 legs x 4-pair	.29 x .54	7.5 x 13.7	72	33
30132-24	3 legs x 4-pair	.58	14.7	104	47
30132-32	4 legs x 4-pair	.64	16.3	132	60
30132-48	6 legs x 4-pair	.802	20.4	204	93

Category 6 plenum hybrid constructions available skip-wrapped only.

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER
Primary Insulation	Polyolefin
Star Filler	Flame-retardant thermoplastic
Overall Jacket	Flame-retardant thermoplastic
Central Filler	Flame-retardant thermoplastic

2 x 4-pair | 3 x 4-pair | 4 x 4-pair | 6 x 4-pair

Hitachi Cable America reserves the right to revise any specifications.

Electrical Characteristics

Input Impedance	100 ± 15Ω (1.0 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)	68%, riser
Voltage Rating	300 Volts

Photo is for representation purposes only.

Transmission Specifications

ANSI/TIA 568-C.2 Category 6 Verified
ISO/IEC 11801, 2nd ed. Class E Compliant

	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
Freq. (MHz)	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

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Product Highlights

- REACH & RoHS compliant
- Low Smoke CMP construction
- Tested from 1 to 400 MHz
- UL Verified Category 5e

TIA PARAMETER	GUARANTEED HEADROOM
NEXT loss	+6 dB
PSNEXT loss	+6 dB
ELFEXT	+4 dB
PSELFEXT	+4 dB
Return loss	N/A

Packaging

- 1,000 foot (305m) reels
- 1,000 foot (305m) Reelex (featuring reverse sequential numbering)
- 1,000 foot (305m) Reel-in-a-Box

Options

- CMP-50 rated cables available
- Available in a 4-pair construction

Applications

- Including:

1000 BASE-T Gigabit Ethernet
1000 Mbps ATM
622 Mbps ATM
100 BASE-T Ethernet
10 BASE-T
Broadband Video
POE

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

350™ (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
38891-8	4	.18	4.67	20.36	9.24

350™ (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
38893-8	4	.179	4.547	17.86	8.10

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Polyolefin	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic

Hitachi Cable America reserves the right to revise any specifications.

Electrical Characteristics

Input Impedance	100 ± 15Ω (1.0 - 100 MHz)
Maximum conductor resistance	9.38 Ω/100 meters @ 20C
Maximum resistance unbalance	5%
Maximum capacitance unbalance	330 pF/100 meters
Nominal velocity of propagation (NVP)	riser, 68% plenum, 70%
Maximum delay skew	25 ns/100 meters
Voltage Rating	300 Volts

Hitachi 350 cables offer +6 dB of NEXT loss and PSNEXT loss margin over Category 5e requirements.

Photo is for representation purposes only.

Transmission Specifications

ANSI/TIA 568-C.2 Category 5e Verified
ISO/IEC 11801, 2nd ed. Class D Compliant

	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
Freq. (MHz)	Std.	Max.	Std.	Min.	Std.	Min.	Cal.	Min.	Cal.	Min.	Std.	Min.	Std.	Min.	Std.	Min.
1	2.0	2.0	65.3	71.3	62.3	68.3	63.3	69.3	60.3	66.3	63.8	67.8	60.8	64.8	20.0	20.0
4	4.1	4.1	56.3	62.3	53.3	59.3	52.2	58.2	49.2	55.2	51.8	55.8	48.8	52.8	23.0	23.0
8	5.8	5.8	51.8	57.8	48.8	54.8	46.0	52.0	43.0	49.0	45.7	49.7	42.7	46.7	24.5	24.5
10	6.5	6.5	50.3	56.3	47.3	53.3	43.8	49.8	40.8	46.8	43.8	47.8	40.8	44.8	25.0	25.0
16	8.2	8.2	47.2	53.2	44.2	50.2	39.0	45.0	36.0	42.0	39.7	43.7	36.7	40.7	25.0	25.0
31.25	11.7	11.7	42.9	48.9	39.9	45.9	31.2	37.2	28.2	34.2	33.9	37.9	30.9	34.9	23.6	23.6
62.5	17.0	17.0	38.4	44.4	35.4	41.4	21.4	27.4	18.4	24.4	27.9	31.9	24.9	28.9	21.5	21.5
100	22.0	22.0	35.3	41.3	32.3	38.3	13.3	19.3	10.3	16.3	23.8	27.8	20.8	24.8	20.1	20.1
155	-	28.1	-	38.4	-	35.4	4.4	10.4	1.4	7.4	-	24.0	-	21.0	-	18.8
200	-	32.4	-	36.8	-	33.8	-	4.4	-	1.4	-	21.8	-	18.8	-	18.0
250	-	36.9	-	35.3	-	32.3	-	-	-	-	-	19.8	-	16.8	-	17.3
300	-	41.0	-	34.1	-	31.1	-	-	-	-	-	18.3	-	15.3	-	16.8
350		44.9		33.1		30.1	-	-	-	-	-	16.9	-	13.9	-	16.3
400		48.5		32.3		29.3		-	-	-	-	15.8	-	12.8	-	15.9

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

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS compliant
- Low Smoke CMP construction
- Tested from 1 to 400 MHz
- UL Verified Category 5e

Packaging

- 1,000 foot (305m) reels
- 1,000 foot (305m) Reelex (featuring reverse sequential numbering)
- 1,000 foot (305m) Reel-in-a-Box

Options

- CMP-50 rated cables available
- Available in a 4-pair construction

Applications

- Including:
  1000 BASE-T Gigabit Ethernet
  1000 Mbps ATM
  622 Mbps ATM
  100 BASE-T Ethernet
  10 BASE-T
  Broadband Video
  POE

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Category 5e (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
39419-8	4	.18	4.57	20.36	9.24

Category 5e (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
38696-8	4	.17	4.55	17.86	8.10

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Polyolefin	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic

Hitachi Cable America reserves the right to revise any specifications.

Electrical Characteristics

Input impedance	100 ± 15Ω (1.0 to 100 MHz)
Maximum resistance unbalance	5%
Maximum capacitance unbalance	330 pF/100 meters
Maximum delay skew	45 ns/100 meters
Nominal velocity of propagation (NVP)	68%, riser 70%, plenum
Voltage Rating	300 Volts

Photo is for representation purposes only.

Transmission Specifications

ANSI/TIA 568-C.2 Category 5e Verified
ISO/IEC 11801, 2nd ed. Class D Compliant

	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
Freq. (MHz)	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

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

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS compliant
- Tested from 1 to 100 MHz
- Component compliant to TIA Category 5e cable requirements
- Power sum compliance ensures minimum signal corruption due to alien cross-talk

Packaging

- 1,000 foot (305m) reels

Options

- Available in 2, 3, 4 and 6 leg constructions
- Custom internal jacket colors available

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Diagram scale approx. 3:1

Category 5e GoldLAN™ Hybrid (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF LEGS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
38886-16	2 legs x 4-pair	.21 x .43	5.5 x 10.9	55.37	25.11
38886-24	3 legs x 4-pair	.46	11.7	84	38
38886-32	4 legs x 4-pair	.51	13.0	102.45	46.65
38886-48	6 legs x 4-pair	.62	15.7	160.85	72.96

Category 5e plenum hybrid constructions available skip-wrapped only.

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER
Primary Insulation	Polyolefin
Overall Jacket	Flame-retardant thermoplastic
Central Filler	Flame-retardant thermoplastic

Hitachi Cable America reserves the right to revise any specifications.

Electrical Characteristics

Input impedance	100 ± 15Ω (1.0 to 100 MHz)
Maximum resistance unbalance	5%
Maximum capacitance unbalance	330 pF/100 meters
Maximum delay skew	45 ns/100 meters
Nominal velocity of propagation (NVP)	68%, riser 70%, plenum
Voltage Rating	300 Volts

Custom configurations available

Photo is for representation purposes only.

Transmission Specifications

ANSI/TIA 568-C.2 Category 5e Verified

ISO/IEC 11801, 2nd ed. Class D Compliant

	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
Freq. (MHz)	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

Cat 5e Multi-Pair

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS compliant
- Low Smoke Plenum construction
- Tested from 1 to 100 MHz
- UL Verified Category 5e
- Power sum compliance ensures minimum signal corruption due to alien crosstalk

Packaging

- 1,000 foot (305m) reels

Options

- Consult factory for 50-pair design construction and availability

Applications

- Including:

1000 BASE-T Gigabit Ethernet
1000 Mbps ATM
622 Mbps ATM
100 BASE-T Ethernet
10 BASE-T
Broadband Video

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Hitachi Cable America reserves the right to revise any specifications.

Category 5e Power Sum Multi-pair (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30203-50	25	.454	11.531	141.0	64.0

Category 5e Power Sum Multi-pair (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30093-50	25	.49	12.4	133.25	60.44
30172-100	50	.49 x .99	12.45 x 25.15	267.0	121.11

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Polyolefin	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Plenum-rated fluoropolymer
Central Filler	Flame-retardant thermoplastic	Plenum-rated polymer
Pair Filler	Flame-retardant thermoplastic	Plenum-rated polymer

Diagram scale approx. 3:1

UTP Copper
Return to TOC

Electrical Characteristics

Input impedance	100 ± 15Ω (1.0 to 100 MHz)
Maximum resistance unbalance	5%
Maximum capacitance unbalance	330 pF/100 meters
Maximum delay skew	45 ns/100 meters
Nominal velocity of propagation (NVP)	68%, riser 70%, plenum
Voltage Rating	300 Volts

Transmission Specifications

ANSI/TIA 568-C.2 Category 5e Verified
ISO/IEC 11801, 2nd ed. Class D Compliant

	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
Freq. (MHz)	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

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS compliant
- Low Smoke Plenum construction
- Tested from 1 to 16 MHz
- Component compliant to TIA Category 3 cable requirements

Packaging

- 1,000 foot (305m) reels
- 1,000 foot (305m) Reelex (featuring reverse sequential numbering)
- 1,000 foot (305m) Reel-in-a-Box
- Available in a 4-pair construction

Applications

- Including:

  10 BASE-T
  4/16 Mbps Token Ring
  25.6 Mbps ATM

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Category 3 (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
38718-8	4	.169	4.29	17.88	8.11

Category 3 (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30111-8	4	.167	4.242	17.0	7.7

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	PVC	Low-smoke, flame-retardant thermoplastic
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic

Hitachi Cable America reserves the right to revise any specifications.

Electrical Characteristics

Characteristic impedance	100 ± 15Ω (1.0 to 16 MHz)
Maximum resistance unbalance	5%
Maximum capacitance unbalance	330 pF/100 meters
Maximum delay skew	45 ns/100 meters
Voltage Rating	300 Volts

Transmission Specifications

ANSI/TIA 568-C.2 Category 3 Compliant

FREQ. (MHz)	INS. LOSS	NEXT LOSS	ACR	STRUCTURAL RETURN LOSS
1	2.6	41.3	38.7	12.0
4	5.6	32.3	26.7	12.0
8	8.5	27.8	19.3	12.0
10	9.7	26.3	16.6	12.0
16	13.1	23.2	10.1	10.0

All values are dB/100m.

Photo is for representation purposes only.

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS compliant
- Low Smoke Plenum construction
- Tested from 1 to 16 MHz

Packaging

- 1,000 foot (305m) reels

Options

- Available in 25-, 50-, 100-, 200- and 300-pair constructions
- Consult factory for design and availability of 400-pair constructions

Applications

- Including:

  10 BASE-T
  4/16 Mbps Token Ring
  25.6 Mbps ATM

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Category 3 Power Sum Multi-pair (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30134-50	25	.38	9.7	111.43	50.54
30134-100	50	.446 x .646	11.316 x 16.396	219.95	99.77
30134-200	100	.810	20.57	436.63	198.05
30134-400	200	1.151	29.235	874.94	396.87
30134-600	300	1.33	33.7	1275.83	578.71

Category 3 Power Sum Multi-pair (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
39228-50	25	.371	9.423	104.95	47.60
39228-100	50	.420 x .641	10.669 x 16.280	202.43	91.82
39228-200	100	.743	18.872	402.01	182.34
39228-400	200	1.040	26.416	794.70	360.46
39228-600	300	1.310	33.274	1176.73	533.76

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	PVC	Low-smoke, flame-retardant thermoplastic
Overall Jacket (< 100-pair)	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic
Overall Jacket (≥ 100-pair)	Flame-retardant thermoplastic	PvDF

Hitachi Cable America reserves the right to revise any specifications.

Electrical Characteristics

Characteristic impedance	100 ± 15Ω (1.0 to 16 MHz)
Maximum resistance unbalance	5%
Maximum capacitance unbalance	330 pF/100 meters
Maximum delay skew	45 ns/100 meters
Voltage Rating	300 Volts

Transmission Specifications

ANSI/TIA 568-C.2 Category 3 Compliant

FREQ. (MHz)	INS. LOSS	NEXT LOSS	ACR	STRUCTURAL RETURN LOSS
1	2.6	41.3	38.7	12.0
4	5.6	32.3	26.7	12.0
8	8.5	27.8	19.3	12.0
10	9.7	26.3	16.6	12.0
16	13.1	23.2	10.1	10.0

All values are dB/100m.

Photo is for representation purposes only.

Return to TOC

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS compliant
- Low Smoke Plenum construction
- Tested to 1 GHz
- Compliant to ISO 11801 Class FA (Category 7A) Requirements.
- Conductor pairs are individually wrapped in foil.
- Overall braid

Packaging

- 1,000 foot (305m) reels

Applications

- Including:

  10G Base-T 10 Gigabit Ethernet

  Single cable support of multiple applications such as Ethernet, CATV, Analog voice and VOIP

  Future applications beyond 10 Gb/s

  POE

  POE+

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Cat 7A (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30250-8	4	.305	7.47	53.64	24.33

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	PLENUM
Primary Insulation	Plenum-rated fluoropolymer
Overall Jacket	Low-smoke, flame-retardant thermoplastic

Hitachi Cable America reserves the right to revise any specifications.

Return to TOC

Electrical Characteristics

Maximum resistance unbalance	2% (Within Pairs), 4% (Between Pairs)
Maximum capacitance unbalance	160 pF/100 meters
Maximum delay skew	25 ns/100 meters
Nominal velocity of propagation (NVP)	79%
Voltage Rating	300 Volts

Transmission Specifications

IEC 61156-5, 2nd ed. Category 7A Compliant

	Ins. Loss	NEXT	PS NEXT	ACR	PSACR	ACRF	PS ACRF	TCL	ELTCTL	Return Loss	CA (Type1)
Freq. (MHz)	Max	Min	Min	Cal. Min	Cal. Min	Min	Min	Min	Min	Min	Min
4	3.7	78.0	75.0	74.3	71.3	78.0	75.0	34.0	23.0	23.0	-
8	5.2	78.0	75.0	72.8	69.8	77.2	74.2	31.0	16.9	24.5	-
10	5.8	78.0	75.0	72.2	69.2	75.3	72.3	30.0	15.0	25.0	-
16	7.3	78.0	75.0	70.7	67.7	71.2	68.2	28.0	10.9	25.0	-
20	8.2	78.0	75.0	69.8	66.8	69.3	66.3	27.0	9.0	25.0	-
25	9.2	78.0	75.0	68.8	65.8	67.3	64.3	26.0	7.0	24.3	-
31.25	10.3	78.0	75.0	67.7	64.7	65.4	62.4	25.1	5.1	23.6	85.0
62.5	14.6	78.0	75.0	63.4	60.4	59.4	56.4	22.0	-	21.5	85.0
100	18.5	75.4	72.4	56.9	53.9	55.3	52.3	20.0	-	20.1	85.0
200	26.5	70.9	67.9	44.4	41.4	49.3	46.3	17.0	-	18.0	79.0
300	32.7	68.2	65.2	35.6	32.6	45.8	42.8	-	-	17.3	75.5
400	38.0	66.4	63.4	28.4	25.4	43.3	40.3	-	-	17.3	73.0
500	42.8	64.9	61.9	22.2	19.2	41.3	38.3	-	-	17.3	71.0
600	47.1	63.7	60.7	16.6	13.6	39.7	36.7	-	-	17.3	69.4
700	51.1	62.7	59.7	11.6	8.6	38.4	35.4	-	-	17.3	68.1
800	54.9	61.9	58.8	7.0	3.9	37.2	34.2	-	-	17.3	66.9
900	58.5	61.1	58.1	2.6	-	36.2	33.2	-	-	17.3	65.9
1000	61.9	60.4	57.4			35.3	32.3			17.3	65.0

All values are dB/100m.

