Hitachi Cable America Inc.

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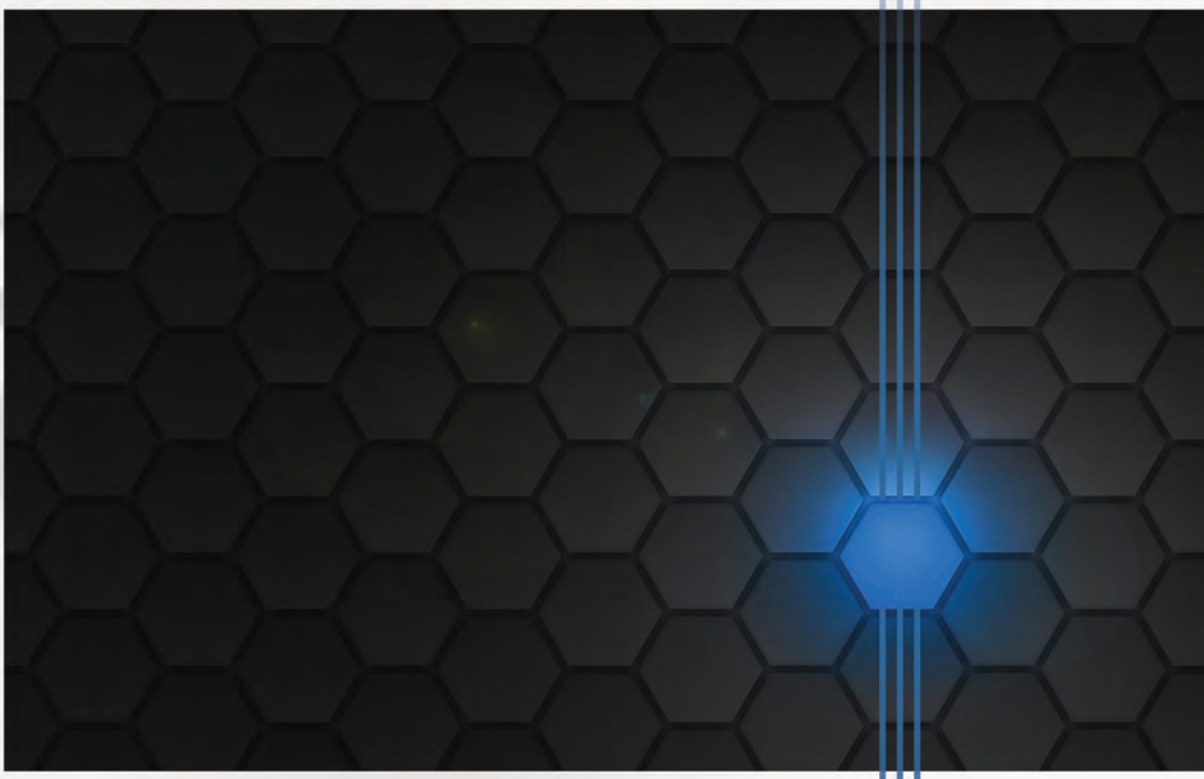
PREMISE & FIBER OPTIC CABLE CATALOG



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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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, NH 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.

Hitachi's Manufacturing Advantage

Hitachi Cable America (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.

Better Materials and Practices for a Better Earth

All the products manufactured at the Manchester, NH facility are compliant to EU Directive 2011/65/EU, also known as the Restriction of Hazardous Substances (RoHS2) 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.

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.

New Products in Development

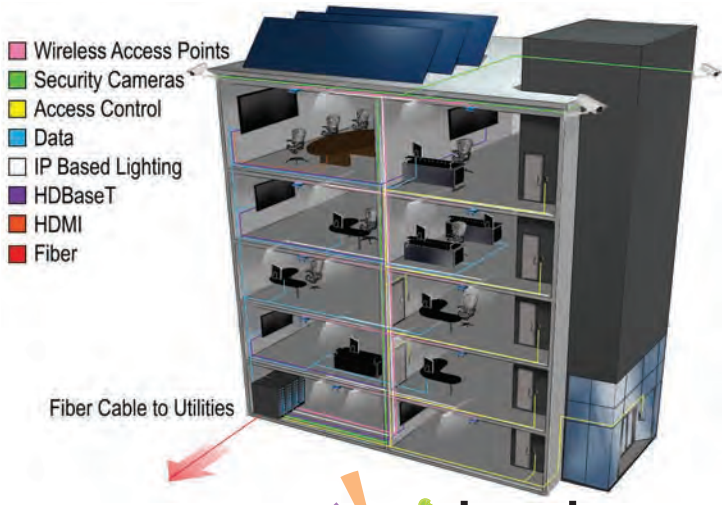
Hitachi and its significant research and development team are constantly releasing new products and developing future ones. As wireless applications and power over Ethernet grows in popularity, Ethernet cables are finding their way into a wide range of physical environments. From oil refineries in Mississippi to cell towers in Anchorage, Ethernet cables are being required to perform in some extremely harsh environments. To meet this growing need, Hitachi is constantly developing new cable constructions. Hitachi offers a vast selection of industrial Ethernet cables. Designs include high-temp shielded cables, oil and chemical resistant cables, high flex cables that can accommodate millions of flex cycles and tactical cables that are designed for extreme environments. To accommodate various Ethernet data rates, cables are available in Category 5e, 6 and 6A designs. These cables and more can be found in our Industrial Ethernet Solution brochure and on our website. With dozens of cable constructions available and more on the way, Hitachi Cable will have the solution you need.

The Open System Architecture Solution

Whether you are installing the highest-performing Category copper cabling or fiber optic infrastructure, there are a number of well-known brands available to choose from. What makes one brand a wiser choice than another? Which one offers maximum performance, while also providing the best value?

Open System Architecture (OSA) from Hitachi Cable America (Hitachi) provides world class performance using virtually any combination of Hitachi verified cables with verified connective hardware in the design of the network. The ANSI/TIA-568-C.1 standard specifies the performance requirements of all network components and defines interoperability base-line limits to ensure that combinations of cable with connectivity will meet or exceed the system's intended application. By employing a Hitachi OSA solution, end users have the freedom to choose from a wide range of quality connectivity products that best meet their specific needs and be confident that the chosen solution will support all applications designed to operate over that solution and be backed by an industry-leading lifetime warranty*.

Beyond-The-Link Building Systems



internet of things
The Gateway To Information

Hitachi Open System Architecture

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

TIA ADVANCING GLOBAL COMMUNICATIONS

ISO International Organization for Standardization

IEEE

It's all in the Cable

In virtually all cable based communication links, it is the cable that determines the ultimate performance of that link. It is the cable, not the connectors, that establishes how well the applications that run over it will be supported. This is the reason why many cable manufacturers make different performance levels of Category 6 cable while jack and plug manufacturers make only one jack or plug to mate to them. The desirable headroom that results from the link is provided by the cable. With a growing list of applications for Category 6, many of them critical to a facility's operation, selecting a quality cable from an established manufacturer is recommended. Additionally, with an increase in counterfeit and unestablished brands flooding the market, protect your investment by sourcing only through trusted distribution channels.

Cable is Key!

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

*Lifetime Warranty available only through Hitachi certified installers.

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.

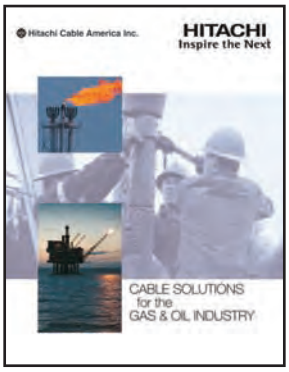
Hitachi Cable Warranted Systems feature:

- 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

Other Products offered by Hitachi Cable America

Cabling Solutions for Rail & Rolling Stock

Hitachi's presence in rail and rolling stock transportation goes back many decades. With major rail engagement in Europe, Japan, China, Korea, India and the Americas, we are well positioned to support this expanding mass transit segment, especially for Canbus and Ethernet cable applications meeting the NFPA130-2010 requirements.



Cabling Solutions for Gas & Oil Industry

Cable solutions for the oil and gas segment range from tiny bundles of 38 AWG microcoaxials used in the ultrasound detection of pipeline flaws to large, ruggedized fiber optic cable bundles used for 'walking' drilling rigs. Our specialty cable designs feature cut-through resistant thermoplastic polyurethane jackets with outstanding petrochemical and solvent resistance.

Cabling Solutions for Mining Industry

Our mining cable designs feature cut through resistant thermoplastic polyurethane jackets for long application life. We offer "Leaky Coaxial" cables for wireless applications. Both fiber and copper communications cables are produced in the Americas. Rubber jacketed cable for large drum applications is available from our tried and true global production center in Japan.

Cabling Solutions for Industrial Ethernet

To accommodate a wide variety of applications, Hitachi Cable offers dozens of unique designs intended to meet your specific needs. From high-flex to static, solid conductor to stranded, high and low temperature, oil and chemical resistant, we have the right industrial Ethernet solution.

Cabling Solutions for Direct Attach Cables/ Optical Active Cables/Transcievers

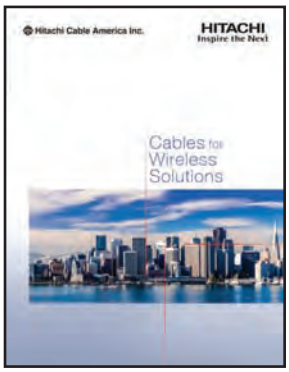
Fiber Optic Transceivers and Active Optical Cables perform the conversion between optical and electrical signals, incorporated in routers, switches, and servers. The best quality optical transceivers, intended for high-end markets, achieve transmission speeds of 40Gbps, 100Gbps and beyond.

Cabling Solutions for Defense

From our high-speed shielded Category 6A network cables to our armored fiber optic cables, Hitachi Cable's products are deployed not just in federal agencies across the U.S., but at its military installations both domestic and abroad.