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS compliant
- Low Smoke Plenum construction
- Tested to 600 MHz
- Compliant to ISO 11801 Class F (Category 7) Requirements.
- Conductor pairs are individually wrapped in foil.
- Overall braid

Packaging

- 1,000 foot (305m) reels

Applications

- Including:

  10G Base-T 10 Gigabit Ethernet

  Single cable support of multiple applications such as Ethernet, CATV, Analog voice and VOIP

  Future applications beyond 10 Gb/s

  POE

  POE+

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Cat 7 (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30245-8	4	.305	7.747	53.64	24.33

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	PLENUM
Primary Insulation	Plenum-rated fluoropolymer
Overall Jacket	Low-smoke, flame-retardant thermoplastic

Hitachi Cable America reserves the right to revise any specifications.

Electrical Characteristics

Maximum resistance unbalance	2% (Within Pairs), 4% (Between Pairs)
Maximum capacitance unbalance	160 pF/100 meters
Maximum delay skew	25 ns/100 meters
Nominal velocity of propagation (NVP)	79%
Voltage Rating	300 Volts

Transmission Specifications

IEC 61156-5, 2nd ed. Category 7 Compliant

	Ins. Loss	NEXT	PS NEXT	ACR	PSACR	ACRF	PS ACRF	TCL	ELTCTL	Return Loss	CA (Type2)
Freq. (MHz)	Max	Min	Min	Cal. Min	Cal. Min	Min	Min	Min	Min	Min	Min
1	2.0	78.0	75.0	76.0	73.0	78.0	75.0	40.0	35.0	-	-
4	3.7	78.0	75.0	74.3	71.3	78.0	75.0	34.0	23.0	-	-
8	5.2	78.0	75.0	72.8	69.8	77.2	74.2	31.0	16.9	-	-
10	5.9	78.0	75.0	72.1	69.1	75.3	72.3	30.0	15.0	-	-
16	7.4	78.0	75.0	70.6	67.6	71.2	68.2	28.0	10.9	-	-
20	8.3	78.0	75.0	69.7	66.7	69.3	66.3	27.0	9.0	25.0	-
25	9.3	78.0	75.0	68.7	65.7	67.3	64.3	26.0	7.0	24.3	-
31.25	10.4	78.0	75.0	67.6	64.6	65.4	62.4	25.1	-	23.6	85.0
62.5	14.9	75.5	72.5	60.6	57.6	59.4	56.4	22.0	-	21.5	85.0
100	19.0	72.4	69.4	53.4	50.4	55.3	52.3	20.0	-	20.1	85.0
200	27.5	67.9	64.9	40.4	37.4	49.3	46.3	17.0	-	18.0	79.0
250	31.0	66.4	63.4	35.5	32.5	47.3	44.3	16.0	-	17.3	77.0
300	34.2	65.2	62.2	31.1	28.1	45.8	42.8	-	-	17.3	75.5
400	40.0	63.4	60.4	23.4	20.4	43.3	40.3	-	-	17.3	73.0
500	45.3	61.9	58.9	16.7	13.7	41.3	38.3	-	-	17.3	71.0
600	50.1	60.7	57.7	10.6	7.6	39.7	36.7	-	-	17.3	69.4
600	50.1	60.7	57.7	10.6	7.6	39.7	36.7	-	-	17.3	39.4

All values are dB/100m.

Supra 10G™ F/UTP

Enhanced F/UTP Category 6A

HITACHI
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Product Highlights

- REACH & RoHS compliant
- Low Smoke CMP construction
- Tested from 1 to 660 MHz
- UL Verified Category 6A
- Small O.D. allows more cables per conduit
- Proven Shield Technology improves RFI, EMI and Alien Crosstalk performance

Packaging

- 1,000 foot (305m) reels

Options

- Available in LSZH
- Available in a 4-pair construction

Applications

- Including:

10G BASE-T 10 Gigabit Ethernet
1000 BASE-T Gigabit Ethernet
1000 Mbps ATM
622 Mbps ATM
100 BASE-T Ethernet
Broadband Video
POE
POE+

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Category 6A F/UTP (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30233-8	4	.29	7.37	40.34	18.29

Category 6A F/UTP (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30234-8	4	.29	7.37	39.02	17.70

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Polyolefin	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic
Star Filler	Flame-retardant thermoplastic	Plenum-rated polymer

Hitachi Cable America reserves the right to revise any specifications.

Electrical Characteristics

Input impedance	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)	68%, riser 70%, plenum
Voltage Rating	300 Volts

Transmission Specifications

ANSI/TIA 568-C.2 Category 6A Verified
ISO/IEC 11801, 2nd ed. Class EA Compliant

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

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

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Product Highlights

- REACH & RoHS compliant
- Low Smoke CMP construction
- Tested from 1 to 555 MHz
- UL Verified Category 6
- Proven Shield Technology improves RFI and EMI performance

Packaging

- 1,000 foot (305m) reels

Options

- Available in a 4-pair construction

Applications

- Including:

10G BASE-T 10 Gigabit Ethernet (limited distance)
1000 BASE-T Gigabit Ethernet
1000 Mbps ATM
622 Mbps ATM
100 BASE-T Ethernet
Broadband Video
POE
POE+

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Category 6 F/UTP (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30154-8	4	.29	7.37	40.33	18.29

Category 6 F/UTP (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30129-8	4	.29	7.37	39.02	17.70

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Flame-retardant thermoplastic	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic
Star Filler	Flame-retardant thermoplastic	Plenum-rated polymer

Hitachi Cable America reserves the right to revise any specifications.

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)	68%, riser 70%, plenum
Voltage Rating	300 Volts

Photo is for representation purposes only.

Transmission Specifications

ANSI/TIA 568-C.2 Category 6 Verified
ISO/IEC 11801, 2nd ed. Class E Compliant

	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
Freq. (MHz)	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.

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS compliant
- Low Smoke CMP construction
- Tested from 1 to 400 MHz
- UL Verified Category 5e
- Proven Shield Technology improves RFI and EMI performance

Packaging

- 1,000 foot (305m) reels

Options

- Available in a 4-pair construction

Applications

- Including:
  1000 BASE-T Gigabit Ethernet
  1000 Mbps ATM
  622 Mbps ATM
  100 BASE-T Ethernet
  10 BASE-T
  Broadband Video
  POE

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

Category 5e F/UTP (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
38653-8	4	.25	6.48	33.33	15.12

Category 5e F/UTP (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
39092-8	4	.25	6.48	30.93	14.03

To build a complete part number, visit page 102.

Features

DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Flame-retardant thermoplastic	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic

Hitachi Cable America reserves the right to revise any specifications.

Electrical Characteristics

Input impedance	100 ± 15Ω (1.0 to 100 MHz)
Maximum resistance unbalance	5%
Maximum capacitance unbalance	330 pF/100 meters
Maximum delay skew	45 ns/100 meters
Nominal velocity of propagation (NVP)	68%, riser 70%, plenum
Voltage Rating	300 Volts

Photo is for representation purposes only.

Transmission Specifications

ANSI/TIA 568-C.2 Category 5e Verified
ISO/IEC 11801, 2nd ed. Class D Compliant

	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
Freq. (MHz)	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	4.3	4.3	1.3	1.3	-	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

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

HITACHI
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Product Highlights

- REACH & RoHS compliant
- Pairs consist of striped conductors twisted together.

Packaging

- 1,000 foot (305m) reels

1-pair, red

2-pair

4-pair

Diagram scale approx. 3:1

Category 6 Cross-Connect

ANSI/TIA 568-C.2 Category 6 Compliant
ISO/IEC 11801, 2nd ed. Class E Compliant
Tested from 1 to 250 MHz

HITACHI PART NO.	NO. OF PAIRS	PAIR COLOR-CODING
30110-4	2	BLUE/WHITE+WHITE/BLUE, ORANGE/WHITE+WHITE/ORANGE
30110-4	2	BLUE/RED+RED/BLUE, ORANGE/RED+RED/ORANGE
30110-8	4	BLUE/WHITE+WHITE/BLUE, ORANGE/WHITE+WHITE/ORANGE, GREEN/WHITE+WHITE/GREEN, BROWN/WHITE+WHITE/BROWN

To build a complete part number, visit page 102.

Category 5e Cross-Connect

ANSI/TIA 568-C.2 Category 5e Compliant
ISO/IEC 11801, 2nd ed. Class D Compliant
Tested from 1 to 100 MHz

HITACHI PART NO.	NO. OF PAIRS	PAIR COLOR-CODING
30153-2	1	ORANGE/WHITE+WHITE/ORANGE
30153-4	2	BLUE/RED+RED/BLUE, ORANGE/RED+RED/ORANGE
30153-8	4	BLUE/WHITE+WHITE/BLUE, ORANGE/WHITE+WHITE/ORANGE, GREEN/WHITE+WHITE/GREEN, BROWN/WHITE+WHITE/BROWN

To build a complete part number, visit page 102.

Category 3 Cross-Connect

ANSI/TIA 568-C.2 Category 3 Compliant
Tested from 1 to 16 MHz

HITACHI PART NO.	NO. OF PAIRS	PAIR COLOR-CODING
30124-2	1	ORANGE/WHITE+WHITE/ORANGE
30124-2	1	BLUE/WHITE+WHITE/BLUE
30124-2	1	BLUE/YELLOW+YELLOW/BLUE
30124-2	1	GREEN/WHITE+WHITE/GREEN
30124-2	1	RED/BLACK+BLACK/RED

To build a complete part number, visit page 102.

Hitachi Cable America reserves the right to revise any specifications.

Features

PAIR DETAIL

DIELECTRIC MATERIALS	CATEGORY 3	CATEGORY 5e AND CATEGORY 6
Primary Insulation	Polyolefin	Polyolefin

Category 3

Category 5e

Category 6

Photo is for representation purposes only.

Special Applications
Return to TOC

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS compliant
- Low Smoke CMP construction
- Bonded leg constructions facilitate easier cable pulls
- Easy-tear web allows quick cable separation in the field

Packaging

- 1,000 foot (305m) reels

Options

- Custom leg configurations available
- 2-pair leg constructions available

Temp Range

- Storage Temperature
  -40C to +60C (-40F to +140F)
- Installation Temperature
  0C to +60C (+32F to +140F)
- Operation Temperature
  -20C to +50C (-4F to +122F)

2 leg, category 3/5e construction

2 leg, category 6 construction

Diagram scale approx. 2:1

Multi-Net™ Bonded Jacket (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

HITACHI PART NO.	CATEGORY OF EACH 4-PAIR UTP LEG	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
TWO LEG CONSTRUCTIONS					
30120	6 x 6	.215 x .450	5.461 x 11.430	57.60	26.12
38730	5e x 5e	.180 x .380	4.572 x 9.652	41.67	18.90

To build a complete part number, visit page 102.

Multi-Net™ Bonded Jacket (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	CATEGORY OF EACH 4-PAIR UTP LEG	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
TWO LEG CONSTRUCTIONS					
30086	6 x 6	.25 x .52	6.4 x 13.2	50.0	22.7
38743	5e x 5e	.193 x .406	4.902 x 10.312	42.15	19.12

To build a complete part number, visit page 102.

Features

Hitachi Cable America reserves the right to revise any specifications.

Transmission Specifications

Category 5e Leg

- **ANSI/TIA 568-C.2 Category 5e Compliant**
- **ISO/IEC 11801, 2nd ed. Class D Compliant**

Category 6 Leg

- **ANSI/TIA 568-C.2 Category 6 Compliant**
- **ISO/IEC 11801, 2nd ed. Class E Compliant**

Photo is for representation purposes only.

Special Applications
Return to TOC

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS compliant
- Suitable for direct burial, lashed aerial, duct and underground conduit applications
- Cable core is filled with non-conductive, water-blocking gel
- Rugged black polyolefin jacket
- UV resistant jacket

Packaging

- 1,000 foot (305m) reels

Options

- Category 3 outdoor cables available
- Available in a 4-pair construction

Applications

- Including:

  10G BASE-T 10 Gigabit Ethernet (limited distance for Cat 6 only)
  1000 BASE-T Gigabit Ethernet
  1000 Mbps ATM
  622 Mbps ATM
  100 BASE-T Ethernet
  Broadband Video

Temp Range

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

Category 5e and Category 6 Outdoor

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	CABLE mm	WEIGHT lbs/1000ft	kg/305m
Category 5e					
30145-8	4	0.23	5.8	25.75	11.68
Category 6					
30180-8	4	0.270	6.858	34.65	15.72

To build a complete HCM part number, visit page 102.

Features

Category 5e

Category 6

DIELECTRIC MATERIALS	OUTDOOR UTP CABLES
Primary Insulation	Polyolefin
Overall Jacket	Medium density polyolefin

Hitachi Cable America reserves the right to revise any specifications.

Electrical Characteristics

Input impedance 100 ± 15 Ω (1.0 to 100 MHz)
100 ± 20 Ω (101 to 250 MHz)
Maximum resistance unbalance 5%
Voltage Rating 300 Volts

Maximum capacitance unbalance
330 pF/100 meters
Maximum delay skew
45 ns/100 meters
Nominal velocity of propagation (NVP) 63%

Transmission Specifications

ANSI/TIA 568-C.2 Category 5e Compliant
ISO/IEC 11801, 2nd ed. Class D Compliant

	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
Freq. (MHz)	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

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

Transmission Specifications

ANSI/TIA 568-C.2 Category 6 Compliant
ISO/IEC 11801, 2nd ed. Class E Compliant

	Ins. Loss		NEXT		PSNEXT		ACR		PSACR		ACRF		PSACRF		Return Loss	
Freq. (MHz)	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

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

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Special Applications
Return to TOC

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Product Highlights

- RoHS & REACH compliant.
- 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.
- Extremely flexible for easy handling.

Options

- Cables with 600 micron buffer available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Violet for OM4 is available
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

1-fiber Interconnect

2-fiber Interconnect

2-fiber Zip Cord

Diagram scale approx. 5:1

Interconnect (Riser)

(UL) OFNR c(UL) OFNR FT4

FIBER COUNT	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
1	60001-1	60004-1	60464-1	61838-1	60040-1
1	60037-1	60003-1	60465-1	61791-1	60039-1
1	60038-1	60002-1	60466-1	61792-1	60010-1
1	60425-1	60462-1	60467-1	61793-1	60489-1
2	60001-2	60004-2	60464-2	61838-2	60040-2
2	60514-2	60063-2	60463-2	61842-2	60012-2
zip	60005-2	60007-2	60501-2	61844-2	60011-2

Features

DIELECTRIC MATERIALS	RISER
Overall Jacket	Flame-retardant thermoplastic

Interconnect (Riser)

(UL) OFNR c(UL) OFNR FT4

FIBER COUNT	CABLE O.D. in.	CABLE O.D. mm	RECOMMENDED MAXIMUM LOADS INSTALL lbs-f	INSTALL N	OPERATION lbs-f	OPERATION N	CABLE WEIGHT lbs/1000 ft	CABLE WEIGHT kg/1000m
1	0.114	2.9	96	427	48	213	4.9	7.3
1	0.094	2.4	96	427	48	213	3.6	5.4
1	0.080	2.0	48	213	24	106	3.2	4.8
1	0.063	1.6	48	213	24	106	1.8	2.7
2	0.114	2.9	96	427	48	213	11.5	17.1
2	0.190	4.8	128	569	64	284	4.3	6.4
zip	.113x.140	2.9x5.8	128	569	64	284	10.2	15.2

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: -10° to 60°C (14° to 140°F)
Operating: -20° to 70°C (-4° to 158°F)

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Optical Specifications

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

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Product Highlights

- RoHS & REACH compliant.
- 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.
- Extremely flexible for easy handling.

Options

- Cables with 600 micron buffer available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Violet for OM4 is available
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

1-fiber Interconnect

2-fiber Interconnect

2-fiber Zip Cord

Diagram scale approx. 5:1

Interconnect (Plenum)

(UL) OFNP c(UL) OFNP FT6

FIBER COUNT	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
1	60042-1	60022-1	60472-1	61851-1	60044-1
1	60430-1	60468-1	60473-1	61852-1	60490-1
1	60431-1	60469-1	60474-1	61853-1	60491-1
1	60432-1	60470-1	60475-1	61854-1	60492-1
2	60042-2	60022-2	60472-2	61851-2	60044-2
2	60024-2	60026-2	60471-2	61855-2	60031-2
zip	60023-2	60008-2	60502-2	61857-2	60030-2

Features

DIELECTRIC MATERIALS — PLENUM

Overall Jacket — Low-smoke, flame-retardant thermoplastic

Interconnect (Plenum)

(UL) OFNP c(UL) OFNP FT6

FIBER COUNT	CABLE O.D. in.	CABLE O.D. mm	RECOMMENDED INSTALL lbs-f	RECOMMENDED INSTALL N	MAXIMUM LOADS OPERATION lbs-f	MAXIMUM LOADS OPERATION N	CABLE WEIGHT lbs/1000 ft	CABLE WEIGHT kg/1000m
1	0.114	2.9	96	427	48	213	5.6	8.3
1	0.094	2.4	96	427	48	213	4.7	6.9
1	0.080	2.0	48	213	24	106	3.6	5.3
1	0.063	1.6	48	213	24	106	2.0	2.9
2	0.114	2.9	96	427	48	213	6.4	9.5
2	0.190	4.8	128	569	64	284	13.1	19.4
zip	.113x.235	2.9x6.0	128	569	64	284	13.2	19.6

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: 0° to 60°C (32° to 140°F)
Operating: 0° to 70°C (32° to 158°F)

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Optical Specifications

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

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Product Highlights

- RoHS & REACH compliant.
- 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.
- Extremely flexible for easy handling.

Options

- Cables with 600 micron buffer available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Violet for OM4 is available
- Third Party tested for compliance to the following standards:
  -IEC 60332-3-24 (Flame Spread)
  -IEC 61034-2 (Low Smoke)
  -IEC 60754-1&2 (Non-Halogen)

Diagram scale approx. 5:1

Interconnect (LSZH)

Low Smoke Zero Halogen

FIBER COUNT	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
1	62124-1	62125-1	62126-1	62127-1	62029-1
1	62129-1	62130-1	62131-1	62132-1	62133-1
1	62135-1	62136-1	62137-1	62138-1	62139-1
1	62141-1	62142-1	62143-1	62144-1	62145-1
2	62147-2	62148-2	62149-2	62150-2	62151-2
2	62124-2	62125-2	62126-2	62127-2	62029-2
zip	62153-2	62154-2	62155-2	62156-2	62157-2

Features

DIELECTRIC MATERIALS	FRPE
Overall Jacket	FRPE

Interconnect (LSZH)

Low Smoke Zero Halogen

FIBER COUNT	CABLE O.D. in.	CABLE O.D. mm	RECOMMENDED MAXIMUM LOADS INSTALL lbs-f	INSTALL N	OPERATION lbs-f	OPERATION N	CABLE WEIGHT lbs/1000 ft	CABLE WEIGHT kg/1000m
1	0.114	2.9	96	427	48	213	5.5	8.2
1	0.094	2.4	96	427	48	213	4.1	6.1
1	0.080	2.0	48	213	24	106	3.5	5.2
1	0.063	1.6	48	213	24	106	1.85	2.8
2	0.19	4.8	96	427	48	213	12.9	19.2
2	0.114	2.9	128	569	64	284	4.6	6.8
zip	.113 x 229"	2.9 x 5.8	128	569	64	284	11.5	17.1

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: -10° to 60°C (14° to 140°F)
Operating: -20° to 70°C (-4° to 158°F)

Mechanical Specifications

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

plus CORNING ClearCurve® Optical Fiber

Optical Specifications

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

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Product Highlights

- RoHS and REACH compliant.
- 900 micron buffered design recommended for easy termination.
- All Multimode, and single-mode 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

- Cables with 600 micron buffer available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Low smoke zero halogen available.
- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Violet for OM4 is available
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

Diagram scale approx. 2:1

SingleUnit (Riser)

(UL) OFNR c(UL) OFNR FT4

Fiber Count	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
2	60514-2	60063-2	60463-2	61842-2	60012-2
4	60515-4	60516-4	60520-4	61865-4	60014-4
6	60515-6	60516-6	60520-6	61865-6	60014-6
8	60515-8	60516-8	60520-8	61865-8	60014-8
10	60515-10	60516-10	60520-10	61865-10	60014-10
12	60515-12	60516-12	60520-12	61865-12	60014-12
24	60515-24	60516-24	60520-24	61865-24	60014-24

Features

DIELECTRIC MATERIALS	RISER
Overall Jacket	Flame-retardant thermoplastic

SingleUnit (Riser)

(UL) OFNR c(UL) OFNR FT4

FIBER COUNT	CABLE O.D.		RECOMMENDED INSTALL		MAXIMUM LOADS OPERATION		CABLE WEIGHT	
	in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
2	.190	4.8	128	569	64	284	11.5	17.1
4	.190	4.8	128	569	64	284	13.0	19.4
6	.190	4.8	128	569	64	284	14.5	21.6
8	.230	5.8	160	712	80	356	18.5	27.6
10	.230	5.8	160	712	80	356	20.0	29.8
12	.230	5.8	160	712	80	356	21.5	32.0
24	.350	8.8	288	1282	144	641	52.4	78.1

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: -10° to 60°C (14° to 140°F)
Operating: -20° to 70°C (-4° to 158°F)

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Optical Specifications

TIA/EIA-568-C.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) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Product Highlights

- RoHS & REACH compliant.
- 900 micron buffered design recommended for easy termination.
- All Multimode, and single-mode 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

- Cables with 600 micron buffer available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Violet for OM4 is available
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

Diagram scale approx. 2:1

SingleUnit (Plenum)

(UL) OFNP c(UL) OFNP FT6

Fiber Count	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
2	60024-2	60026-2	60471-2	61855-2	60031-2
4	60517-4	60518-4	60522-4	61868-4	60029-4
6	60517-6	60518-6	60522-6	61868-6	60029-6
8	60517-8	60518-8	60522-8	61868-8	60029-8
10	60517-10	60518-10	60522-10	61868-10	60029-10
12	60517-12	60518-12	60522-12	61868-12	60029-12
24	60517-24	60518-24	60522-24	61868-24	60029-24

Features

DIELECTRIC MATERIALS	PLENUM
Overall Jacket	Low-smoke, flame-retardant thermoplastic

SingleUnit (Plenum)

(UL) OFNP c(UL) OFNP FT6

FIBER COUNT	CABLE O.D.		RECOMMENDED INSTALL		MAXIMUM LOADS OPERATION		CABLE WEIGHT	
	in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
2	.190	4.8	128	569	64	284	13.3	19.8
4	.190	4.8	128	569	64	284	14.5	21.6
6	.190	4.8	128	569	64	284	15.7	23.4
8	.230	5.8	160	712	80	356	20.9	31.1
10	.230	5.8	160	712	80	356	21.7	32.3
12	.230	5.8	160	712	80	356	23.0	34.3
24	.350	8.8	288	1282	144	641	52.4	78.1

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: 0° to 60°C (32° to 140°F)
Operating: 0° to 70°C (32° to 158°F)

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Optical Specifications

TIA/EIA-568-C.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) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Product Highlights

- RoHS & REACH compliant.
- 900 micron buffered design recommended for easy termination.
- All Multimode, and single-mode cables (except OM1) utilize bend-insensitive optical fibers.
- Each fiber is color coded for easy identification.
- Compact distribution design.
- Ideal intra-building, multi-floor cable solution.
- Lightweight, flexible aramid yarns enhance strength.

Options

- Cables with a 600 micron buffer available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Low smoke zero halogen available.
- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Violet for OM4 is available
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

48-fibers (12 tubes of 4-fibers)

48-fibers
(8 tubes of 6-fibers)

48-fibers
(4 tubes of 12-fibers)

Diagram scale approx. 1:1

MultiUnit (Riser)

(UL) OFNR c(UL) OFNR FT4

FIBER COUNT	FIBERS PER TUBE	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
12	2	60369-12	60594-12	60585-12	61870-12	60621-12
24	2	60369-24	60594-24	60585-24	61870-24	60621-24
24	4	60564-24	60588-24	60591-24	61871-24	60627-24
48	4	60564-48	60588-48	60591-48	61871-48	60627-48
18	6	60567-18	60595-18	60581-18	61872-18	60633-18
24	6	60567-24	60595-24	60581-24	61872-24	60633-4
36	6	60567-36	60595-36	60581-36	61872-36	60633-36
48	6	60567-48	60595-48	60581-48	61872-48	60633-48
72	6	60567-72	60595-72	60581-72	61872-72	60633-72
24	8	60569-24	60600-24	60603-24	61873-24	60638-24
32	8	60569-32	60600-32	60603-32	61873-32	60638-32
48	8	60569-48	60600-48	60603-48	61873-48	60638-48
72	8	60569-72	60600-72	60603-72	61873-72	60638-72
36	12	60006-36	60009-36	60613-36	61874-36	60015-36
48	12	60006-48	60009-48	60613-48	61874-48	60015-48
60	12	60006-60	60009-60	60613-60	61874-60	60015-60
72	12	60006-72	60009-72	60613-72	61874-72	60015-72
96	12	60006-96	60009-96	60613-96	61874-96	60015-96
144	12	60006-144	60009-144	60613-144	61874-144	60015-144

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: -10° to 60°C (14° to 140°F)
Operating: -20° to 70°C (-4° to 158°F)

Features

DIELECTRIC MATERIALS	RISER
Overall Jacket	Flame-retardant thermoplastic

MultiUnit (Riser)

(UL) OFNR c(UL) OFNR FT4

FIBER COUNT	# FIBERS PER TUBE	TUBE LAYOUT	CABLE O.D. in.	CABLE O.D. mm	RECOMMENDED INSTALL lbs-f	RECOMMENDED INSTALL N	MAXIMUM LOADS OPERATION lbs-f	MAXIMUM LOADS OPERATION N	CABLE WEIGHT lbs/1000 ft	CABLE WEIGHT kg/1000m
12	2	6xCSM	.650	16.5	768	3418	384	1709	126.0	187.7
24	2	9x3xCSM	.903	22.9	1536	6837	768	3418	208.0	309.9
24	4	6xCSM	.650	16.5	768	3418	384	1709	135.0	201.2
48	4	9x3xCSM	.903	22.9	1536	6837	768	2418	225.0	335.3
18	6	3xCSM	.499	12.6	384	1709	192	854	75.0	111.8
24	6	4xCSM	.538	13.6	512	2279	256	1139	93.0	138.6
36	6	6xCSM	.650	16.5	768	3418	384	1709	143.0	213.1
48	6	8xCSM	.792	20.1	1024	4557	512	2279	222.0	330.8
72	6	9x3xCSM	.903	22.9	1536	6837	768	3418	241.0	359.1
24	8	3xCSM	.579	14.7	480	2136	240	1068	97.0	144.5
32	8	4xCSM	.634	16.1	640	2848	320	1424	122.0	181.8
48	8	6xCSM	.770	19.5	960	4273	480	2136	191.0	284.6
72	8	9xCSM	1.00	25.4	1440	6409	720	3204	350.0	521.5
36	12	3xCSM	.579	14.7	480	2136	240	1068	106.0	157.9
48	12	4xCSM	.634	16.1	640	2848	320	1424	134.0	199.7
60	12	5xCSM	.701	17.8	800	3561	400	1780	169.0	251.8
72	12	6xCSM	.770	19.5	960	4272	480	2136	208.0	309.9
96	12	8xCSM	.937	237	1280	5697	640	2848	321.0	478.3
144	12	9x3xCSM	1.06	26.9	1920	8545	960	4272	355.0	529.0

Mechanical Specifications

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

plus CORNING®
ClearCurve® Optical Fiber

Optical Specifications

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

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Product Highlights

- RoHS & REACH compliant.
- 900 micron buffered design recommended for easy termination.
- All Multimode, and single-mode cables (except OM1) utilize bend-insensitive optical fibers.
- Each fiber is color coded for easy identification.
- Compact distribution design.
- Ideal intra-building, multi-floor cable solution.
- Lightweight, flexible aramid yarns enhance strength.