Cabling Solutions for Broadcast

Hitachi Cable offers a line of SMPTE products for the professional broadcast industry. With the rugged demands of professional broadcasting in mind, Hitachi manufacturers cables with a flexible TPE jacket for in-studio applications and light to medium field use, or a rugged polyurethane jacket for outdoor and truck applications.



Cabling Solutions for Wireless Applications

As more and more devices go wireless, the importance of the cable infrastructure supporting those wireless networks grows as well. Hitachi Cable manufactures fiber optic cables, coaxial cables, shielded and unshielded twisted pair cables and hybrid cables to support wireless applications, such as Distributed Antenna System (DAS) and Fiber to the Antenna (FTTA).

Cat 7A S/FTP

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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.
- Supports up to 120 watts of power.

Packaging

- 1,000 foot (305m) reels

Applications

- Including:

HDBase-T

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+

Note: If terminating with a plug for HDBaseT use, suggested plug is Metz Connect P/N 130E405032-E.

Temp Range

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

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-XXY	4	.305	7.47	53.64	24.33

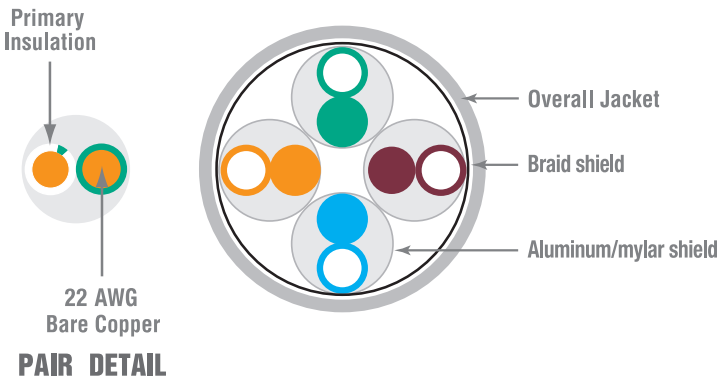
Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30250	8	XX	Y

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reels(3)

Features



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

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
Ampacity[1]	.6 Amps/conductor

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.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Cat 7 S/FTP

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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.
- Supports up to 120 watts of power.

Packaging

- 1,000 foot (305m) reels

Applications

- Including:

HDBase-T

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+

Note: If terminating with a plug for HDBaseT use, suggested plug is Metz Connect P/N 130E405032-E.

Temp Range

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

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-XXY	4	.305	7.747	53.64	24.33

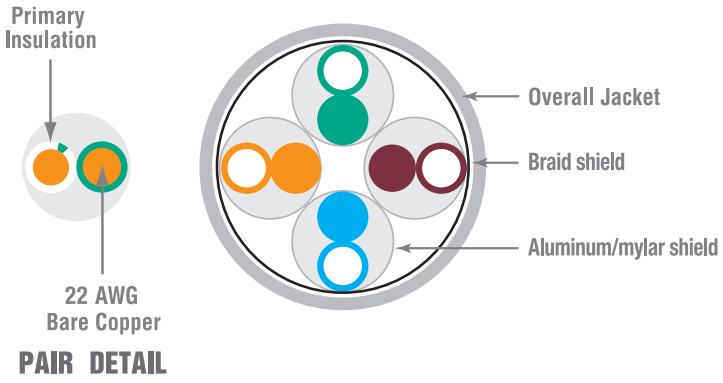
Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30245	8	XX	Y

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reels(3)

Features



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

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
Ampacity[1]	.6 Amps/conductor

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.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Cat 7 StratoGig-HD®

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- Low Smoke Plenum construction.
- Tested from 1 MHz to 600 MHz.
- Compliant to ISO 11801 Class F (Category 7) Requirements.
- 3rd Party Certified HDBaseT performance to 100 meters.
- Conductor pairs are individually wrapped in foil.
- Overall braid.
- Color-coded stripe extruded on each white conductor.
- Larger gauge conductor ideal for heat dissipation for POE++ applications.
- Higher heat rating than standard category cable.
- Supports up to 120 watts of power.

Packaging

- 1,000 foot (305m) reels
- Inquire for custom reel lengths.

Applications

- Including:

  HDBase-T to 100m

  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+

  POE++

Note: If terminating with a plug for HDBaseT use, suggested plug is Metz Connect P/N 130E405032-E.

Temp Range

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

Cat 7 StratoGig-HD® (Plenum) HDBaseT-Ethernet-PoE

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

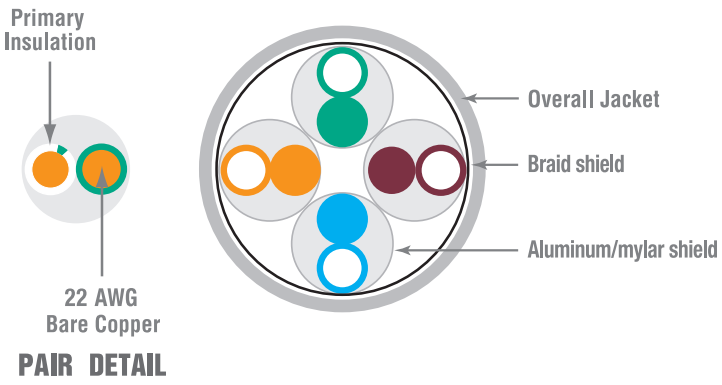
HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
41684-8	4	.335	7.47	53.64	24.33

Standard jacket color is black. Custom colors are available.

StratoGig-HD® cable is designed to deliver maximum throughput up to 100 meters for today's and tomorrow's applications. Its construction allows it to accommodate industrial Ethernet, high-temp PoE++ (IEEE 802.3bt), HDBaseT 5Play and future high-speed Ethernet applications. The individually shielded pairs deliver exceptional noise immunity and ensure optimum signal transmissions.

HDBT™

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.

Category 7

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
Ampacity[1]	.6 Amps/conductor

Transmission Specifications

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

	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	5.9	78.0	75.0	72.2	69.2	75.3	72.3	30.0	15.0	25.0	-
16	7.4	78.0	75.0	70.7	67.7	71.2	68.2	28.0	10.9	25.0	-
20	8.3	78.0	75.0	69.8	66.8	69.3	66.3	27.0	9.0	25.0	-
25	9.3	78.0	75.0	68.8	65.8	67.3	64.3	26.0	7.0	24.3	-
31.25	10.4	78.0	75.0	67.7	64.7	65.4	62.4	25.1	5.1	23.6	85.0
62.5	14.9	75.5	72.5	63.4	60.4	59.4	56.4	22.0	-	21.5	85.0
100	19.0	72.4	69.4	56.9	53.9	55.3	52.3	20.0	-	20.1	85.0
200	27.5	67.9	64.9	44.4	41.4	49.3	46.3	17.0	-	18.0	79.0
300	34.2	65.2	62.2	35.6	32.6	45.8	42.8	-	-	17.3	75.5
400	40.0	63.4	60.4	28.4	25.4	43.3	40.3	-	-	17.3	73.0
500	45.3	61.9	58.9	22.2	19.2	41.3	38.3	-	-	17.3	71.0
600	50.1	60.7	57.7	16.6	13.6	39.7	36.7	-	-	17.3	69.4

All values are dB/100m.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Supra 10G™ F/UTP

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- UL Verified.
- Low Smoke Plenum construction.
- Tested from 1 to 660 MHz.
- Small O.D. allows more cables per conduit.
- Proven shield technology improves RFI, EMI and alien crosstalk performance.
- Supports up to 100 watts of power.

Packaging

- 1,000 foot (305m) reels

Options

- Available in LSZH

Applications

- Including:

HDBase-T
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+

Note: If terminating with a plug for HDBaseT use, suggested plug is Metz Connect P/N 130E405032-E.

Temp Range

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

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-XXY	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-XXY	4	.29	7.37	39.02	17.70

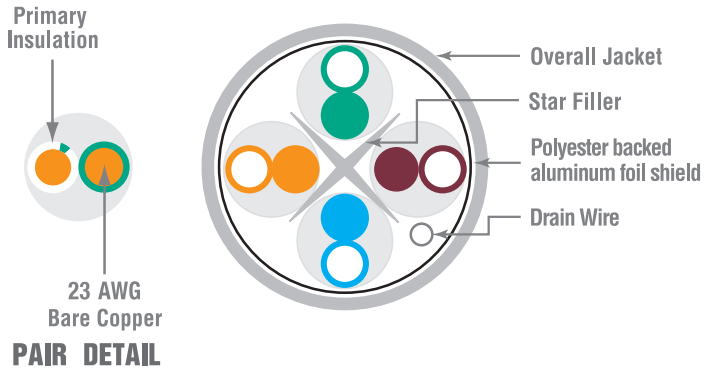
Building a Part Number

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

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reels(3)

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

Category 6A

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
Ampacity[1]	.5 Amps/conductor

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.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Supra 10G™

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- UL Verified.
- Low Smoke Plenum construction.
- Unique spline construction is installation and termination friendly.
- Guaranteed minimum performance.
- Tested from 1 to 660 MHz.
- Performance that exceeds TIA and ISO Category 6A requirements.
- Patented non-concentric design increases alien crosstalk performance.
- Supports up to 100 watts of power.

Packaging

- 1,000 foot (305m) reels

Options

- CMP-50 rated cables available
- Low smoke zero halogen available; Part #30224-8

Applications

- Including:

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

Note: If terminating with a plug for HDBaseT use, suggested plug is Metz Connect P/N 130E405032-E.

Temp Range

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

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-XXY	4	.31	7.87	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-XXY	4	.32	8.13	36.72	16.65

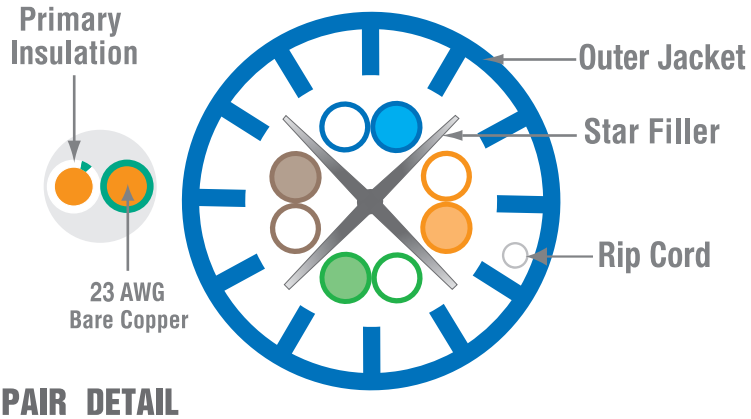
Building a Part Number

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

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reels(3)

Features



PAIR DETAIL

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
Ampacity[1]	.5 Amps/conductor

Unique patented non-concentric design produces alien crosstalk performance that far exceeds the TIA standard.

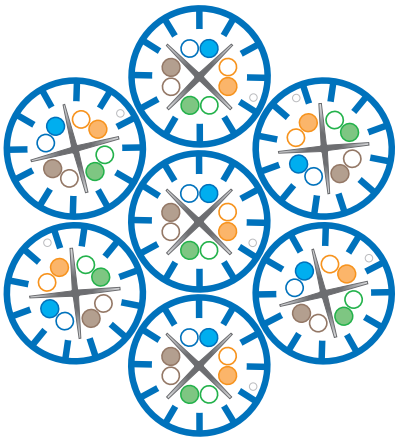


Photo is for representation purposes only.

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.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

10G RD™

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- UL Verified.
- Low Smoke Plenum construction.
- Tested from 1 to 500 MHz.
- 6A compliant single cable up to TIA Standard maximum 100m (channel).
- Guaranteed 10 gigabit Ethernet support to 100m (channel).
- 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.
- Supports up to 100 watts of power.

Packaging

- 1,000 foot (305m) reels

Applications

- Including:

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

Note: If terminating with a plug for HDBaseT use, suggested plug is Metz Connect P/N 130E405032-E.

Temp Range

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

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-XXY	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-XXY	4	.29	7.36	37.1	16.83

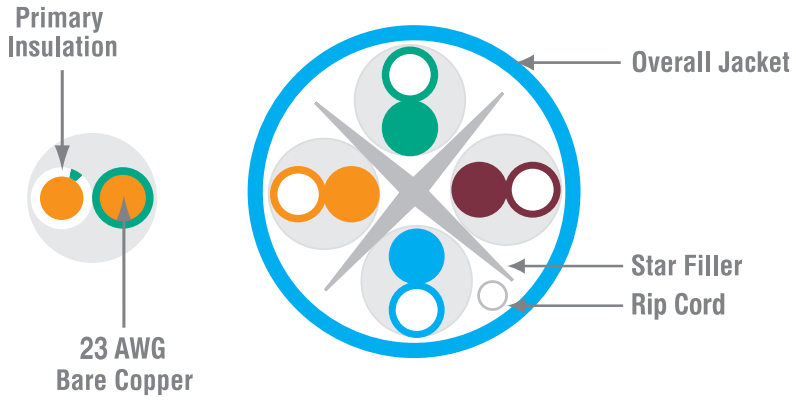
Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30263	8	XX	Y

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reels(3);

Features

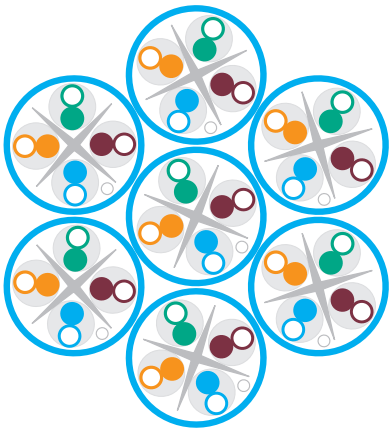


DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Polyolefin	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic
Star Filler	Flame-retardant thermoplastic	Plenum-rated polymer

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
Ampacity[1]	.5 Amps/conductor

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 Single Cable.
Alien crosstalk performance compliant per ACMC.

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 100 meters. Alien Crosstalk Mathematical Calculation (ACMC) based on TSB-155.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Cat 6 F/UTP

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- UL Verified.
- Low Smoke Plenum construction.
- Tested from 1 to 555 MHz.
- Proven shield technology improves RFI and EMI performance.
- Supports up to 100 watts of power.

Packaging

- 1,000 foot (305m) reels

Applications

- Including:

HDBase-T
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+

Note: If terminating with a plug for HDBaseT use, suggested plug is Metz Connect P/N 130E405032-E.

Temp Range

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

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-XXY	4	.28	7.11	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-XXY	4	.29	7.37	39.02	17.70

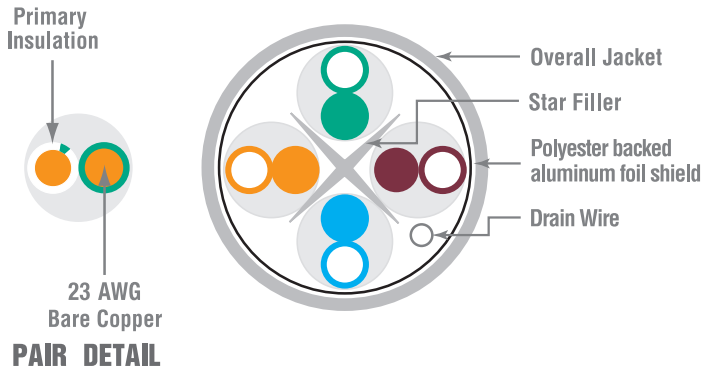
Building a Part Number

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

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reels(3)

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

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
Ampacity[1]	.5 Amps/conductor

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.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Supra™ 660

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- UL Verified.
- Low Smoke Plenum construction.
- Guaranteed minimum performance.
- Enhanced performance beyond TIA Standard.
- Tested from 1 to 660 MHz.

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

- Supports up to 100 watts of power.

Packaging

- 1,000 foot (305m) reels
- 1,000 foot (305m) Reelex

Options

- CMP-50 rated cables available

Applications

- Including:

HDBase-T
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 +75C (-4F to +167F)

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-XXY	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-XXY	4	.24	6.09	26.93	12.22

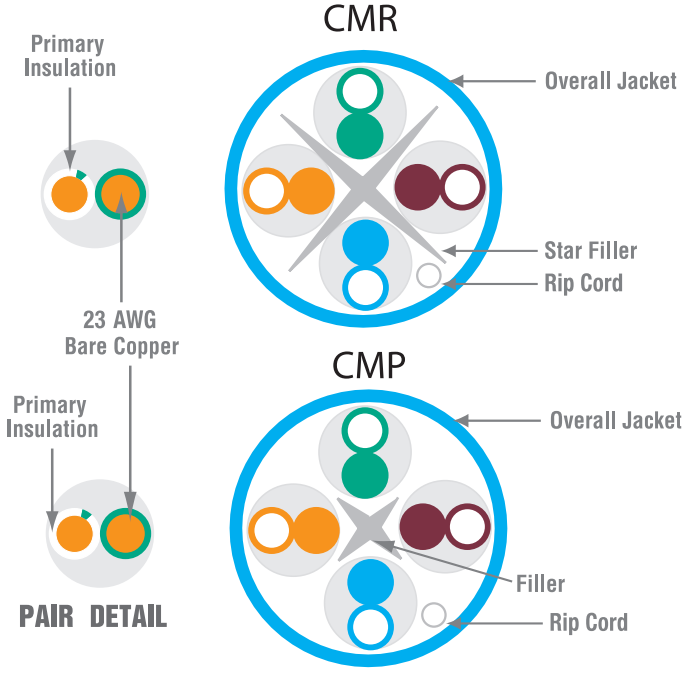
Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30016	8	XX	Y

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reelex Boxes(2); Reels(3)

Features



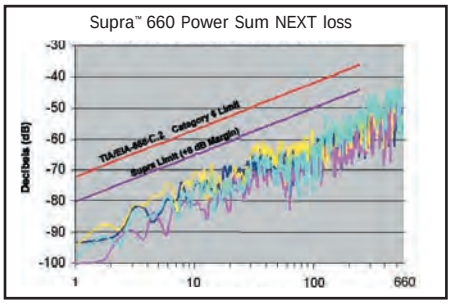
DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Polyolefin	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic
Star Filler	Flame-retardant thermoplastic	Plenum-rated polymer

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) I 45 ns/100 meters (CMR)
Nominal velocity of propagation (NVP)	riser, 68%, plenum, 70%
Voltage Rating	300 Volts
Ampacity[1]	.5 Amps/conductor

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



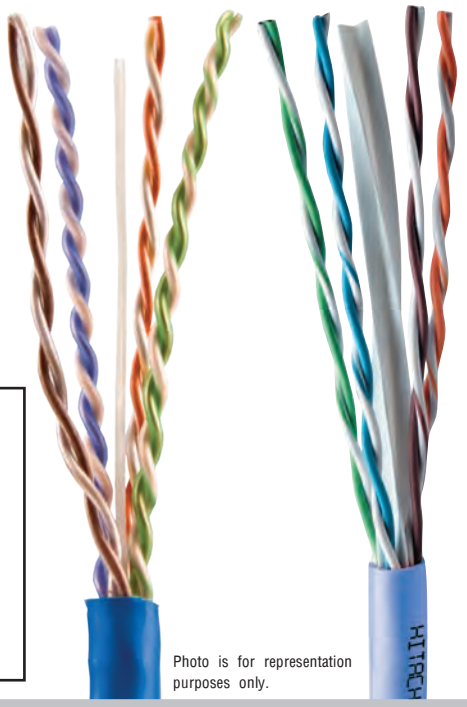


Photo is for representation purposes only.