Options

- Cables with a 600 micron buffer available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Standard jacket colors are:
  - Yellow: OS2
  - Orange: OM1 & OM2
  - Aqua: OM3 & OM4
  - *Note: Violet for OM4 is available*
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

48-fibers (12 tubes of 4-fibers)

48-fibers (8 tubes of 6-fibers)

48-fibers (4 tubes of 12-fibers)

Diagram scale approx. 1:1

MultiUnit (Plenum)

(UL) OFNP c(UL) OFNP FT6

FIBER COUNT	FIBERS PER TUBE	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
12	2	60559-12	60582-12	60586-12	61875-12	60622-12
24	2	60559-24	60582-24	60586-24	61875-24	60622-24
24	4	60565-24	60589-24	60592-24	61876-24	60628-24
48	4	60565-48	60589-48	60592-48	61876-48	60628-48
18	6	60258-18	60596-18	60598-18	61877-18	60634-18
24	6	60258-24	60596-24	60598-24	61877-24	60634-24
36	6	60258-36	60596-36	60598-36	61877-36	60634-36
48	6	60258-48	60596-48	60598-48	61877-48	60634-48
72	6	60258-72	60596-72	60598-72	61877-72	60634-72
24	8	60570-24	60601-24	60604-24	61878-24	60639-24
32	8	60570-32	60601-32	60604-32	61878-32	60639-32
48	8	60570-48	60601-48	60604-48	61878-48	60639-48
72	8	60570-72	60601-72	60604-72	61878-72	60639-72
36	12	60027-36	60028-36	60614-36	61879-36	60033-36
48	12	60027-48	60028-48	60614-48	61879-48	60033-48
60	12	60027-60	60028-60	60614-60	61879-60	60033-60
72	12	60027-72	60028-72	60614-72	61879-72	60033-72
96	12	60027-96	60028-96	60614-96	61879-96	60033-96
144	12	60027-144	60028-144	60614-144	61879-144	60033-144

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: 0° to 60°C (32° to 140°F)
Operating: 0° to 70°C (32° to 158°F)

Features

DIELECTRIC MATERIALS	PLENUM
Overall Jacket	Low-smoke, flame-retardant thermoplastic

MultiUnit (Plenum)

(UL) OFNP c(UL) OFNP FT6

FIBER COUNT	# FIBERS PER TUBE	TUBE LAYOUT	CABLE O.D. in.	CABLE O.D. mm	RECOMMENDED INSTALL lbs-f	RECOMMENDED INSTALL N	MAXIMUM LOADS OPERATION lbs-f	MAXIMUM LOADS OPERATION N	CABLE WEIGHT lbs/1000 ft	CABLE WEIGHT kg/1000m
12	2	6xCSM	.630	16.0	768	3418	384	1709	131.0	195.2
24	2	9x3xCSM	.903	22.9	1536	6837	768	3418	249.0	371.0
24	4	6xCSM	.630	16.0	768	3418	384	1709	140.0	2086
48	4	9x3xCSM	.903	22.9	1536	6837	768	3418	263.0	391.9
18	6	3xCSM	.479	12.1	384	1709	192	854	77.0	114.7
24	6	4xCSM	.518	13.1	512	2279	256	1139	97.0	144.5
36	6	6xCSM	.630	16.0	768	3418	384	1709	148.0	220.5
48	6	8xCSM	.792	20.1	1024	4557	512	2279	253.0	377.0
72	6	9x3xCSM	.903	22.9	1536	6837	768	3418	280.0	417.2
24	8	3xCSM	.559	14.1	480	2136	240	1068	100.0	149.0
32	8	4xCSM	.614	15.5	640	3848	320	1424	127.0	189.2
48	8	6xCSM	.750	19.0	960	4273	480	2136	199.0	296.5
72	8	9xCSM	1.00	25.4	1440	6409	720	3204	393.0	585.6
36	12	3xCSM	.559	14.1	480	2136	240	1068	109.0	162.4
48	12	4xCSM	.614	15.5	640	2848	320	1424	139.0	207.1
60	12	5xCSM	.681	17.2	800	3561	400	1780	175.0	260.8
72	12	6xCSM	.750	19.0	960	4272	480	2136	216.0	321.8
96	12	8xCSM	.937	23.7	1280	5697	640	2848	360.0	536.4
144	12	9x3xCSM	1.06	26.9	1920	8545	960	4272	404.0	602.0

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Optical Specifications

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

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Product Highlights

- RoHS & REACH compliant.
- Multimode and singlemode cables 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.
- No gel design makes installation quick, easy and clean.
- Each fiber is color coded for easy identification.
- Flexible and easy to handle.
- Lightweight, flexible Aramid yarns enhance strength.

Options

- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Violet for OM4 is available
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

Zip Cord

Diagram scale approx. 5:1

NanoCore™ Loose Tube No Gel Distribution Zip Cord (Plenum)

(UL) OFNP c(UL) OFNP FT6

FIBER COUNT	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
12	61546-12	61539-12	61882-12	61547-12
24	61546-24	61539-24	61882-24	61547-24

Features

DIELECTRIC MATERIALS	PLENUM
Overall Jacket	Low-smoke, flame-retardant thermoplastic

NanoCore™ Loose Tube No Gel Distribution Zip Cord (Plenum)

(UL) OFNP c(UL) OFNP FT6

FIBER COUNT	CABLE O.D. in.	CABLE O.D. mm	RECOMMENDED MAXIMUM LOADS INSTALL lbs-f	INSTALL N	OPERATION lbs-f	OPERATION N	CABLE WEIGHT lbs/1000 ft	CABLE WEIGHT kg/1000m
12	.118 x .255	3.0 x 6.47	128	569	64	284	11.3	16.8
24	.118 x .255	3.0 x 6.47	128	569	64	284	11.4	17.0

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: 0° to 60°C (32° to 140°F)
Operating: 0° to 70°C (32° to 158°F)

Optical Specifications

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

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

Hitachi Cable America reserves the right to revise any specifications.

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

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Product Highlights

- RoHS & REACH compliant.
- All Multimode, and single-mode 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.
- No gel design makes installation quick, easy and clean.
- Each fiber is color coded for easy identification.
- Flexible and easy to handle.

Options

- Riser/LSZH cables available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Standard jacket colors are:
  - Yellow: OS2
  - Orange: OM1 & OM2
  - Aqua: OM3 & OM4
  - *Note: Violet for OM4 is available*
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.
- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3).
- Cables with 3.0 mm tubes are available.

Applications

- Suitable for high-density installations like data centers, central offices and overall premises applications.
- For additional applications, visit the HCA website.

NanoCore™ Loose Tube No Gel Distribution Single-Jacket (Plenum)

(UL) OFNP c(UL) OFNP FT6

Fiber count	Fibers per tube	Tube layout	Tube OD in.	Tube OD mm	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2[1]
6	-	-	-	-	61537-6	61506-6	61507-6	61883-6	61538-6
12	-	-	-	-	61537-12	61506-12	61507-12	61883-12	61538-12
24[2]	-	-	-	-	61537-24	61506-24	61507-24	61883-24	61538-24
24	12	2+FxCSM	0.079	2.0	62220-24	62214-24	62216-24	62218-24	62205-24
36	12	3xCSM	0.079	2.0	62220-36	62214-36	62216-36	62218-36	62205-36
48	12	4xCSM	0.079	2.0	62220-48	62214-48	62216-48	62218-48	62205-48
72	12	6xCSM	0.079	2.0	62220-72	62214-72	62216-72	62218-72	62205-72
96	12	8xCSM	0.079	2.0	62220-96	62214-96	62216-96	62218-96	62205-96
144	12	9x3xCSM	0.079	2.0	62220-144	62214-144	62216-144	62218-144	62205-144
144	48	3XCSM	0.210	5.3	62172-144	62171-144	62168-144	62169-144	62166-144

Notes:
1: OS2 glass is compliant to ITU-T G.657.A1
2: 24-strand single-tube layout has two 12-strand bundles that are separated by colored nylon binders.

Abbreviations:
CSM = Central Strength Member, F = Filler

Features

DIELECTRIC MATERIALS

Overall Jacket

PLENUM

Low-smoke, flame-retardant thermoplastic

12 fibers | 24 fibers | 48 fibers | 144 fibers

NanoCore™ Loose Tube No Gel Distribution Single-Jacket (Plenum)

(UL) OFNP c(UL) OFNP FT6

Fiber count	Fibers per tube	Tube layout	Tube OD in.	Tube OD mm	Cable OD in.	Cable OD mm	RECOMMENDED MAXIMUM LOADS Tensile load Install lbs	Install N	Operation lbs	Operation N	Cable weight lbs/kft	Cable weight Kg/Km
6	-	-	-	-	0.118	3.0	100	445.1	30	133.5	5.6	8.3
12	-	-	-	-	0.118	3.0	100	445.1	30	133.5	5.9	8.8
24	-	-	-	-	0.177	4.5	150	667.6	45	200.3	13.1	19.5
24	12	2+FxCSM	0.079	2.0	0.234	5.9	150	667.6	45	200.3	20.7	30.8
36	12	3xCSM	0.079	2.0	0.234	5.9	150	667.6	45	200.3	21.2	31.5
48	12	4xCSM	0.079	2.0	0.256	6.5	150	667.6	45	200.3	25.6	38.1
72	12	6xCSM	0.079	2.0	0.295	7.5	150	667.6	45	200.3	36	53.6
96	12	8xCSM	0.079	2.0	0.344	8.7	150	667.6	45	200.3	48.5	72.2
144	12	9x3xCSM	0.079	2.0	0.39	9.9	150	667.6	45	200.3	54.1	80.5
144	48	3XCSM	0.210	5.3	0.522	13.2	320	1424.3	160	712.2	81.72	121.6

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: 0° to 60°C (32° to 140°F)
Operating: 0° to 70°C (32° to 158°F)

Optical Specifications

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

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

Hitachi Cable America reserves the right to revise any specifications.

Mechanical Specifications

- Bend radius, no load = 10x cable overall diameter
- Bend radius, load = 15x cable overall diameter
- Compliant to TIA 568-C.3, ISO/IEC 11801 & Telcordia GR-409.

plus CORNING ClearCurve® Optical Fiber

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Product Highlights

- RoHS & REACH compliant.
- Multimode and singlemode cables 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.
- No gel design makes installation quick, easy and clean.
- Each fiber is color coded for easy identification.
- Color-coded binders separate fiber strands into bundles of 12.
- Rugged dual-jacket design.
- Flexible and easy to handle.
- Lightweight, flexible Aramid yarns enhance strength.

Options

- Cables with improved attenuation available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Violet for OM4 is available
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

12-fibers

Diagram scale approx. 3:1

NanoCore™Loose Tube No Gel Distribution Dual-Jacket (Plenum)

(UL) OFNP c(UL) OFNP FT6

FIBER COUNT	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
12	61549-12	61509-12	61884-12	61550-12
24	61549-24	61509-24	61884-24	61550-24
36	61549-36	61509-36	61884-36	61550-36
48	61549-48	61509-48	61884-48	61550-48
72	61549-72	61509-72	61884-72	61550-72
96	61549-96	61509-96	61884-96	61550-96
144	61549-144	61509-144	61884-97	61550-144

Features

DIELECTRIC MATERIALS	PLENUM
Overall Jacket	Low-smoke, flame-retardant thermoplastic

NanoCore™Loose Tube No Gel Distribution Dual-Jacket (Plenum)

(UL) OFNP c(UL) OFNP FT6

FIBER COUNT	12-Fiber Bundles	CABLE O.D. in.	CABLE O.D. mm	RECOMMENDED INSTALL lbs-f	RECOMMENDED INSTALL N	MAXIMUM LOADS OPERATION lbs-f	MAXIMUM LOADS OPERATION N	CABLE WEIGHT lbs/1000ft	CABLE WEIGHT kg/1000m
12	1	.335	8.5	384	1709	195	868	47.0	70.0
24	2	.335	8.5	384	1709	195	868	47.2	70.3
36	3	.335	8.5	384	1709	195	868	47.4	70.6
48	4	.335	8.5	384	1709	195	868	47.6	70.9
72	6	.335	8.5	384	1709	195	868	47.8	71.2
96	8	.385	9.8	384	1709	195	868	60.3	89.7
144	12	.47	11.9	384	1709	195	868	88.3	131.5

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: 0° to 60°C (32° to 140°F)
Operating: 0° to 70°C (32° to 158°F)

Mechanical Specifications

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

Inner Jacket Diameters

12-72 Strand = .24 inches
96 Strand = .29 inches
144 Strand = .37 inches

plus CORNING® ClearCurve® Optical Fiber

Optical Specifications

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

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Product Highlights

- RoHS & REACH compliant.
- Multimode and singlemode cables 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.
- No gel design makes installation quick, easy and clean.
- Each fiber is color coded for easy identification.
- Color-coded binders separate fiber strands into bundles of 12.
- Rugged dual-jacket design.
- Flexible and easy to handle.
- Lightweight, flexible Aramid yarns enhance strength.
- Compliant To:
  - -IEC 60332-3-24 (Flame Spread)
  - -IEC 61034-2 (Low Smoke)
  - -IEC 60754-1&2 (Non-Halogen)

Options

- Cables with improved attenuation available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Standard jacket colors are:
  - Yellow: OS2
  - Orange: OM1 & OM2
  - Aqua: OM3 & OM4
  - *Note: Violet for OM4 is available*
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.
- OM1 cables available.

12-fibers

Diagram scale approx. 3:1

NanoCore™ Loose Tube No Gel Distribution Dual-Jacket (LSZH)

Low Smoke Zero Halogen

Fiber Count	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
12	62122-12	62030-12	62123-12	62031-12
24	62122-24	62030-24	62123-24	62031-24
36	62122-36	62030-36	62123-36	62031-36
48	62122-48	62030-48	62123-48	62031-48
72	62122-72	62030-72	62123-72	62031-72
96	62122-96	62030-96	62123-96	62031-96
144	62122-144	62030-144	62123-144	62031-144

Features

DIELECTRIC MATERIALS	FRPE
Overall Jacket	FRPE

NanoCore™ Loose Tube No Gel Distribution Dual-Jacket (LSZH)

Low Smoke Zero Halogen

FIBER COUNT	12-Fiber Bundles	CABLE O.D.		RECOMMENDED INSTALL		MAXIMUM LOADS OPERATION		CABLE WEIGHT	
		in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
12	1	.335	8.5	384	1709	195	868	45.4	67.6
24	2	.335	8.5	384	1709	195	868	45.95	68.4
36	3	.335	8.5	384	1709	195	868	46.49	69.2
48	4	.335	8.5	384	1709	195	868	46.6	69.4
72	6	.335	8.5	384	1709	195	868	46.8	69.6
96	8	.385	9.8	384	1709	195	868	56.23	83.7
144	12	.47	11.9	384	1709	195	868	81	120.5

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: -10° to 60°C (14° to 140°F)
Operating: -20° to 70°C (-4° to 158°F)

Mechanical Specifications

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

Inner Jacket Diameters

12-72 Strand = .24 inches
96 Strand = .29 inches
144 Strand = .37 inches

plus CORNING® ClearCurve® Optical Fiber

Optical Specifications

TIA/EIA-568-C.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) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Product Highlights

- RoHS compliant.
- All Multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- 900 um buffered design recommended 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

- Cables with up to 144 fibers available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Steel interlock available.
- Low smoke zero halogen available.
- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Violet for OM4 is available
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

Diagram scale approx. 2:1

Armored Tight Buffered (Riser)

(UL) OFCR c(UL) OFCR FT4

Fiber Count	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
2	60524-2	61542-2	61421-2	61896-2	61540-2
4	60524-4	61542-4	61421-4	61896-4	61540-4
6	60524-6	61542-6	61421-6	61896-6	61540-6
8	60524-8	61542-8	61421-8	61896-8	61540-8
10	60524-10	61542-10	61421-10	61896-10	61540-10
12	60524-12	61542-12	61421-12	61896-12	61540-12
24	60524-24	61542-24	61421-24	61896-24	61540-24

Features

DIELECTRIC MATERIALS	RISER
Overall Jacket	Flame-retardant thermoplastic

Armored Tight Buffered (Riser)

(UL) OFCR c(UL) OFCR FT4

FIBER COUNT	CABLE O.D.		RECOMMENDED MAXIMUM LOADS INSTALL		OPERATION		CABLE WEIGHT	
	in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
2	.48	12.192	128	570	64	285	93.4	139.2
4	.48	12.192	128	570	64	285	94.9	141.4
6	.48	12.192	128	570	64	285	96.4	143.6
8	.52	13.208	160	712	80	356	109.9	163.8
10	.52	13.208	160	712	80	356	111.4	166.0
12	.52	13.208	160	712	80	356	112.9	168.2
24	.64	16.256	288	1282	144	641	164.1	244.5