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	15.9	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	5.5	15.5	3.5	13.5	19.8	27.8	16..8	24.8	17.3	20.9
300*	-	35.3	-	46.1	-	44.1	-	10.8	-	8.8	-	26.3	-	23.3	-	20.4
350*	-	38.6	-	45.1	-	43.1	-	6.5	-	4.5	-	24.9	-	21.9	-	20.1
400*	-	41.7	-	44.3	-	42.3	-	2.6	-	0.6	-	23.8	-	20.8	-	19.7
500*	-	47.5	-	42.8	-	40.8	-	-	-	-	-	21.8	-	18.8	-	19.2
555*	-	50.5	-	42.1	-	40.1	-	-	-	-	-	20.9	-	17.9	-	18.9
660*	-	55.9	-	41.0	-	39.0	-	-	-	-	-	19.4	-	16.4	-	18.5

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

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Premium

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- UL Verified.
- Low Smoke Plenum construction.
- Guaranteed minimum performance.
- Enhanced performance beyond TIA Standard.
- Tested from 1 to 660 MHz.

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

- Supports up to 100 watts of power.

Packaging

- 1,000 foot (305m) reels
- 1,000 foot (305m) Reelex (featuring reverse sequential numbering)

Options

- CMP-50 rated cables available

Applications

- Including:

HDBase-T
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 +75C (-4F to +167F)

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-XXY	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-XXY	4	.24	6.22	26.93	12.22

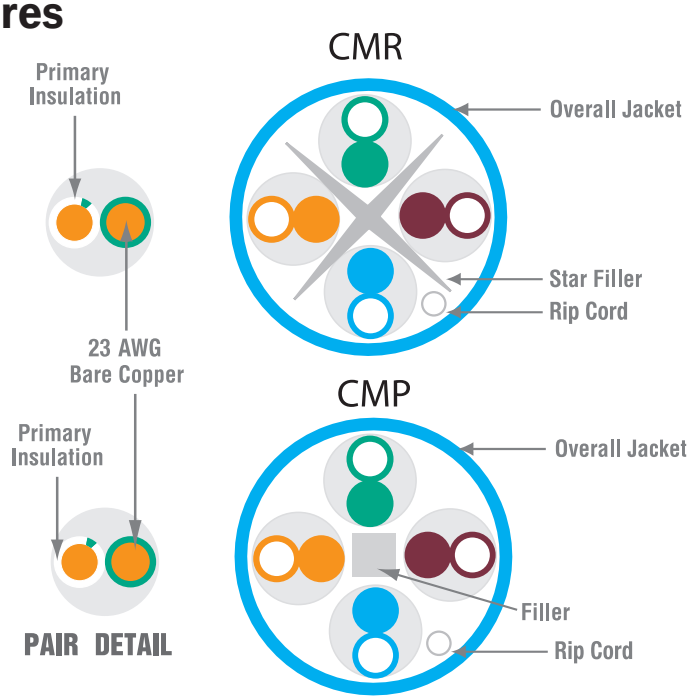
Building a Part Number

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

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reelex Boxes(2); Reels(3)

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 (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) I 45 ns/100 meters (CMR)
Nominal velocity of propagation (NVP)	riser, 68% plenum, 70%
Voltage Rating	300 Volts
Ampacity[1]	.5 Amps/conductor

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.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- UL Verified.
- Low Smoke Plenum construction.
- Guaranteed minimum performance.
- Enhanced performance beyond TIA Standard.
- Tested from 1 to 555 MHz.

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

- Supports up to 100 watts of power.

Packaging

- 1,000 foot (305m) reels
- 1,000 foot (305m) Reelex (featuring reverse sequential numbering)

Options

- CMP-50 rated cables available

Applications

- Including:

HDBase-T
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 +75C (-4F to +167F)

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-XXY	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-XXY	4	.23	5.84	22.87	10.37

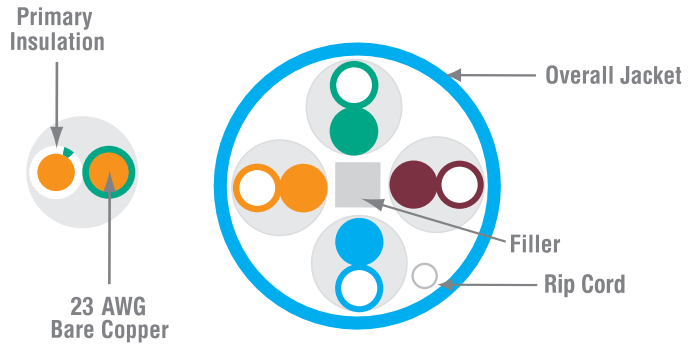
Building a Part Number

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

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reelex Boxes(2); Reels(3)

Features



PAIR DETAIL

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

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
Ampacity[1]	.5 Amps/conductor

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.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

HITACHI
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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- UL Verified.
- Low Smoke Plenum construction.
- Guaranteed minimum performance.
- Tested from 1 to 555 MHz.
- 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.
- Supports up to 100 watts of power.

Packaging

- 1,000 foot (305m) reels
- 1,000 foot (305m) Reelex (featuring reverse sequential numbering)

Applications

- Including:

HDBase-T
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 +75C (-4F to +167F)

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-XXY	4	.20	5.08	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-XXY	4	.21	5.48	23.12	10.5

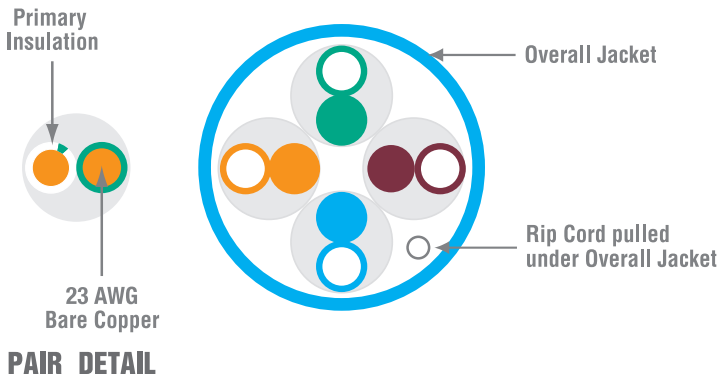
Building a Part Number

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

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reelex Boxes(2); Reels(3)

Features



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

Category 6

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
Ampacity[1]	.5 Amps/conductor

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.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Cat 6 Hybrid

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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.
- Supports up to 100 watts of power.

Packaging

- 1,000 foot (305m) reels

Applications

- Including:

HDBase-T
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+

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 +75C (-4F to +167F)

Diagram scale approx. 2:1

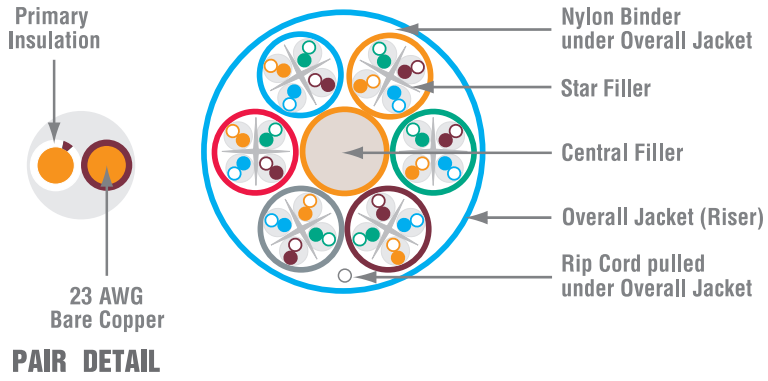
Category 6 GoldLAN™ Hybrid (Riser)

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

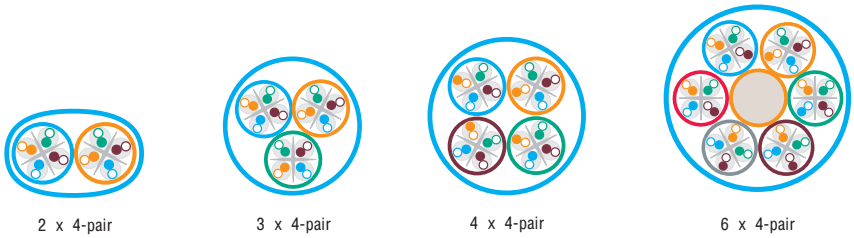
HITACHI PART NO.	NO. OF LEGS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30132-16	2 legs x 4-pair	.29 x .54	7.5 x 13.7	72	33
30132-24	3 legs x 4-pair	.58	14.7	104	47
30132-32	4 legs x 4-pair	.64	16.3	132	60
30132-48	6 legs x 4-pair	.802	20.4	204	93

Category 6 plenum hybrid constructions available skip-wrapped only.

Features



DIELECTRIC MATERIALS	RISER
Primary Insulation	Polyolefin
Star Filler	Flame-retardant thermoplastic
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 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
Ampacity[1]	.5 Amps/conductor

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

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Cat 5e F/UTP

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- UL Verified.
- Low Smoke Plenum construction.
- Tested from 1 to 400 MHz.
- Proven shield technology improves RFI and EMI performance.
- Supports up to 80 watts of power.

Packaging

- 1,000 foot (305m) reels

Applications

- Including:

HDBase-T
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 +75C (-4F to +167F)

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-XXY	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-XXY	4	.25	6.48	30.93	14.03

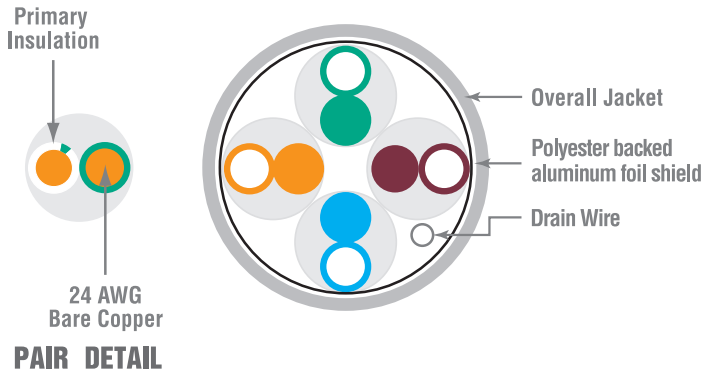
Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
38653	8	XX	Y

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reels(3)

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
Ampacity[1]	.4 Amps/conductor

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.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

350™

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- UL Verified.
- Low Smoke Plenum construction.
- Tested from 1 to 400 MHz.

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

- Supports up to 80 watts of power.

Packaging

- 1,000 foot (305m) reels
- 1,000 foot (305m) Reelex (featuring reverse sequential numbering)

Options

- CMP-50 rated cables available

Applications

- Including:

HDBase-T
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 +75C (-4F to +167F)

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-XXY	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-XXY	4	.179	4.547	17.86	8.10

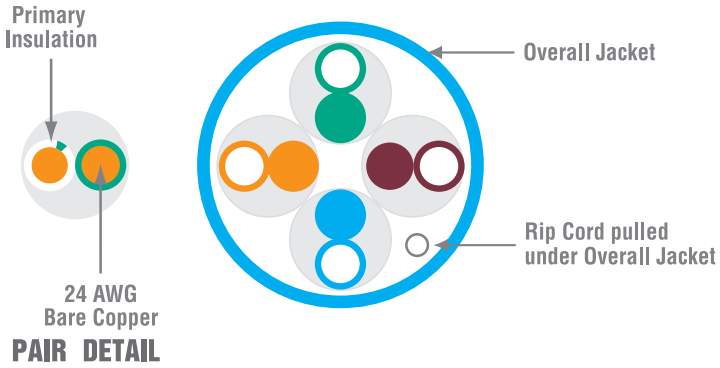
Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
38891	8	XX	Y

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reelex Boxes(2); Reels(3)

Features



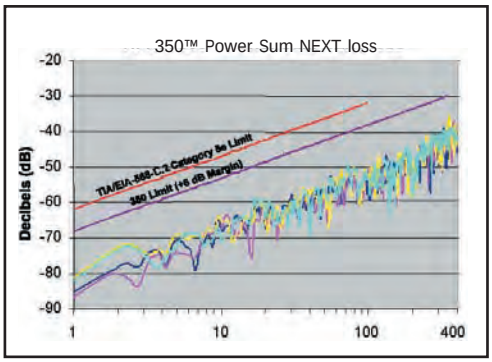
DIELECTRIC MATERIALS	RISER	PLENUM
Primary Insulation	Polyolefin	Plenum-rated fluoropolymer
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic

Enhanced UTP Category 5e

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
Ampacity[1]	.4 Amps/conductor

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



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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.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Cat 5e

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- UL Verified.
- Low Smoke Plenum construction.
- Tested from 1 to 400 MHz.
- Supports up to 80 watts of power.

Packaging

- 1,000 foot (305m) reels
- 1,000 foot (305m) Reelex (featuring reverse sequential numbering)

Options

- CMP-50 rated cables available

Applications

- Including:

HDBase-T
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 +75C (-4F to +167F)

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-XXY	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-XXY	4	.17	4.55	17.86	8.10

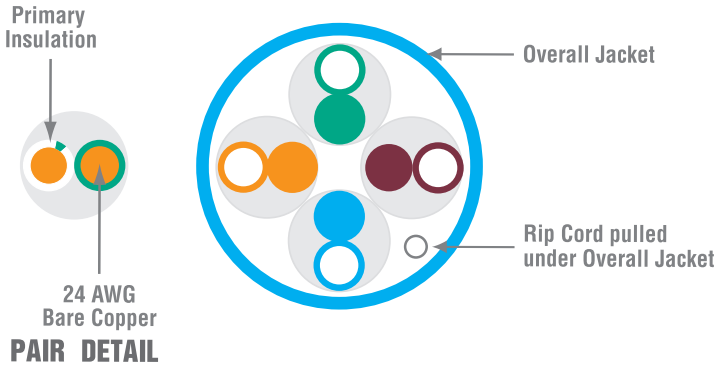
Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
39419	8	XX	Y

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reelex Boxes(2); Reels(3)

Features



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

Category 5e

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
Ampacity[1]	.4 Amps/conductor

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.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Cat 5e Hybrid

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- Tested from 1 to 100 MHz.
- Component compliant to TIA Category 5e cable requirements.
- Power sum compliance ensures minimum signal corruption due to alien crosstalk.
- Supports up to 80 watts of power.

Packaging

- 1,000 foot (305m) reels

Options

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

Applications

- Including:

HDBase-T
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 +75C (-4F to +167F)

Diagram scale approx. 3:1

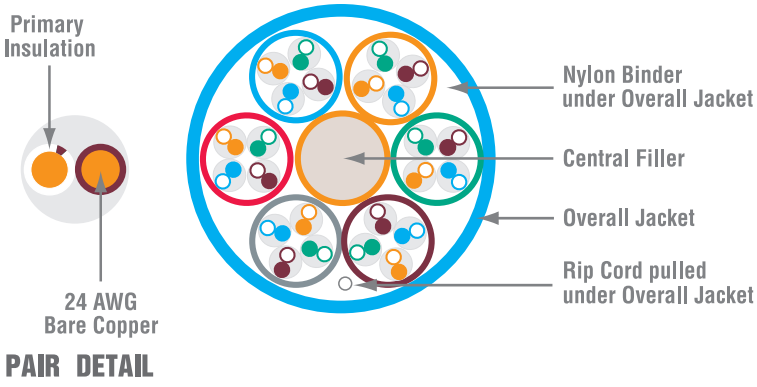
Category 5e GoldLAN™ Hybrid (Riser)

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

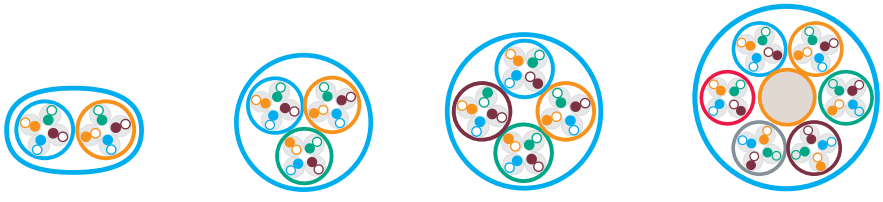
HITACHI PART NO.	NO. OF LEGS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
38886-16	2 legs x 4-pair	.21 x .43	5.5 x 10.9	55.37	25.11
38886-24	3 legs x 4-pair	.46	11.7	84	38
38886-32	4 legs x 4-pair	.51	13.0	102.45	46.65
38886-48	6 legs x 4-pair	.62	15.7	160.85	72.96

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

Features



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

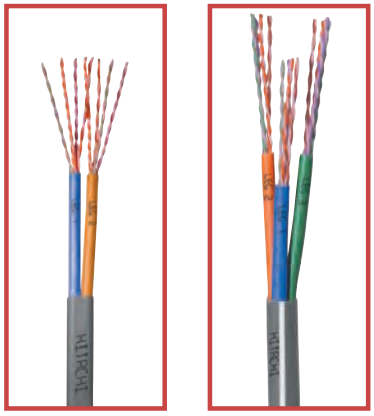


Hitachi Cable America reserves the right to revise any specifications.

Category 5e

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
Ampacity[1]	.4 Amps/conductor



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

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Cat 5e Multi-Pair

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- UL Verified.
- Low Smoke Plenum construction.
- Tested from 1 to 100 MHz.
- Power sum compliance ensures minimum signal corruption due to alien crosstalk.
- Supports up to 80 watts of power.

Packaging

- 1,000 foot (305m) reels

Options

- Consult factory for 50-pair design construction and availability

Applications

- Including:

HDBase-T
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 +75C (-4F to +167F)

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)

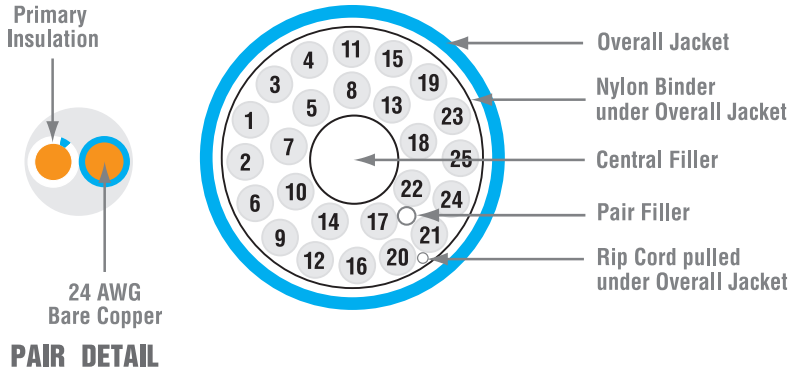
HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30203-50	25	.454	11.531	141.0	64.0

Category 5e Power Sum Multi-pair (Riser)

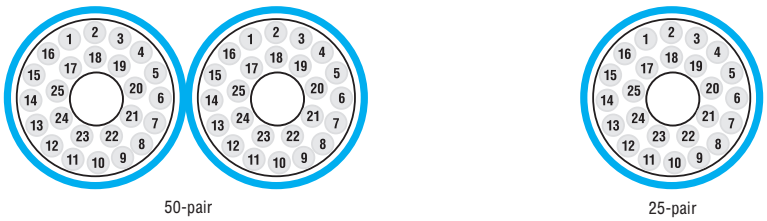
(c(UL)us Listed Type CMR, CSA Type FT4)

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

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



50-pair

25-pair

Diagram scale approx. 3:1

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
Ampacity[1]	.4 Amps/conductor

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

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Multi-Net™

HITACHI
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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- Low Smoke Plenum construction.
- Bonded leg constructions facilitate easier cable pulls.
- Easy-tear web allows quick cable separation in the field.
- Supports up to 100 watts (Category 6) and 80 watts (Category 5e).