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: -10° to 60°C (14° to 140°F)
Operating: -20° to 70°C (-4° to 158°F)

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Optical Specifications

TIA/EIA-568-C.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) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Indoor Fiber Armored
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Product Highlights

- RoHS compliant.
- All Multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- 900um buffered design recommended 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

- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Violet for OM4 is available
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

Diagram scale approx. 2:1

Armored Tight Buffered (Plenum)

(UL) OFCP c(UL) OFCP FT6

Fiber Count	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
2	60405-2	61319-2	61337-2	61897-2	61433-2
4	60405-4	61319-4	61337-4	61897-4	61433-4
6	60405-6	61319-6	61337-6	61897-6	61433-6
8	60405-8	61319-8	61337-8	61897-8	61433-8
10	60405-10	61319-10	61337-10	61897-10	61433-10
12	60405-12	61319-12	61337-12	61897-12	61433-12
24	60405-24	61319-24	61337-24	61897-24	61433-24
48	62183-48	62184-48	62185-48	62186-48	62187-48
72	62183-72	62184-72	62185-72	62186-72	62187-72
96	62183-96	62184-96	62185-96	62186-96	62187-96
144	62183-144	62184-144	62185-144	62186-144	62187-144

Features

DIELECTRIC MATERIALS	PLENUM
Overall Jacket	Low-smoke, flame-retardant thermoplastic

Armored Tight Buffered (Plenum)

(UL) OFCP c(UL) OFCP FT6

FIBER COUNT	CABLE O.D.		RECOMMENDED MAXIMUM LOADS INSTALL		OPERATION		CABLE WEIGHT	
	in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
2	.48	12.192	128	570	64	285	99.2	147.8
4	.48	12.192	128	570	64	285	100.4	149.6
6	.48	12.192	128	570	64	285	101.6	151.4
8	.52	13.208	160	712	80	356	116.7	173.9
10	.52	13.208	160	712	80	356	117.5	175.1
12	.52	13.208	160	712	80	356	118.8	177.0
24	.64	16.332	288	1282	144	641	164.1	244.5
48	0.94	23.876	640	2848.639	320	1424.319	385.7	574.0
72	1.086	27.584	960	4272.958	480	2136.479	506.6	753.9
96	1.279	32.487	1280	5697.278	640	2848.639	694.5	1033.6
144	1.4	35.560	1920	8545.917	960	4272.958	782.4	1164.4

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: 0° to 60°C (32° to 140°F)
Operating: 0° to 70°C (32° to 158°F)

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Optical Specifications

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

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Indoor Fiber Armored
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Product Highlights

- RoHS and REACH compliant.
- 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 Resistent Jacket.
- Dry, super absorbant 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. Colored inner and outer jackets (orange, yellow & aqua) can be special ordered.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.
- Steel Interlock armor available.

Diagram scale approx. 2:1

Indoor/Outdoor Armored Tight Buffered (Plenum)

(UL) OFCP c(UL) OFCP FT6

FIBER COUNT	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
2	61580-2	61577-2	61578-2	62068-2	61579-2
4	61580-4	61577-4	61578-4	62068-4	61579-4
6	61580-6	61577-6	61578-6	62068-6	61579-6
8	61580-8	61577-8	61578-8	62068-8	61579-8
12	61580-12	61577-12	61578-12	62068-12	61579-12
24	61580-24	61577-24	61578-24	62068-24	61579-24

Features

DIELECTRIC MATERIALS — Overall Jacket

PLENUM — Low-smoke, flame-retardant thermoplastic

Armored Tight Buffered (Plenum)

(UL) OFCP c(UL) OFCP FT6

FIBER COUNT	CABLE O.D. in.	CABLE O.D. mm	RECOMMENDED MAXIMUM LOADS INSTALL lbs-f	INSTALL N	OPERATION lbs-f	OPERATION N	CABLE WEIGHT lbs/1000 ft	CABLE WEIGHT kg/1000m
2	0.48	12.192	300	1335	100	445	100.4	149.4
4	0.48	12.192	300	1335	100	445	101.7	151.4
6	0.48	12.192	300	1335	100	445	103.0	153.3
8	0.52	13.208	300	1335	100	445	109.1	162.4
12	0.52	13.208	300	1335	100	445	111.8	166.4
24	0.64	16.256	600	2671	200	890	164.1	244.2

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: 0°C to 60°C (32° to 140°F)
Operating: -40° to 70°C (-40° to 158°F)

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Optical Specifications

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

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Indoor/Outdoor Armored
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Product Highlights

- RoHS & REACH compliant.
- All Multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- UV resistant jacket.
- Tight buffered construction.
- 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 riser applications.
- 900 um buffered design recommended for easy termination.
- For cables with fiber counts of 36 to 144, fibers are segregated into 12-fiber bundles identified by color-coded binders.

Options

- Low smoke zero halogen available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

6-fiber

12-fiber

48-fibers (4 Bundles of 12-fibers)

Diagram scale approx. 2:1

I/O Tight Buffered (Riser)

(UL) OFNR c(UL) OFNR FT4

FIBER COUNT	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
2	61345-2	61347-2	61348-2	61893-2	61349-2
4	61345-4	61347-4	61348-4	61893-4	61349-4
6	61345-6	61347-6	61348-6	61893-6	61349-6
8	61345-8	61347-8	61348-8	61893-8	61349-8
10	61345-10	61347-10	61348-10	61893-10	61349-10
12	61345-12	61347-12	61348-12	61893-12	61349-12
24	61345-24	61347-24	61348-24	61893-24	61349-24
36	61345-36	61347-36	61348-36	61893-36	61349-36
48	61354-48	61347-48	61348-48	61893-48	61349-48
72	61345-72	61347-72	61348-72	61893-72	61349-72
96	61345-96	61347-96	61348-96	61893-96	61349-96
144	61345-144	61347-144	61348-144	61893-144	61349-144

Features

DIELECTRIC MATERIALS	RISER
Overall Jacket	Flame-retardant thermoplastic

I/O Tight Buffered (Riser)

(UL) OFNR c(UL) OFNR FT4

FIBER COUNT	CABLE O.D. in.	CABLE O.D. mm	RECOMMENDED MAXIMUM LOADS INSTALL lbs-f	INSTALL N	OPERATION lbs-f	OPERATION N	CABLE WEIGHT lbs/1000 ft	CABLE WEIGHT kg/1000m
2	.190	4.83	128	570	64	285	12.6	18.8
4	.190	4.83	128	570	64	285	13.9	20.7
6	.190	4.83	128	570	64	285	15.1	22.5
8	.230	5.84	160	712	80	356	20.0	29.8
10	.230	5.84	160	712	80	356	21.3	31.7
12	.230	5.84	160	712	80	356	22.5	33.5
24	.350	8.89	288	1282	144	641	52.4	78.1
36	.424	10.77	600	2671	200	892	63.0	93.8
48	.488	11.38	600	2671	200	890	77.0	144.4
72	.555	14.10	600	2671	200	890	131.0	194.9
96	.64	16.26	600	2671	200	890	196.8	292.9
144	.78	19.81	600	2671	200	890	222.5	331.2

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: -10° to 60°C (14° to 140°F)
Operating: -40° to 70°C (-40° to 158°F)

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Optical Specifications

TIA/EIA-568-C.3

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Indoor/Outdoor
Return to TOC

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Product Highlights

- RoHS & REACH compliant.
- All Multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- UV 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.
- 900 um buffered design recommended for easy termination.
- Cables with more than 24 fibers have fibers segregated into 12-fiber sub-units.

Options

- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.

6-fiber

12-fiber

48-fibers (4 tubes of 12-fibers)

Diagram scale approx. 3:1

I/O Tight Buffered (Plenum)

(UL) OFNP c(UL) OFNP FT6

Fiber Count	Fibers per tube	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
2	2	61460-2	61464-2	61468-2	61894-2	61459-2
4	4	61460-4	61464-4	61468-4	61894-4	61459-4
6	6	61460-6	61464-6	61468-6	61894-6	61459-6
8	8	61460-8	61464-8	61468-8	61894-8	61459-8
10	10	61460-10	61464-10	61468-10	61894-10	61459-10
12	12	61460-12	61464-12	61468-12	61894-12	61459-12
24	24	61460-24	61464-24	61468-24	61894-24	61459-24
48	12	61979-48	61956-48	61959-48	61980-48	61480-48
72	12	61979-72	61956-72	61959-72	61980-72	61480-72
144	12	61979-144	61956-144	61959-144	61980-144	61480-144

Features

DIELECTRIC MATERIALS	PLENUM
Overall Jacket	Low-smoke, flame-retardant thermoplastic

I/O Tight Buffered (Plenum)

(UL) OFNP c(UL) OFNP FT6

FIBER COUNT	# Fibers per Tube	Tube Layout	CABLE O.D.		RECOMMENDED INSTALL		MAXIMUM LOADS OPERATION		CABLE WEIGHT	
			in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
2	2	x	.190	4.8	128	570	64	285	12.6	18.8
4	4	x	.190	4.8	128	570	64	285	13.9	20.7
6	6	x	.190	4.8	128	570	64	285	15.1	22.5
8	8	x	.230	5.8	160	712	80	356	20.0	29.8
10	10	x	.230	5.8	160	712	80	356	21.3	31.7
12	12	x	.230	5.8	160	712	80	356	22.5	33.5
24	24	x	.350	8.8	288	1282	144	641	52.4	78.1
48	12	4xCSM	0.627	15.9	640	2849	320	1424	135.1	201.1
72	12	6xCSM	0.756	19.2	960	4273	480	2136	226.6	337.2
144	12	9x3xCSM	1.072	27.2	1920	8546	960	4273	396.8	590.5

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: 0°C to 60°C (32° to 140°F)
Operating: -40° to 70°C (-40° to 158°F)

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Optical Specifications

TIA/EIA-568-C.3

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) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)	850nm (MM) or 1310nm (SM)	1300nm (MM) or 1550nm (SM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.5	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.25	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
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Indoor/Outdoor
Return to TOC
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Central Tube 2 through 12 fibers

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Product Highlights

- RoHS & REACH compliant.
- All Multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- UV resistant jacket.
- Gel filled central tube provides protection against water penetration.
- Dry, super absorbent polymers (SAPs) eliminate water migration between cable jackets.
- Suitable for lashed aerial, duct, underground conduit and indoor riser applications.
- 250 micron loose tube design allows for higher fiber strand counts in a smaller overall diameter cable.

Options

- Low smoke zero halogen available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

Indoor/Outdoor Central Tube (Riser)

(UL) OFNR c(UL) OFNR FT4

FIBER COUNT	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
2	60103-2	60104-2	60337-2	61895-2	60105-2
4	60103-4	60104-4	60337-4	61895-4	60105-4
6	60103-6	60104-6	60337-6	61895-6	60105-6
8	60103-8	60104-8	60337-8	61895-8	60105-8
10	60103-10	60104-10	60337-10	61895-10	60105-10
12	60103-12	60104-12	60337-12	61895-12	60105-12

Features

DIELECTRIC MATERIALS	RISER
Overall Jacket	Flame-retardant thermoplastic

Diagram scale approx. 3:1

Indoor/Outdoor Central Tube (Riser)

(UL) OFNR c(UL) OFNR FT4

FIBER COUNT	CABLE O.D. in.	CABLE O.D. mm	RECOMMENDED MAXIMUM LOADS INSTALL lbs-f	INSTALL N	OPERATION lbs-f	OPERATION N	CABLE WEIGHT lbs/1000 ft	CABLE WEIGHT kg/1000m
2	.287	7.2	300	1335	150	667	39.4	58.7
4	.287	7.2	300	1335	150	667	39.4	58.7
6	.287	7.2	300	1335	150	667	39.4	58.7
8	.287	7.2	300	1335	150	667	39.5	58.8
10	.287	7.2	300	1335	150	667	39.5	58.8
12	.287	7.2	300	1335	150	667	39.6	58.8

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: -10° to 60°C (14° to 140°F)
Operating: -40° to 70°C (-40° to 158°F)

Optical Specifications

TIA/EIA-568-C.3-1

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM1	3.25	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.25	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3	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
OS2	0.4	0.3	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Mechanical Specifications

Bend radius

- No load = 10x cable overall diameter
- Load = 20x cable overall diameter

Central Tube Diameter

	in.	mm
2-12 fibers per tube	.160	4.1

plus CORNING® ClearCurve® Optical Fiber

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Indoor/Outdoor
Return to TOC

Loose Tube

12 through 72 fibers

Multimode and Singlemode

Loose Tube

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Product Highlights

- RoHS & REACH compliant.
- All Multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- UV resistant jacket.
- Gel filled loose tubes provide protection against water penetration.
- Dry, super absorbent polymers (SAPs) eliminate water migration in cable interstices.
- Suitable for lashed aerial, duct, underground conduit and indoor riser applications.
- 250 micron loose tube design allows for higher fiber strand counts in a smaller overall diameter cable.

Options

- Other configurations and fiber counts available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Low smoke zero halogen available.
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

Applications

- See Page 95.

Diagram scale approx. 1:1

Indoor/Outdoor Loose Tube (Riser)

(UL) OFNR c(UL) OFNR FT4

FIBER COUNT	FIBERS PER TUBE	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
12	2	60701-12	60710-12	60714-12	61900-12	60720-12
24	2	60701-24	60710-24	60714-24	61900-24	60720-24
24	4	60344-24	60711-24	60715-24	61901-24	60721-24
48	4	60344-48	60711-48	60715-48	61901-48	60721-48
18	6	60106-18	60108-18	60716-18	61902-18	60110-18
24	6	60106-24	60108-24	60716-24	61902-24	60110-24
36	6	60106-36	60108-36	60716-36	61902-36	60110-36
48	6	60106-48	60108-48	60716-48	61902-48	60110-48
72	6	60106-72	60108-72	60716-72	61902-72	60110-72
24	8	60702-24	60712-24	60717-24	61903-24	60722-24
32	8	60702-32	60712-32	60717-32	61903-32	60722-32
48	8	60702-48	60712-48	60717-48	61903-48	60722-48
72	8	60702-72	60712-72	60717-72	61903-72	60722-72
36	12	60107-36	60109-36	60719-36	61904-36	60111-36
48	12	60107-48	60109-48	60719-48	61904-48	60111-48
60	12	60107-60	60109-60	60719-60	61904-60	60111-60
72	12	60107-72	60109-72	60719-72	61904-72	60111-72

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: -10° to 60°C (14° to 140°F)
Operating: -40° to 70°C (-40° to 158°F)

Features

DIELECTRIC MATERIALS	RISER
Overall Jacket	Flame-retardant thermoplastic

Indoor/Outdoor Loose Tube (Riser)

(UL) OFNR c(UL) OFNR FT4

FIBER COUNT	FIBERS PER TUBE	TUBE LAYOUT	CABLE O.D. in.	CABLE O.D. mm	RECOMMENDED INSTALL lbs-f	RECOMMENDED INSTALL N	MAXIMUM LOADS OPERATION lbs-f	MAXIMUM LOADS OPERATION N	CABLE WEIGHT lbs/1000 ft	CABLE WEIGHT kg/1000m
12	2	6xCSM	.422	10.7	600	2670	200	890	77.0	114.7
24	2	12xCSM	.595	15.1	600	2670	200	890	155	231.0
24	4	6xCSM	.422	10.7	600	2670	200	890	78.0	116.2
48	4	12xCSM	.595	15.1	600	2670	200	890	155	231.0
18	6	6xCSM	.422	10.7	600	2670	200	890	64	95.4
24	6	6xCSM	.422	10.7	600	2670	200	890	69.0	102.8
36	6	6xCSM	.422	10.7	600	2670	200	890	78.0	116.2
48	6	8XCSM	.482	12.2	600	2670	200	890	100	149.0
72	6	12XCSM	.595	15.1	600	2670	200	890	156	232.4
24	8	6xCSM	.422	10.7	600	2670	200	890	64	95.4
32	8	6xCSM	.422	10.7	600	2670	200	890	69.0	102.8
48	8	6xCSM	.422	10.7	600	2670	200	890	78.0	117.7
72	8	9XCSM	.509	12.9	600	2670	200	890	113	168.4
36	12	6xCSM	.466	11.8	600	2670	200	890	73.0	108.8
48	12	6xCSM	.422	11.8	600	2670	200	890	79.0	117.7
60	12	6xCSM	.466	11.8	600	2670	200	890	85.0	126.7
72	12	6xCSM	.466	11.8	600	2670	200	890	91.0	135.6

Mechanical Specifications

Bend radius

- No load = 10x cable overall diameter
- Load = 20x cable overall diameter

Loose Tube Diameter

	in.	mm
2-8 fibers per tube	.095	2.4
12-fibers per tube	.110	2.8

plus CORNING® ClearCurve® Optical Fiber

Optical Specifications

TIA/EIA-568-C.3

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM1	3.25	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.25	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3	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
OS2	0.4	0.3	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Loose Tube 12 through 432 fibers

Multimode and Singlemode Loose Tube

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Product Highlights

- RoHS & REACH compliant.
- UV resistant jacket.
- Gel filled loose tubes provide protection against water penetration.
- Dry, super absorbent polymers (SAPs) eliminate water migration in cable interstices.
- Suitable for lashed aerial, duct, and underground conduit applications.
- SM Fiber optic cable is RDUP approved
- All Multimode, and single-mode cables (except OM1) utilize bend-insensitive optical fibers.

Options

- Other configurations and fiber counts available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Dual jacket constructions available.
- Low smoke zero halogen available.
- Up to 432 fibers available.
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

Applications

- See Page 95.

Diagram scale approx. 1:1

Outdoor (Outside Plant) Loose Tube

FIBER COUNT	FIBERS PER TUBE	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
12	2	60351-12	60282-12	60938-12	61905-12	60950-12
24	2	60351-24	60282-24	60938-24	61905-24	60950-24
24	4	60235-24	60408-24	60939-24	61906-24	60951-24
48	4	60235-48	60408-48	60939-48	61906-48	60951-48
18	6	60085-18	60087-18	60940-18	61907-18	60089-18
24	6	60085-24	60087-24	60940-24	61907-24	60089-24
36	6	60085-36	60087-36	60940-36	61907-36	60089-36
48	6	60085-48	60087-48	60940-48	61907-48	60089-48
12	12	60086-12	60088-12	60943-12	61908-12	60090-12
24	12	60086-24	60088-24	60943-24	61908-24	60090-24
36	12	60086-36	60088-36	60943-36	61908-36	60090-36
48	12	60086-48	60088-48	60943-48	61908-48	60090-48
60	12	60086-60	60088-60	60943-60	61908-60	60090-60
72	12	60086-72	60088-72	60943-72	61908-72	60090-72
84	12	60086-84	60088-84	60943-84	61908-84	60090-84
96	12	60086-96	60088-96	60943-96	61908-96	60090-96
108	12	60086-108	60088-108	60943-108	61908-108	60090-108
120	12	60086-120	60088-120	60943-120	61908-120	60090-120
132	12	60086-132	60088-132	60943-132	61908-132	60090-132
144	12	60086-144	60088-144	60943-144	61908-144	60090-144
168	12	60086-168	60088-168	60943-168	61908-168	60090-168
192	12	60086-192	60088-192	60943-192	61908-192	60090-192
216	12	60086-216	60088-216	60943-216	61908-216	60090-216
240	12	60086-240	60088-240	60943-240	61908-240	60090-240
264	12	60086-264	60088-264	60943-264	61908-264	60090-264
288	12	60086-288	60088-288	60943-288	61908-288	60090-288
312	12	60086-312	60088-312	60943-312	61908-312	60090-312
336	12	60086-336	60088-336	60943-336	61908-336	60090-336
360	12	60086-360	60088-360	60943-360	61908-360	60090-360
384	12	60086-384	60088-384	60943-384	61908-384	60090-384
432	12	60086-432	60088-432	60943-432	61908-432	60090-432

Features

DIELECTRIC MATERIALS

Overall Jacket — Medium density polyolefin

Outdoor (Outside Plant) Loose Tube

FIBER COUNT	FIBERS PER TUBE	TUBE LAYOUT	CABLE O.D. in.	CABLE O.D. mm	RECOMMENDED INSTALL lbs-f	RECOMMENDED INSTALL N	MAXIMUM LOADS OPERATION lbs-f	MAXIMUM LOADS OPERATION N	CABLE WEIGHT lbs/1000 ft	CABLE WEIGHT kg/1000m
12	2	6xCSM	.493	12.5	600	2670	200	890	74.0	110.3
24	2	12XCSM	.700	17.8	600	2670	200	890	160.0	238.4
24	4	6xCSM	.493	12.5	600	2670	200	890	75.0	111.8
48	4	12XCSM	.700	17.8	600	2670	200	890	160.0	238.4
18	6	5XCSM	.463	11.7	600	2670	200	890	56.0	83.4
24	6	5XCSM	.463	11.7	600	2670	200	890	60.0	89.4
36	6	6xCSM	.493	12.5	600	2670	200	890	75.0	111.8
48	6	8XCSM	.561	14.2	600	2670	200	890	97.0	144.5
12	12	5XCSM	.463	11.7	600	2670	200	890	48.0	71.5
24	12	5XCSM	.463	11.7	600	2670	200	890	52.0	77.5
36	12	5XCSM	.463	11.7	600	2670	200	890	56.0	83.4
48	12	5XCSM	.463	11.7	600	2670	200	890	60.0	89.4
60	12	5XCSM	.463	11.7	600	2670	200	890	64.0	95.4
72	12	6xCSM	.493	12.5	600	2670	200	890	76.0	113.2
84	12	7XCSM	.552	14.0	600	2670	200	890	93.0	138.6
96	12	8XCSM	.581	14.8	600	2670	200	890	106.0	157.9
108	12	9XCSM	.620	15.7	600	2670	200	890	120.0	178.8
120	12	10XCSM	.649	16.5	600	2670	200	890	137.0	204.1
132	12	11XCSM	.683	17.3	600	2670	200	890	153.0	228.0
144	12	12XCSM	.720	18.3	600	2670	200	890	171.0	255.0
168	12	12X6XCSM	.737	18.7	600	2670	200	890	1430	213.1
192	12	12X6XCSM	.737	18.7	600	2670	200	890	151.0	225.0
216	12	12X6XCSM	.737	18.7	600	2670	200	890	159.0	236.9
240	12	13X7XCSM	.770	19.6	600	2670	200	890	175.0	260.8
264	12	14X8XCSM	.805	20.4	600	2670	200	890	196.0	292.0
288	12	15X9XCSM	.835	21.2	600	2670	200	890	213.0	317.4
312	12	16X10XCSM	.870	22.1	600	2670	200	890	233.0	347.2
336	12	17X11XCSM	.902	22.9	600	2670	200	890	255.0	380.0
360	12	18X12X6XCSM	.956	24.3	600	2670	200	890	241.0	359.1
384	12	18X12X6XCSM	.956	24.3	600	2670	200	890	249.0	371.0
432	12	18X12X6XCSM	.956	24.3	600	2670	200	890	266.0	396.3

Optical Specifications

TIA/EIA-568-C.3

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM1	3.25	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.25	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3	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
OS2	0.4	0.3	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

Hitachi Cable America reserves the right to revise any specifications.

Mechanical Specifications

Bend radius

- No load = 10x cable overall diameter
- Load = 20x cable overall diameter

Loose Tube Diameter

	in.	mm
2-12 fibers per tube	.110	2.8

plus CORNING ClearCurve® Optical Fiber

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Product Highlights

- RoHS & REACH compliant.
- Rugged corrugated steel armor provides extra crush-resistance and rodent protection.
- UV resistant jacket.
- Gel filled loose tube provides protection against water penetration.
- Dry, super absorbent polymers (SAPs) eliminate water migration in cable interstices.
- Suitable for lashed aerial, duct, and underground conduit applications.
- All Multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.

Options

- Other configurations and fiber counts available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Dual jacket constructions available.
- Low smoke zero halogen available.
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.

48-fibers (12 tubes of 4-fibers)

48-fibers (8 tubes of 6-fibers)

48-fibers (4 tubes of 12-fibers)

Diagram scale approx. 1:1

Outdoor (Outside Plant) Armored

FIBER COUNT	FIBERS PER TUBE	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
24	2	60346-24	60932-24	60944-24	61909-24	60954-24
48	4	60345-48	60933-48	60945-48	61910-48	60356-48
48	6	60097-48	60934-48	60946-48	61911-48	60101-48
12	12	60098-12	60937-12	61497-12	61912-12	60102-12
24	12	60098-24	60937-24	61497-24	61912-24	60102-24
48	12	60098-48	60937-48	61497-48	61912-48	60102-48
144	12	60098-144	60937-144	61497-144	61912-144	60102-144

Features

DIELECTRIC MATERIALS

Overall Jacket — Medium density polyolefin

Outdoor (Outside Plant) Armored

FIBER COUNT	FIBERS PER TUBE	TUBE LAYOUT	CABLE O.D. in.	CABLE O.D. mm	RECOMMENDED INSTALL lbs-f	RECOMMENDED INSTALL N	MAXIMUM LOADS OPERATION lbs-f	MAXIMUM LOADS OPERATION N	CABLE WEIGHT lbs/1000 ft	CABLE WEIGHT kg/1000m
24	2	12xCSM	0.748	19.0	600	2700	600	2700	228.0	339.7
48	4	12xCSM	0.748	19.0	600	2700	600	2700	229.0	341.2
48	6	8XCSM	0.613	15.6	600	2700	600	2700	147.0	219.0
12	12	5XCSM	0.508	13.1	600	2700	600	2700	97.0	144.5
24	12	5XCSM	0.508	13.1	600	2700	600	2700	101.0	150.0
48	12	5XCSM	0.508	13.1	600	2700	600	2700	110.0	163.9
144	12	12xCSM	0.768	19.5	600	2700	600	2700	241.0	359.1

Cable Temperature Ranges

Storage: -40° to 70°C (-40° to 158°F)
Installation: -30° to 60°C (-22° to 140°F)
Operating: -40° to 70°C (-40° to 158°F)

Mechanical Specifications

Bend radius

- No load = 10x cable overall diameter
- Load = 20x cable overall diameter

Loose Tube Diameter

	in.	mm
2-12 fibers per tube	.110	2.8

plus CORNING ClearCurve® Optical Fiber

Optical Specifications

TIA/EIA-568-C.3

Fiber type	Max. Attenuation (dB/km) 850nm (MM) or 1310nm (SM)	Max. Attenuation (dB/km) 1300nm (MM) or 1550nm (SM)	Min OFL Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min OFL Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Min EMBc Bandwidth (MHz-km) 850nm (MM) or 1310nm (SM)	Min EMBc Bandwidth (MHz-km) 1300nm (MM) or 1550nm (SM)	Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)	10 Gb Ethernet distance (m) 850nm (MM) or 1310nm (SM)	10 Gb Ethernet distance (m) 1300nm (MM) or 1550nm (SM)
OM1	3.25	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.25	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3	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
OS2	0.4	0.3	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40000

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Color Code Chart

High Pair Count Cables

When cables contain more than one pair group, different color binder tapes are used to differentiate the 25 pair groups.

Primary Insulation Color Coding

Hitachi Cable uses a co-extruded color stripe to mark insulated conductors. This process provides several benefits:

- Marking durability is insured for the life of the cable
- Electrical characteristics of the marking stripe match the insulation
- Avoids highly toxic ink systems that are required to bond to some materials.

Pair #	Copper Conductor Color Combinations
1	White/Blue - Blue/White
2	White/Orange - Orange/White
3	White/Green - Green/White
4	White/Brown - Brown/White
5	White/Gray - Gray/White
6	Red/Blue - Blue/Red
7	Red/Orange - Orange/Red
8	Red/Green - Green/Red
9	Red/Brown - Brown/Red
10	Red/Gray - Gray/Red
11	Black/Blue - Blue/Black
12	Black/Orange - Orange/Black
13	Black/Green - Green/Black
14	Black/Brown - Brown/Black
15	Black/Gray - Gray/Black
16	Yellow/Blue - Blue/Yellow
17	Yellow/Orange - Orange/Yellow
18	Yellow/Green - Green/Yellow
19	Yellow/Brown - Brown/Yellow
20	Yellow/Gray - Gray/Yellow
21	Violet/Blue - Blue/Violet
22	Violet/Orange - Orange/Violet
23	Violet/Green - Green/Violet
24	Violet/Brown - Brown/Violet
25	Violet/Gray - Gray/Violet

Fiber #	Fiber Buffer Color
1	Blue
2	Orange
3	Green
4	Brown
5	Gray
6	White
7	Red
8	Black
9	Yellow
10	Violet
11	Pink
12	Aqua

Note:
To differentiate bundles in cables with greater than 12 strands, polyester binders or buffer tubes (depending on the construction) are used. Those binders or buffer tubes will incorporate the same color code found in the chart above. The color code is part of the TIA-598 standard. For indoor, multiunit fiber optic cables, subunits will be numbered for identification.

Code References

National Electric Code

Cable Substitution Hierarchy

NEC and CSA

Fire Resistance Levels

Fire Resistance Level	Test Requirement	NEC 725	NEC 760	NEC 800
(Highest) Plenum Cables	UL-910 (Steiner Tunnel) CSA-FT6 (Steiner Tunnel)	CL3P CL2P	FPLP	CMP
Riser Cables Multiple Floors	UL-1666 (Vertical Shaft) CSA-FT4, CMG (Vertical Tray)	CL3R CL2R	FPLR	CMR
General Purpose Cables	UL-1581 (Vertical Tray) CSA-FT4, CMG (Vertical Tray)	CL3 CL2	FPL	CM
(Lowest) Residential Cables Restricted Use	UL-1581 VW-1 CSA-FT1	CL3X CL2X		CMX

Notes

1 Cables with a higher fire resistance level may be substituted for those with a lower fire resistance level, except that FT6 must also be marked FT4 for FT4 applications.