Packaging

- 1,000 foot (305m) reels

Options

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

Applications

- Including:

HDBase-T
1000 BASE-T Gigabit Ethernet
1000 Mbps ATM
622 Mbps ATM
100 BASE-T Ethernet
10 BASE-T
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 +75C (-4F to +167F)

Multi-Net™ Bonded Jacket (Plenum)

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

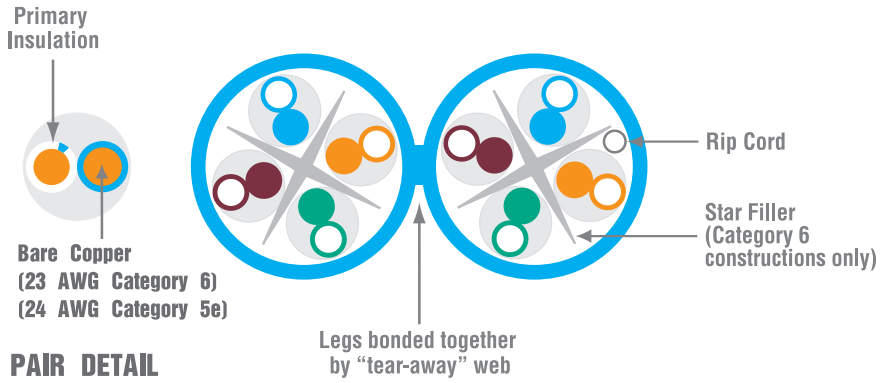
HITACHI PART NO.	CATEGORY OF EACH 4-PAIR UTP LEG	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
TWO LEG CONSTRUCTIONS					
30120	6 x 6	.215 x .450	5.461 x 11.430	57.60	26.12
38730	5e x 5e	.180 x .380	4.572 x 9.652	41.67	18.90

Multi-Net™ Bonded Jacket (Riser)

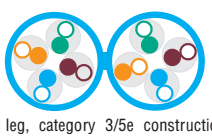
(c(UL)us Listed Type CMR, CSA Type FT4)

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

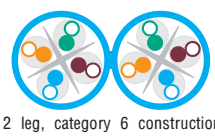
Features



Hitachi Cable America reserves the right to revise any specifications.



2 leg, category 3/5e construction



2 leg, category 6 construction

Diagram scale approx. 2:1

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%
Ampacity[1] (Category 5e)	.4 Amps/Conductor
Ampacity[1] (Category 6)	.5 Amps/Conductor

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

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.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

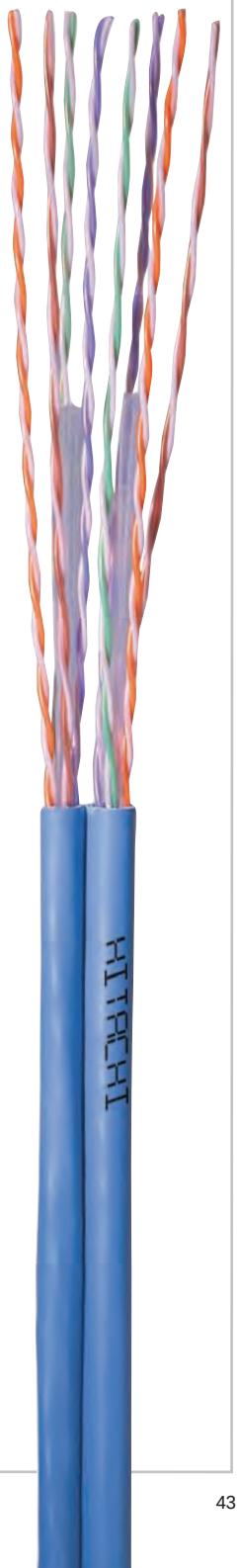


Photo is for representation purposes only.

Cat 3

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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)

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 +75C (-4F to +167F)

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-XXY	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-XXY	4	.167	4.242	17.0	7.7

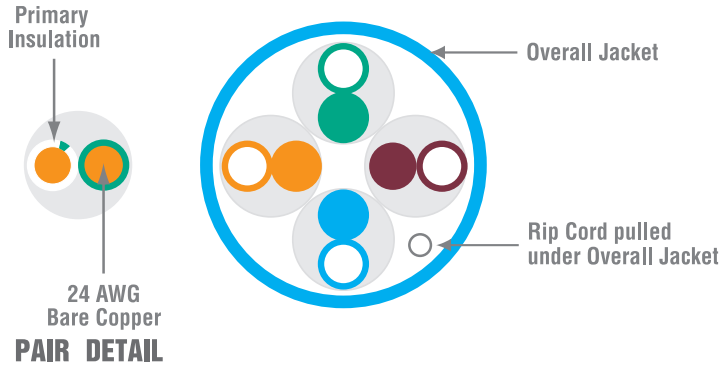
Building a Part Number

Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
38718	8	XX	Y

Jacket Colors (XX):
Black(BK); Blue(BL); Brown(BR); Gray(GA); Green(GR); Red(RD); White(WH); Yellow(YE)

Reel Type (Y):
Reelex Boxes(2); Reels(3)

Features



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

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.

Cat 3 Multi-Pair

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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 +75C (-4F to +167F)

Category 3 Power Sum Multi-pair (Plenum)

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

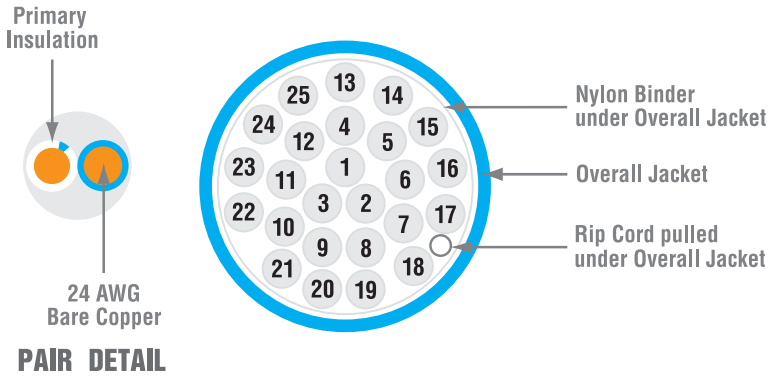
HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	mm	CABLE WEIGHT lbs/1000ft	kg/305m
30134-50	25	.38	9.7	111.43	50.54
30134-100	50	.446 x .646	11.316 x 16.396	219.95	99.77
30134-200	100	.810	20.57	436.63	198.05
30134-400	200	1.151	29.235	874.94	396.87
30134-600	300	1.33	33.7	1275.83	578.71

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

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

Category 3

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

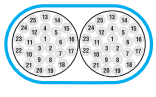
Transmission Specifications

ANSI/TIA 568-C.2 Category 3 Compliant

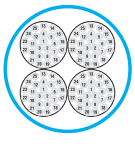
FREQ. (MHz)	INS. LOSS	NEXT LOSS	ACR	STRUCTURAL RETURN LOSS
1	2.6	41.3	38.7	12.0
4	5.6	32.3	26.7	12.0
8	8.5	27.8	19.3	12.0
10	9.7	26.3	16.6	12.0
16	13.1	23.2	10.1	10.0

All values are dB/100m.

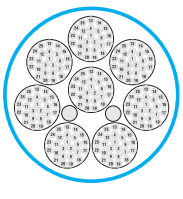
25-pair



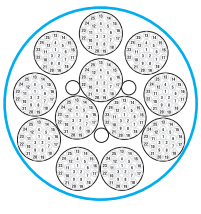
50-pair



100-pair



200-pair



300-pair

Photo is for representation purposes only.

Cat 6A Outdoor

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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.
- Proven shield technology improves RFI and EMI performance.
- Supports up to 100 watts of power.

Packaging

- 1,000 foot (305m) reels

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 6A F/UTP Outdoor

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	CABLE mm	WEIGHT lbs/1000ft	kg/305m
Category 6					
30287-8-XXY	4	0.360	9.144	56.87	25.8

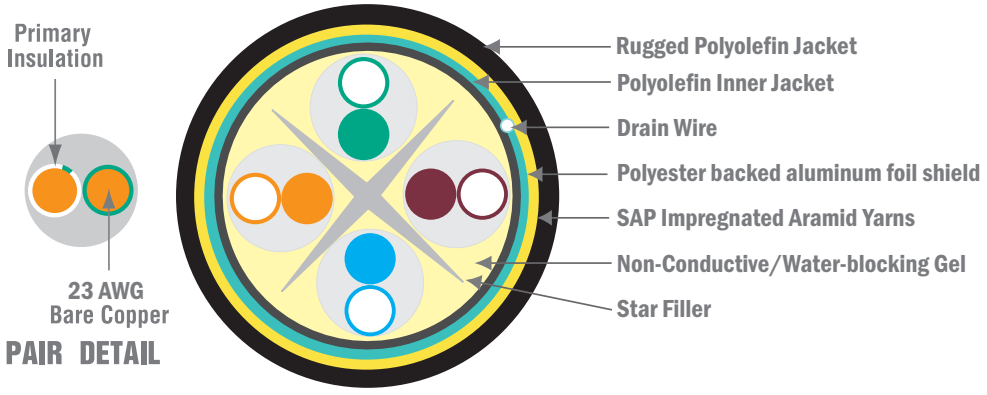
Building a Part Number

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

Jacket Colors (XX):
Black(BK)

Reel Type (Y):
Reels(3)