2 Cables rated CM may be used in runs penetrating one floor. (NEC 800-53)

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Applications

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Copper

Applications Support Matrix

	Category 3	Category 5e	Category 6	Category 6A	Category 7[1]
Voice	■	■	■	■	■
T1 Fractional	■	■	■	■	■
IBM Type 3 - 1 Mbps	■	■	■	■	■
4/16 Mbps Token Ring	■	■	■	■	■
10BASE-T Ethernet	■	■	■	■	■
100BASE-T4 Fast Ethernet	■	■	■	■	■
25.6 Mbps ATM	■	■	■	■	■
100 VG - Any LAN	■	■	■	■	■
All other applications developed to operate over Category 3 or class C cabling	■	■	■	■	■
100 Mbps TP-PMD		■	■	■	■
155 Mbps ATM		■	■	■	■
270 Mbps digital video		■	■	■	■
Broadband video		■	■	■	■
100BASE-TX Fast Ethernet		■	■	■	■
1000BASE-T Gigabit Ethernet		■	■	■	■
All other applications developed to operate over Category 5e or class D cabling		■	■	■	■
1000 Mbps ATM (CBIG)			■	■	■
All other applications developed to operate over Category 6 or class E cabling			■	■	■
10GBASE-T			■[2]	■	■
All other applications developed to operate Category 6A or class E_A cabling				■	■
All other applications developed to operate over Category 7 or class F cabling					■

Guaranteed Category 5e support of IEEE 1000BASE-T (Gigabit Ethernet) application:

Hitachi Cable America, Inc.'s Category 5e cables exceed all of the requirements specified by IEEE 8023.ab for support of Gigabit Ethernet (1000BASE-T) operation over twisted-pair cabling. Furthermore, Hitachi Cable guarantees that all of our Category 5e and higher rated cables will support the 1000BASE-T application.

To demonstrate our compliance, Hitachi Cable's products have been extensively tested for 1000BASE-T throughput at the University of New Hampshire's Interoperability Lab and found to fully support the IEEE 100BASE-T Gigabit Ethernet application.

[1] Cat 7 Cable standard has not yet been ratified.

[2] Per TSB-155, Category 6 cable may accommodate 10 gigabit Ethernet up to 55 meters in a channel. Mitigation to achieve 55m may be required. Hitachi Cable's 10G-RD(TM) Enhanced Category 6 provides guaranteed 10 gigabit up to 90 meters in a channel.

Fiber

Applications Support Matrix

Application

Standard	Wavelength	Transmission	Fiber type	Length (m)
1000BASE-LX	1300nm	Serialized	OM1	550
			OM2	550
			SM	>2,000
1000BASE-SX	850nm	Serialized	OM1	220
			OM2	550
			OM3	>550
10GBASE-SR	850nm	Serialized	OM1	33
			OM2	82
			OM3	300
			OM4	550
10GBASE-LR	1310nm	Serialized	SM	10,000 - 25,000
10GBASE-LRM	1310nm	Serialized	OM1	220
			OM3	260
10GBASE-ER	1550nm	Serialized	SM	40,000
10GBASE-LX4	1300nm	WDM	MM	240-300
			SM	10,000
40GBASE-SR4	850nm	Parallel Optics	OM3	100
			OM4	125
40GBASE-LR4	1310nm	WDM	SM	10,000
100GBASE-SR10	850nm	Parallel Optics	OM3	100
			OM4	125
100GBASE-LR4	1310nm	WDM	SM	10,000
100GBASE-ER4	1310nm	WDM	SM	40,000
Infiniband SDR	850nm	Parallel Optics	OM1	75
			OM2	125
			OM3	200
Infiniband DDR	850nm	Parallel Optics	OM1	50
			OM2	75
			OM3	150
Infiniband 4x-LX	call	call	OS2	10,000
ITU-T G.957 STM-1, -4 & -16	1550nm	WDM	OS2	2,000
ITU-T G.957 STM-1 & -4				15,000
ITU-T G.957 STM-1		Serialized		40,000
Fibre Channel, 2 Gig	850nm	Serialized	OM2	300
			OM3	500
Fibre Channel, 4 Gig	850nm	Serialized	OM2	150
			OM3	270
Fibre Channel 1, 2 & 4 Gig	1300nm	Serialized	OS2	10,000

Applications
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Standards

All of Hitachi Cable's products are fully compliant to the requirements of applicable national and international structured cabling standards.

TIA-568-C.0 "Generic Telecommunications Cabling Standard (2009)" This standard, in part, supersedes TIA/EIA-568-B.1 and its addenda. This standard incorporates the following standards: TIA/EIA-568-B.1-1, TIA/EIA-568-B.1-2, TIA/EIA-568-B.1-3, TIA/EIA-568-B.1-7, TIA/EIA TSB125, TIA TSB140, TIA TSB153. This document specifies copper and fiber optic cabling requirements and test methods that will support a multi-product, multi-vendor environment.

TIA-568-C.1 "Commercial Building Telecommunications Cabling Standard (2009)" This standard, in part, supersedes TIA/EIA-568-B.1 and its addenda. This standard incorporates content from ANSI/TIA-568-B.1-4, Addendum 4, as well as ANSI/TIA-568-B.1-5, Addendum 5.

TIA-568-C.2 "Balanced Twisted Pair Telecommunications Cabling Components Standard (2009)" This standard supersedes ANSI/TIA/EIA-568B.2. This document specifies the performance of copper cables, patch cords, and connectors, in addition to the transmission, system models, and the measurement procedures needed for verification of balanced twisted pair cabling performance. This standard incorporates content from the following ANSI/TIA/EIA standards: 568-B.2, 568-B.2-1, 568-B.2-2, 568-B.2-3, 568-B.2-4, 568-B.2-5, 568-B.2-6 and ANSI/TIA standards 568-B.2-7, 568-B.2-9, 568-B.2-10 and 568-B.2-11.

TIA-568-C.3 "Optical Fiber Cabling Components Standard (2008)" This document specifies the performance of the cables, patch cords, and connector used in fiber optic cable systems. This standard replaces ANSI/TIA/EIA-568-B.3 and ANSI/TIA/EIA-568-B.3-1.

TIA/EIA-568-B.1 "Commercial Building Telecommunications Cabling Standard Part 1:General Requirements (2001)" This document specifies copper and fiber optic cabling requirements and test methods that will support a multi-product, multi-vendor environment.

TIA/EIA-568-B.1-1 "Commercial Building Telecommunications Cabling Standard Part 1: General Requirements addendum 1 Minimum 4-pair UTP and 4-Pair ScTP Patch Cable Bend Radius (2001)" This addendum specifies minimum bend radius requirements for 4-pair unshielded twisted-pair (UTP) and 4-pair screened twisted-pair (ScTP) patch cable.

TIA/EIA-568-B.2 "Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted Pair Cabling Components (2001)" This document specifies the performance of copper cables, patch cords, and connectors, in addition to the transmission, system models, and the measurement procedures needed for verification of balanced twisted pair cabling performance.

TIA/EIA-568-B.2-1 "Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted Pair Components Addendum 1 Transmission Performance Specifications for 4-Pair 100 Ohm Category 6 Cabling (2002)" This document specifies requirements for category 6 cabling, cables, and connecting hardware.

TIA/EIA-568-B.2-10 "Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted Pair Cabling Components Addendum 10 Transmission Performance Specifications for 4-Pair 100 Ohm Augmented Category 6 Cabling (2007)" This document specifies the requirements for Category 6A cabling, cables and connecting hardware.

TIA/EIA 568-B-3.1 "Optical Fiber Cabling Components Standard addendum 1 Additional Transmission Performance Specifications for 50/125 um Optical Fiber Cables (2002)" This addendum specifies additional component and transmission requirements for 50/125 um optical fiber cables capable of supporting 10 Gb/s serial transmission up to 300 m (984 ft) using 850 nm nominal wavelength lasers.

TIA/EIA-569-B "Commercial Building Standard for Telecommunications Pathways and Spaces (2003)" This document describes recognized cabling locations both within and between buildings. Included are the pathways in which telecommunications media are placed and the rooms and areas associated with the building used to terminate media and install telecommunications equipment.

TIA/EIA-570-A "Residential Telecommunications Cabling Standard (2001)" The purpose of this document is to standardize requirements for residential telecommunications cabling. The requirements are intended to be implemented for new construction, additions and remodeled single and multi-tenant residential buildings.

TIA/EIA-606-A "Administration Standard for Commercial Telecommunications Infrastructure (2003)" This standard provides guidelines and choices of classes of administration for maintaining telecommunications infrastructure.

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Configurations

Standards (continued)

TIA/EIA-607-A "Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications (2001)" This purpose of this standard is to enable the planning, design, and installation of telecommunications grounding and bonding systems within a building with or without prior knowledge of the telecommunications systems that will subsequently be installed.

TIA/EIA-758-A "Customer-Owned Outside Plant Telecommunications Infrastructure (2003)" This standard provides requirements used in the design of the cabling, pathways and spaces used between buildings or points in a customer-owned campus environment.

TI/EIA-862 "Building Automation Systems cabling Standard for Commercial Buildings (2002)" This standard specifies a generic cabling system for building automation systems (BAS) used in commercial systems.

ISO/IEC 11801, 2nd edition "Generic cabling for Customer Premises (2002)" This standard is the international counterpart to the TIA/EIA-568-B family of standards. It contains requirements for balanced twisted-pair and fiber optic components and cabling systems.

TSB 155 "Guidelines for the Assessment of Mitigation of Installed Category 6 Cabling to Support 10GBASE-T" This document specifies the requirements for Category 6 UTP and ScTP (FTP) in regards to accommodating 10GBASE-T Ethernet.

Channel Configuration

The channel test configuration is to be used by system designers and users of data communications systems to verify the performance of the overall channel. The channel includes up to 90 m (295 ft) of horizontal cable, a work area equipment cord, a telecommunications outlet/connector, an optional transition/consolidation connector, and two connections in the telecommunications room. The total length of equipment cords, patch cords or jumpers and work area cords shall not exceed 10 m (33 ft). Note that the connections to the equipment at each end of the channel are not included in the channel definition.

Permanent Link

The permanent link test configuration is to be used by installers and users of data telecommunications systems to verify the performance of permanently installed cabling. The permanent link consists of up to 90 m (295 ft) of horizontal cabling and one connection at each end and may also include an optional transition/consolidation point connection. Note that the permanent link excludes both the cable portion of the field test instrument cord and the connection to the field test instrument.

Cables and cords		Connecting Hardware
A = Work area cord	D = Patch cord or jumper cable	WA = Telecommunications outlet/connector
B = Optional transition cabling	E = Telecommunications room equipment cord	CP = Optional transition/consolidation point connector
C = Horizontal cabling	F = Test equipment cord	C1, C2 = Horizontal cross-connect or interconnect

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Glossary

Acronyms & Abbreviations

ACR: Attenuation-to-crosstalk ratio
ACRF: Attenuation-to-crosstalk ratio far-end
ANSI: American National Standards Institute
ASTM: American Society for Testing and Materials
ATM: asynchronous transfer mode
AWG: American Wire Gauge
BELLCORE: Bell Communications Research
BICSI: Building Industry Consulting Services International
CATV: community antenna television
EIA: Electronic Industries Alliance
ELFEXT: equal level far-end crosstalk
EMC: electromagnetic compatibility
EMI: electromagnetic interference
FCC: Federal Communications Commission
FDDI: fiber distributed data interface
FEXT: far-end crosstalk
FOCIS: Fiber Optic Connector Intermateability Standard
F/UTP: foil over unshielded twisted pairs
IEC: International Electrotechnical Commission
IEEE: The Institute of Electrical and Electronics Engineers
ILD: Insertion loss deviation
LCL: Longitudinal conversion loss
LCTL: Longitudinal conversion transfer loss
ISDN: integrated services digital network
ISO: International Organization for Standardization
LAN: local area network
LED: light emitting diode
Mb/s: megabits per second
MUTOA: multi-user telecommunications outlet assembly
NEC®: National Electrical Code®
NEMA: National Electrical Manufacturers Association
NESC®: National Electrical Safety Code®
NEXT: near-end crosstalk
NFPA: National Fire Protection Association
NVP: nominal velocity of propagation
PSACR: power sum attenuation-to-crosstalk ratio
PSACRF: power sum attenuation-to-crosstalk ratio far-end
PSELFEXT: power sum equal level far-end crosstalk
PSFEXT: power sum far-end crosstalk
PSNEXT: power sum near-end crosstalk
SFTP: braided shield over pairs in foil
STP: shielded twisted-pair
TIA: Telecommunications Industry Association
TSB: Telecommunications System Bulletin
UL: Underwriters Laboratories
UTP: unshielded twisted-pair

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adapter (copper): A device that enables any or all of the following: (1) different sizes or types of plugs to mate with one another or to fit into a telecommunications outlet, (2) the rearrangement of leads, (3) large cables with numerous wires to fan out into smaller groups of wires, and (4) interconnection between cables.

adapter (fiber optic): optical fiber duplex: A mechanical device designed to align and join two duplex optical fiber connectors (plugs) to form an optical duplex connection.

administration: The method for labeling, identification, documentation and usage needed to implement moves, additions and changes of the telecommunications infrastructure.

attenuation: (see insertion loss)

attenuation-to-crosstalk ratio: A ratio, expressed in dB, determined by subtracting the insertion loss from the near-end crosstalk loss.

attenuation-to-crosstalk ratio far-end: replaces ELFEXT. A measure of the unwanted signal coupling from a transmitter at the near-end into another pair measured at the far-end, and relative to the received signal level.

backbone cable: A cable that runs between telecommunications rooms, or floor distribution terminals, the entrance facilities, and the equipment rooms within or between buildings.

balance: Balance is the ratio of the differential signal output at either end of any pair to a common mode signal input, at either end of the same or a different pair, and vice versa, under specified termination conditions.

bonding: The permanent joining of metallic parts to form an electrically conductive path that will assure electrical continuity and the capacity to conduct safely any current likely to be imposed on it.

bundled cable: An assembly of two or more cables continuously bound together to form a single unit.

cable: An assembly of one or more insulated conductors or optical fibers, within an enveloping sheath.

cable run: A length of installed media, which may include other components along its path.

cable sheath: A covering over the optical fiber or conductor assembly that may include one or more metallic members, strength members, or jackets.

cabling: A combination of all cables, jumpers, cords, and connecting hardware.

campus: The buildings and grounds having legal contiguous interconnection.

centralized cabling: A cabling configuration from the work area to a centralized cross-connect using pull through cables, an interconnect, or splice in the telecommunications room.

channel: The end-to-end transmission path between two points at which application-specific equipment is connected.

connecting hardware: A device providing mechanical cable terminations.

connector, small form factor: An optical fiber duplex connector with a size approximating that of an 8-position modular outlet/connector typically used for terminating 4-pair copper cable.

cord (telecommunications): A cable using stranded conductors for flexibility, as in distribution cords or line cords.

cross-connect: A facility enabling the termination of cable elements and their interconnection or cross-connection.

cross-connection: A connection scheme between cabling runs, subsystems, and equipment using patch cords or jumpers that attach to connecting hardware on each end.

decibels (dB): A logarithmic unit that is used to describe a wide range of differences in signal voltage or power levels.

delay skew: The difference in propagation delay between any two pairs within the same cable sheath.

demarcation point: A point where the operational control or ownership changes.

drain wire: A non-insulated conductor placed in electrical contact with a shield.

electromagnetic interference: Radiated or conducted electromagnetic energy that has an undesirable effect on electronic equipment or signal transmissions.

entrance facility (telecommunications): An entrance to a building for both public and private network service cables (including wireless) including the entrance point of the building and continuing to the entrance room or space.

entrance point (telecommunications): The point of emergence for telecommunications cabling through an exterior wall, a floor, or from a conduit.

entrance room or space (telecommunications): A space in which the joining of inter or intra building telecommunications backbone facilities takes place.

equal level far-end crosstalk: (obsolete) A measure of the unwanted signal coupling from a transmitter at the near-end into another pair measured at the far-end, and relative to the received signal level.

equipment cable, cord: A cable or cable assembly used to connect telecommunications equipment to horizontal or backbone cabling.

equipment room (telecommunications): An environmentally controlled centralized space for telecommunications equipment that usually houses a main or intermediate cross-connect.

far-end crosstalk loss: A measure of the unwanted signal coupling from a transmitter at the near end into another pair measured at the far end.

fiber optic: See optical fiber.

ground: A conducting connection, whether intentional or accidental, between an electrical circuit (e.g., telecommunications) or equipment and the earth, or to some conducting body that serves in place of earth.

high-order mode transient losses: Losses in power caused by the attenuation in the cladding of multimode optical fiber.

horizontal cabling: (1)The cabling between and including the telecommunications outlet/connector and the horizontal cross-connect.
(2) The cabling between and including the building automation system outlet or the first mechanical termination of the horizontal connection point and the horizontal cross-connect.

horizontal cross-connect: A cross-connect of horizontal cabling to other cabling, e.g., horizontal, backbone, and equipment.

hybrid cable: An assembly of two or more cables, of the same or different types or categories, covered by one overall sheath.

hybrid optical fiber cable: An optical fiber cable containing two or more fiber types (e.g., multimode and single-mode).