Features

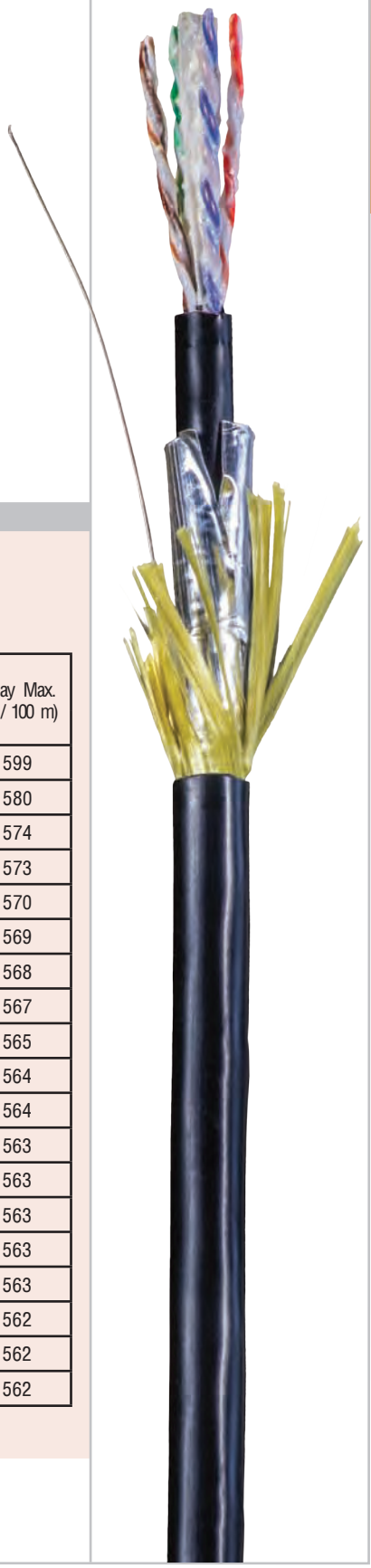


DIELECTRIC MATERIALS	OUTDOOR F/UTP CABLES
Primary Insulation	Polyolefin and/or Fluoropolymer
Overall Jacket	Medium density polyolefin

Outdoor Cable

Electrical Characteristics

Input impedance	100+/-15 Ω (1.0-100 MHz) 100+/-20 Ω (101-250 MHz) 100+/-25 Ω (251-500 MHz)
Maximum Conductor Resistance:	9.38 Ω /100 Meters @ 20C
Maximum Resistance Unbalance:	3%
Maximum Mutual Capacitance:	5.6 nF/100 Meters @ 1 kHz
Maximum Capacitance Unbalance:	330 pF/100 Meters
Maximum Delay Skew:	45 ns/100 Meters
Nominal Velocity of Propogation:	67%
Ampacity[1]	.5 Amps/conductor



Transmission Specifications

ANSI/TIA 568-C.2 Category 6A Compliant

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

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

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

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

Photo is for representation purposes only.

Cat 6 & 5e Outdoor

HITACHI
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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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.
- Supports up to 80 watts of power.

Packaging

- 1,000 foot (305m) reels

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 6 and Category 5e Outdoor

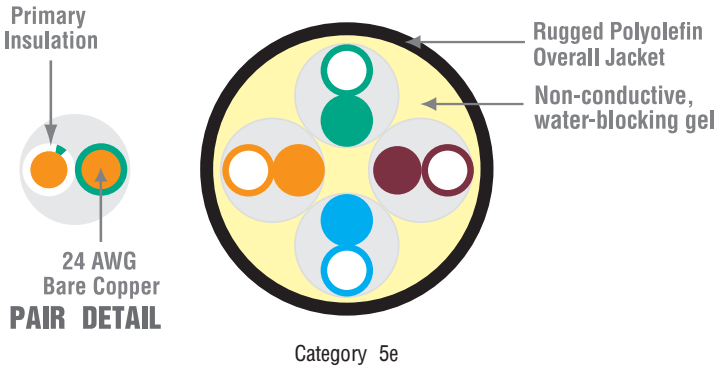
HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D. in.	CABLE mm	WEIGHT lbs/1000ft	kg/305m
Category 5e					
30145-8-XXY	4	0.23	5.8	25.75	11.68
Category 6					
30180-8-XXY	4	0.270	6.858	34.65	15.72

Building a Part Number

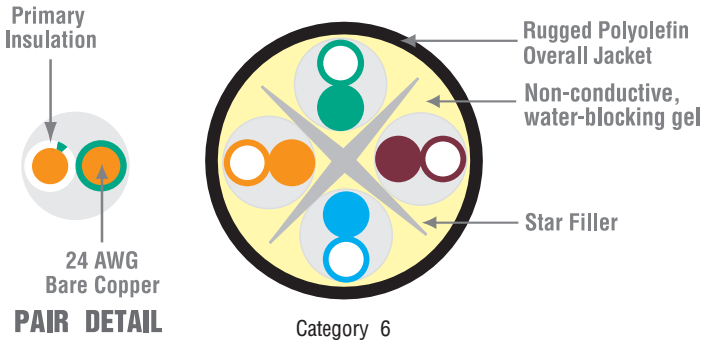
Base Part Number Ex.	No. of Conductors	Jacket Color	Reel Type
30145	8	XX	Y

Jacket Colors (XX):
Black(BK)
Reel Type (Y):
Reels(3)

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.

Outdoor Cable

Electrical Characteristics

Input impedance	100 ± 15 Ω (1.0 to 100 MHz) 100 ± 20 Ω (101 to 250 MHz)	Maximum capacitance unbalance	330 pF/100 meters
Maximum resistance unbalance	5%	Maximum delay skew	45 ns/100 meters
Voltage Rating	300 Volts	Nominal velocity of propagation (NVP)	63%
		Ampacity[1]	.4 Amps/conductor

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

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.

1. Ampacity rating per NEC 725.144 of NFPA NEC (2017) up to 192 cable bundle.

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Fiber Selection Guide

How much fiber do you need?

- Fiber optic cables are frequently cut to length by the manufacturer or by an authorized distributor. This allows you to get exactly the length you need for each cable run. You can also order a reel equivalent in length to all your cable run lengths and cut your own cable segments.
- Even though extreme care may have been taken when measuring the distances between termination points, it is highly recommended to build in a safety buffer when ordering fiber optic cable. An additional 10% is typical.

How many strands of fiber do you need?

- Fiber optic cables typically come in multiples of 2 fiber increments and are commonly available in 6, 12, 24, 48, 72 and 144 fiber configurations.
- Design engineers allow for a number of spare fibers to accommodate possible fiber breaks and for future upgrades to the system. Migration from one Ethernet application to another, such as 1 gigabit to 10 gigabit, may require additional fibers. Accounting for future growth when pulling in the cables now is very cost effective.
- Non-standard fiber counts can be manufactured to specific minimum quantities. Lead times may apply, however. Sometimes using multiple cables to achieve the total fiber count, such as combining a 24-fiber and a 48-fiber cable rather than using a 72-fiber, results in quicker access to product and, depending on the cable pathways, an easier installation.

Determine the type of fiber (optical glass) you need.

- Fibers come in two primary categories: singlemode and multimode. Singlemode is typically used in high bandwidth/ long distance applications. Multimode, which can also be used for high bandwidth applications, is typically used in instances where cable runs do not exceed 550 meters. Multimode and singlemode utilize different electronics. Hitachi Cable's standard singlemode glass is the higher performing OS2.
- Multimode is available in different performance levels starting with low performing OM1 (62.5 micron core) and then increasing performance levels of 50 micron core designs including OM2, OM3, OM4. The designation OM is short for Optical Fiber Multimode. Likewise, OS for singlemode fiber stands for Optical Fiber Singlemode. See the Optical Specifications for each product for more information. Due to the different core size, OM1 fibers cannot be mated to OM2, OM3 or OM4 fibers.

Do you want loose tube or tight buffered fibers?

- Tight buffered refers to the type of cable in which the fiber strands have an additional layer of material applied to the fiber, similar to insulation around a copper conductor. This layer usually increases the size of the fiber strand from 250 micron to 900 micron. The 900 micron size is the standard size for terminating fibers on a job site.
- Loose tube refers to cable designs where the fibers are 250 micron in diameter. They are color-coded to differentiate one fiber from another. The small fiber diameter usually permits smaller cable diameters than tight buffered designs. Originally used in high-fiber outside plant cables, loose tube fibers are now used indoors or anywhere where cable pathway space is limited. Termination of loose tubes requires either a fan-out kit or the ability to splice connectors.

In what environment will the fiber optic cable be installed?

- Cables constructions are specific to an environment, such as indoor, outdoor or both indoor/outdoor environments.
- Many cables are also available in armored constructions for additional protection. Interlock armoring is typically used for indoor and indoor/outdoor cables while corrugated armoring is used for traditional outside plant cables.
- When installing cables indoor or indoor/outdoor, ensure the cables are labeled with the appropriate National Electrical Code (NEC) rating required for that location. Ratings such as OFNP (Optical Fiber Non-conductive Plenum) or OFNR (Optical Fiber Non-conductive Riser) are standard designs. Cables that are armored or contain metal must be identified with a C in the rating instead of an N. C stands for conductive.
- Outdoor cables do not require an NEC rating, but must be terminated within 50 feet of entering the building.

Need help choosing the right fiber optic cable?

- The Optical Specifications table below is an example of the kind of information provided in this catalog for every fiber optic cable. Though attenuation may vary slightly between different cable constructions, the guaranteed application support distance for gigabit (Gb) Ethernet and 10 Gb Ethernet are consistent throughout the catalog.
- If you are uncertain about any aspects of the cable selection process, contact an authorized Hitachi Cable America distributor or contact Hitachi Cable America directly at the Manchester, New Hampshire manufacturing facility.

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)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	2.8	1.0	700	500	950	N/A	750	550	150	N/A
OM3	2.8	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	2.8	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM4+	2.8	1.0	3500	500	5350	N/A	N/A	N/A	600	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	>25,000	>40,000	10,000-25,000	40,000

Hitachi Cable America reserves the right to revise any specifications.