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Glossary

infrastructure (telecommunications): A collection of those telecommunications components, excluding equipment, that together provide the basic support for the distribution of all information within a building or campus.

insertion loss: The signal loss resulting from the insertion of a component, or link, or channel, between a transmitter and receiver.

insertion loss deviation: The difference between the actual insertion loss as measured on a permanent link or channel and the insertion loss as determined by adding the component losses.

interconnection: A connection scheme that employs connecting hardware for the direct connection of a cable to another cable without a patch cord or jumper.

intermediate cross-connect: A cross-connect between first level and second level backbone cabling.

intrabuilding telecommunications backbone: A pathway or cable facility for interconnecting telecommunications service entrance rooms, equipment rooms, or telecommunications rooms within a building.

jumper: An assembly of twisted-pairs without connectors, used to join telecommunications circuits/links at the cross-connect.

keying: The mechanical feature of a connector system that guarantees correct orientation of a connection, or prevents the connection to a jack, or to an optical fiber adapter of the same type intended for another purpose.

link: A transmission path between two points, not including terminal equipment, work area cables, and equipment cables.

longitudinal conversion loss: A ratio, expressed in dB, of measured differential voltage relative to the common mode voltage on a conductor pair applied at the same end.

longitudinal conversion transfer loss: A ratio, expressed in dB, of measured differential voltage at one end of a conductor pair relative to the common mode voltage applied on any pair at the opposite end or on any other pair on the same end.

main cross-connect: A cross-connect for first level backbone cables, entrance cables, and equipment cables.

main terminal space: The location of the cross-connect point of incoming cables from the telecommunications external network and the premises cable system.

megabits per second (Mbps): An application dependent specification describing the number of discrete bits of information (i.e. a "1" or a "0") transmitted per second.

megahertz (MHz): Transmitted signal frequency described as the number of millions of sinusoidal signal cycles per second.

mode: A path of light in an optical fiber.

modular jack: A female telecommunications connector that may be keyed or unkeyed and may have 6 or 8 contact positions, but not all the positions need be equipped with jack contacts.

modular plug cord: A length of cable with a modular plug on both ends.

multimode optical fiber: An optical fiber that carries many paths of light.

multipair cable: A cable having more than four pairs.

multi-user telecommunications outlet assembly: A grouping in one location of several telecommunications outlet/connectors.

open office: A floor space division provided by furniture, moveable partitions, or other means instead of by building walls.

optical fiber: Any filament made of dielectric materials that guides light.

optical fiber cable: An assembly consisting of one or more optical fibers.

optical fiber duplex connection: A mated assembly of two duplex connectors and a duplex adapter.

outlet/connector (telecommunications): A connecting device in the work area on which horizontal cable or outlet cable terminates.

patch cord: A length of cable with a plug on one or both ends.

patch panel: A connecting hardware system that facilitates cable termination and cabling administration using patch cords.

pathway: A facility for the placement of telecommunications cable.

permanent link: A test configuration for a link excluding test cords and patch cords.

plenum: A compartment or chamber to which one or more air ducts are connected and that forms part of the air distribution system.

power sum attenuation-to-crosstalk ratio: A ratio, expressed in dB, determined by subtracting the insertion loss from the power sum near-end crosstalk loss.

power sum attenuation-to-crosstalk ratio far-end: replaces PSELFEXT. A computation of the unwanted signal coupling from multiple transmitters at the near-end into a pair measured at the far-end, and normalized to the received signal level.

power sum equal level far-end crosstalk: (obsolete) A computation of the unwanted signal coupling from multiple transmitters at the near-end into a pair measured at the far-end, and normalized to the received signal level.

power sum near-end crosstalk loss: A computation of the unwanted signal coupling from multiple transmitters at the far-end into a pair measured at the near-end

propagation delay: The time required for a signal to travel from one end of the transmission path to the other end.

return loss: A ratio expressed in dB of the power of the outgoing signal to the power of the reflected signal.

room (telecommunications): An enclosed space for housing telecommunications equipment, cable terminations, and cross-connect cabling, that is the recognized location of the horizontal cross-connect.

screen: An element of a cable formed by a shield.

screened twisted-pair (ScTP): A balanced cable with an overall screen.

shield: A metallic layer placed around a conductor or group of conductors.

singlemode optical fiber: An optical fiber that carries only one path of light.

splice: A joining of conductors in a splice closure, meant to be permanent.

splice closure: A device used to protect a splice.

star topology: A topology in which telecommunications cables are distributed from a central point.

telecommunications: Any transmission, emission, and reception of signs, signals, writings, images, and sounds, that is information of any nature by cable, radio, optical, or other electromagnetic systems.

topology: The physical or logical arrangement of a telecommunications system.

transfer impedance: A measure of shielding performance determined by the ratio of the voltage on the conductors enclosed by a shield to the surface currents on the outside of the shield.

transition point: A location in the horizontal cabling where flat undercarpet cable connects to round cable.

work area (work station): A building space where the occupants interact with telecommunications terminal equipment.

work area cable (cord): A cable connecting the telecommunications outlet/connector to the terminal equipment

Units of Measure

°C	degrees Celsius
°F	degrees Fahrenheit
dB	decibel
ft	foot
GHz	gigahertz
in	inch
km	kilometer
lbf	pound force
m	meter
MHz	megahertz
mm	millimeter
N	newton
nm	nanometer
ns	nanosecond
V_{rms}	volts root mean square
µm	micron or micrometer

Conversion Table

English to Metric

	Multiply by:
from inches to centimeters	2.54
from feet to meters	0.3048
from yards to meters	0.9144
from ounces to grams	28.3495
from pounds to kilograms	0.453592
from Fahrenheit (F) to Celsius (C)	C=(F-32) x 0.555

Fiber

Part #	Page #	Part #	Page #	Part #	Page #	Part #	Page #	Part #	Page #
60001	50	60086	86	60431	52	60565	62	60710	84
60002	50	60087	86	60432	52	60567	60	60712	84
60003	50	60088	86	60462	50	60569	60	60714	84
60004	50	60089	86	60463	50 & 56	60570	62	60715	84
60005	50	60090	86	60464	50	60581	60	60716	84
60006	60	60097	88	60465	50	60582	62	60717	84
60007	50	60098	88	60466	50	60585	60	60719	84
60008	52	60101	88	60467	50	60586	62	60720	84
60009	60	60102	88	60468	52	60588	60	60721	84
60010	50	60103	82	60469	52	60589	62	60722	84
60011	50	60104	82	60470	52	60591	60	60932	88
60012	50 & 56	60105	82	60471	52 & 58	60592	62	60933	88
60014	56	60106	84	60472	52	60594	60	60934	88
60015	60	60107	84	60473	52	60595	60	60937	88
60022	52	60108	84	60474	52	60596	62	60938	86
60023	52	60109	84	60475	52	60598	62	60939	86
60024	52 & 58	60110	84	60489	50	60600	60	60940	86
60026	52 & 58	60111	84	60490	52	60601	62	60943	86
60027	62	60235	86	60491	52	60603	60	60944	88
60028	62	60258	62	60492	52	60604	62	60945	88
60029	58	60282	86	60501	50	60613	60	60946	88
60030	52	60337	82	60502	52	60614	62	60950	86
60031	52 & 58	60344	84	60514	50 & 56	60621	60	60951	86
60033	62	60345	88	60515	56	60622	62	60954	88
60037	50	60346	88	60516	56	60627	60	61319	74
60038	50	60351	86	60517	58	60628	62	61337	74
60039	50	60356	88	60518	58	60633	60	61345	78
60040	50	60369	60	60520	56	60634	62	61347	78
60042	52	60405	74	60522	58	60638	60	61348	78
60044	52	60408	86	60524	72	60639	62	61349	78
60063	50 & 56	60425	50	60559	62	60701	84	61421	72
60085	86	60430	52	60564	60	60702	84	61433	74

Part Number

Fiber

Part #	Page #	Part #	Page #	Part #	Page #	Part #	Page #
61459	80	61855	52 & 58	61910	88	62147	54
61460	80	61857	52	61911	88	62148	54
61464	80	61865	56	61912	88	62149	54
61468	80	61868	58	61956	80	62150	54
61480	80	61870	60	61959	80	62151	54
61497	88	61871	60	61979	80	62153	54
61506	66	61872	60	61980	80	62154	54
61507	66	61873	60	62029	54	62155	54
61509	68	61874	60	62030	70	62156	54
61537	66	61875	62	62031	70	62157	54
61538	66	61876	62	62068	76	62166	66
61539	64	61877	62	62122	70	62168	66
61540	72	61878	62	62123	70	62169	66
61542	72	61879	62	62124	54	62171	66
61546	64	61882	64	62125	54	62172	66
61547	64	61883	66	62126	54	62183	74
61549	68	61884	68	62127	54	62184	74
61550	68	61893	78	62129	54	62185	74
61577	76	61894	80	62130	54	62186	74
61578	76	61895	82	62131	54	62187	74
61579	76	61896	72	62132	54	62205	66
61580	76	61897	74	62133	54	62214	66
61791	50	61900	84	62135	54	62216	66
61792	50	61901	84	62136	54	62218	66
61793	50	61902	84	62137	54	62220	66
61838	50	61903	84	62138	54		
61842	50 & 56	61904	84	62139	54		
61844	50	61905	86	62141	54		
61851	52	61906	86	62142	54		
61852	52	61907	86	62143	54		
61853	52	61908	86	62144	54		
61854	52	61909	88	62145	54		

Notes

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Part Number

Copper

Part #	Page #	Part #	Page #
30016	12	30233	38
30022	12	30234	38
30024	16	30237	18
30025	16	30238	18
30086	48	30245	36
30093	28	30250	34
30110	44	30263	10
30111	30	30265	10
30120	48	38653	42
30129	40	38696	24
30132	20	38718	30
30134	32	38730	48
30145	50	38743	48
30154	40	38822	46
30172	28	38886	26
30180	50	38891	22
30183	14	38893	22
30203	28	39063	46
30212	14	39092	42
30218	8	39228	32
30222	8	39419	24

Jacket Color Abbreviations

Black	BK
Blue	BL
Brown	BR
Gray	GA
Green	GR
Red	RD
White	WH
Yellow	YE

Put-Up Code

Reelex-Boxes	2
Reels	3
Reel-In-A-Box	4

How to Build an Hitachi Part Number

Section 1	Section 2	Section 3	Section 4
39419	8	BL	2
Base Part Number	Number of Conductors	Jacket Color	Reel Type

Part number 39419-8-BL2 is a Category 5e, plenum rated 4-pair cable with a blue jacket and packaged in a reelex-box.
Note: Some cable constructions may require additional information when ordering.

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Notes

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Notes

Installation

Conduit Fill Chart

Cable Diameter: Conduit Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"
40% Int. Area	0.121"	0.213"	.345"	.598"	.814"	1.342"	2.343"	3.538"	4.618"	5.901"
0.19"	4	7	12	21	28	47	82	124	163	208
0.2"	4	6	11	19	26	42	74	112	147	188
0.21"	3	6	10	17	23	38	67	102	133	170
0.22"	3	5	9	15	21	35	61	93	121	155
0.23"	3	5	8	14	19	32	56	85	111	142
0.24"	2	4	7	13	18	29	51	78	102	130
0.25"	2	4	7	12	16	27	47	72	94	120
0.26"	1	4	6	11	15	25	44	66	87	111
0.27"	1	3	6	10	14	23	41	61	80	103
0.28"	1	3	5	9	13	21	38	57	75	96
0.29"	1	3	5	9	12	20	35	53	70	89
0.3"	1	3	5	8	11	19	33	50	65	83
0.31"	1	3	4	8	10	17	31	47	61	78
0.32"	1	2	4	7	10	16	29	44	57	73
0.33"	1	2	4	7	9	15	27	41	54	69
0.34"	1	2	4	6	9	14	26	39	51	65
0.35"	1	1	3	6	8	14	24	36	48	61

The above conduit fill chart is for reference only. The conduit capacity is based on the National Electical Code requirement of 40% maximum fill. To determine the maximum conduit fill for cable O.D.s other than those referenced above, use the following steps: 1. Square the O.D. of the cable. 2. Multiple the result by .7854. This is the total area of the cable. 3. Multiple the total area of the cable by the number of cables you wish to place in the conduit. This is the total area of the cable bundle. Determine the appropriate conduit size by referencing the 40% Interior Area row.

Storage, Installation & Operation Temperatures

	Indoor Copper Cables	Indoor Fiber Optic Cables
Storage Temperature	-40°C to 60°C (-40°F to 140°F)	-40°C to 70°C (-40°F to 158°F)
Installation Temperature	0°C to 60°C (32°F to 140°F)	-10°C to 60°C (14°F to 140°F) Riser 0°C to 60°C (32°F to 140°F) Plenum
Operation Temperature	-20°C to 50°C (-4°F to 122°F)	-20°C to 70°C (-4°F to 158°F) Riser 0°C to 70°C (32°F to 158°F) Plenum

	Outdoor Copper Cables	Outdoor Fiber Optic Cables
Storage Temperature	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)
Installation Temperature	-20°C to 70°C (-4°F to 158°F)	-30° to 60°C (-22° to 140°F)
Operation Temperature	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)

Product Performance Guarantee

All goods sold are warranted to be free from defects in material and workmanship on the date of delivery of the materials to the F.O.B. point stated. Seller makes no representation or warranty of any kind, expressed or implied with respect to the goods sold hereunder, whether as to merchantability, fitness for particular purpose, or any other matter. Seller's only obligation is to replace goods that are proved defective within one (1) year after the date of delivery, but always provided the product receives normal and proper use, and due care in handling is exercised. If the goods purchased show defects in material or workmanship within one (1) year after date of delivery, Buyer must discontinue use thereof and must properly notify Seller, so that the matter may be investigated and material inspected and examined by the Seller without inference or delay. Contact Hitachi Cable for full warranty details.

WORLDWIDE COVERAGE

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Rev 01/2014