Sample Optical Specification from NanoCore Multi-Unit (Page 75)

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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

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

Applications

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

Standards

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

Interconnect (Riser) (UL) OFNR c(UL) OFNR FT4

PART NUMBERS BY FIBER COUNT

FIBERS	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	60288-2	60376-2	61483-2	61988-2	60289-2
zip	60005-2	60007-2	60501-2	61844-2	60011-2

SPECIFICATIONS BY FIBER COUNT

			RECOMMENDED MAXIMUM LOADS					
FIBERS	CABLE O.D.		INSTALL		OPERATION		CABLE WEIGHT	
	in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
1	0.114	2.9	96	427	29	128	4.9	7.3
1	0.094	2.4	64	285	19	85	3.6	5.4
1	0.079	2.0	50	223	15	67	3.2	4.8
1	0.063	1.6	50	223	15	67	1.8	2.7
2	0.114	2.9	96	427	29	128	4.3	6.4
2	0.190	4.8	128	569	38	171	11.5	17.1
zip	.079 x .170	2.0 x 4.3	96	427	29	128	5.7	8.5
zip	.113 x .240	2.9 x 6.1	128	569	38	171	10.2	15.2

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Interconnect (Riser) (UL) OFNR c(UL) OFNR FT4

Optical Specifications

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

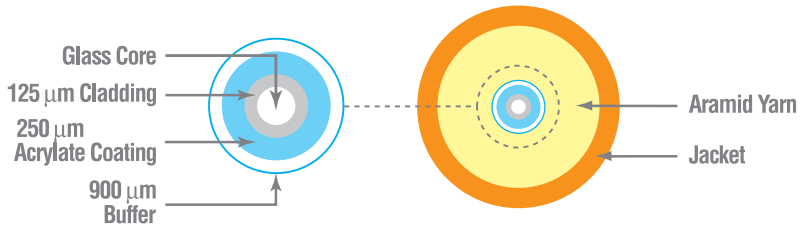
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550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

Hitachi Cable America reserves the right to revise any specifications.

Cable Temperature Ranges

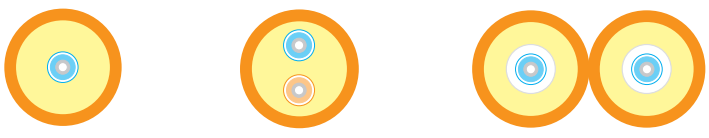
Storage: -40° to 70°C (-40° to 158°F)
Installation: -10° to 60°C (14° to 140°F)
Operating: -20° to 70°C (-4° to 158°F)

Features



DIELECTRIC MATERIALS — RISER

Overall Jacket — Flame-retardant thermoplastic



1-fiber Interconnect | 2-fiber Interconnect | 2-fiber Zip Cord

Diagram scale approx. 5:1

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

- REACH & RoHS 2 compliant.
- Made in USA.
- 900 micron buffered design recommended for easy termination.
- LSZH with OFNR rating enables use in riser-rated environments.
- Halogen free design offers improved safety performance.
- 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.
- LSZH rating established via HCA material testing to IEC 60332-3-24, IEC 60754-1 & 2 and IEC 61034-2.

Options

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

Applications

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

Standards

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

Interconnect (LSZH/Riser)

Low Smoke Zero Halogen
(UL) OFNR c(UL) OFNR FT4

PART NUMBERS BY FIBER COUNT

FIBERS	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	62124-2	62125-2	62126-2	62127-2	62029-2
2	62147-2	62148-2	62149-2	62150-2	62151-2
zip	62275-2	61769-2	62276-2	62277-2	62274-2
zip	62153-2	62154-2	62155-2	62156-2	62157-2

SPECIFICATIONS BY FIBER COUNT

			RECOMMENDED MAXIMUM LOADS					
FIBERS	CABLE O.D.		INSTALL		OPERATION		CABLE WEIGHT	
	in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
1	0.114	2.9	96	427	29	128	4.9	7.3
1	0.094	2.4	64	285	19	85	4.1	6.1
1	0.083	2.1	50	223	15	67	3.5	5.2
1	0.063	1.6	50	223	15	67	1.85	2.8
2	0.114	2.9	96	427	29	128	5.35	8.0
2	0.19	4.8	128	569	38	171	12.9	19.2
zip	.079 x .170	2.0 x 4.3	96	427	29	128	6.2	9.2
zip	.113 x .240	2.9 x 6.1	128	569	38	171	11.5	17.1

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Interconnect (LSZH/Riser)

Low Smoke Zero Halogen
(UL) OFNR c(UL) OFNR FT4

Optical Specifications

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

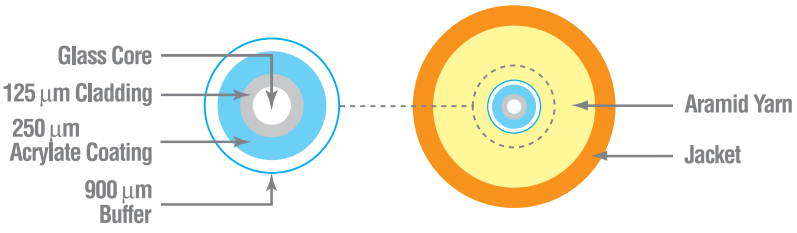
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550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

Hitachi Cable America reserves the right to revise any specifications.

Cable Temperature Ranges

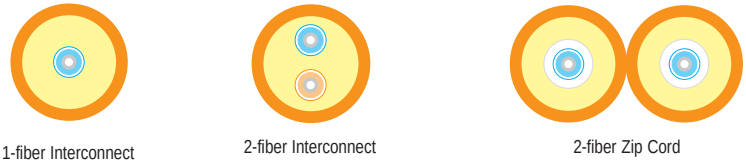
Storage: -40° to 70°C (-40° to 158°F)
Installation: -10° to 60°C (14° to 140°F)
Operating: -20° to 70°C (-4° to 158°F)

Features



DIELECTRIC MATERIALS — LSZH/RISER

Overall Jacket — Flame-retardant thermoplastic



1-fiber Interconnect | 2-fiber Interconnect | 2-fiber Zip Cord

Diagram scale approx. 5:1

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

- REACH & RoHS 2 compliant.
- Made in USA.
- 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

- 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.
- Wideband multimode fiber is available.

Applications

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

Standards

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

Interconnect (Plenum) (UL) OFNP c(UL) OFNP FT6

PART NUMBERS BY FIBER COUNT

FIBERS	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	61379-2	61444-2	61457-2	61986-2	61378-2
zip	60023-2	60008-2	60502-2	61857-2	60030-2

SPECIFICATIONS BY FIBER COUNT

			RECOMMENDED MAXIMUM LOADS					
FIBERS	CABLE O.D.		INSTALL		OPERATION		CABLE WEIGHT	
	in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
1	0.114	2.9	96	427	29	128	5.6	8.3
1	0.094	2.4	64	285	19	85	4.7	6.9
1	0.079	2.0	50	223	15	67	3.6	5.3
1	0.063	1.6	50	223	15	67	2.0	2.9
2	0.114	2.9	96	427	29	128	6.4	9.5
2	0.190	4.8	128	569	38	171	13.1	19.4
zip	.079 x .170	2.0 x 4.3	96	427	29	128	6.27	9.3
zip	.113 x .235	2.9 x 6.0	128	569	38	171	13.2	19.6

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Interconnect (Plenum) (UL) OFNP c(UL) OFNP FT6

Optical Specifications

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

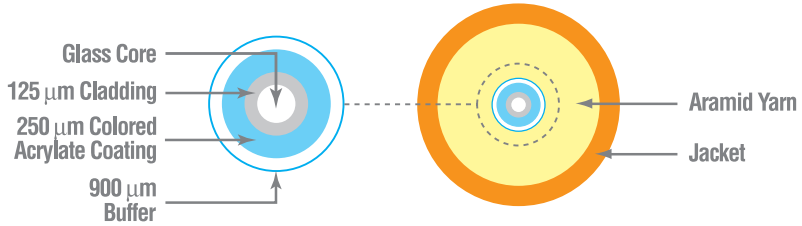
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550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

Hitachi Cable America reserves the right to revise any specifications.

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)

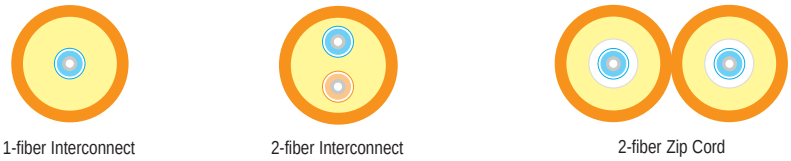
Features



DIELECTRIC MATERIALS

Overall Jacket — PLENUM

Flame-retardant thermoplastic



1-fiber Interconnect | 2-fiber Interconnect | 2-fiber Zip Cord

Diagram scale approx. 5:1

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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FIBER

Single-Unit 2 through 24 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 900 micron buffered design recommended for easy termination.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- Each fiber is color coded for easy identification.
- Ideal intra-building cable solution.
- Flexible and easy to handle.
- Lightweight, flexible aramid yarns enhance strength.

Options

- 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.
- Wideband multimode fiber is available.

Applications

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

Standards

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

Single-Unit (Riser) (UL) OFNR c(UL) OFNR FT4

PART NUMBERS BY FIBER COUNT

FIBERS	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

SPECIFICATIONS BY FIBER COUNT

FIBERS	CABLE O.D.		RECOMMENDED MAXIMUM LOADS INSTALL		OPERATION		CABLE WEIGHT	
	in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
2	.190	4.8	128	569	38	171	11.5	17.1
4	.190	4.8	128	569	38	171	13.0	19.4
6	.190	4.8	128	569	38	171	14.5	21.6
8	.230	5.8	160	712	48	214	18.5	27.6
10	.230	5.8	160	712	48	214	20.0	29.8
12	.230	5.8	160	712	48	214	21.5	32.0
24	.350	8.8	288	1282	86	385	52.4	78.1

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Single-Unit (Riser) (UL) OFNR c(UL) OFNR FT4

Optical Specifications

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

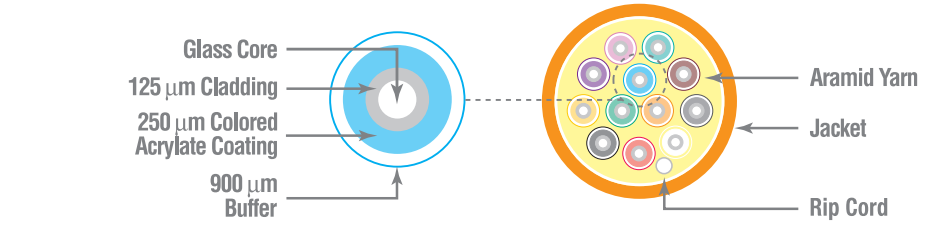
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550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

Hitachi Cable America reserves the right to revise any specifications.

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

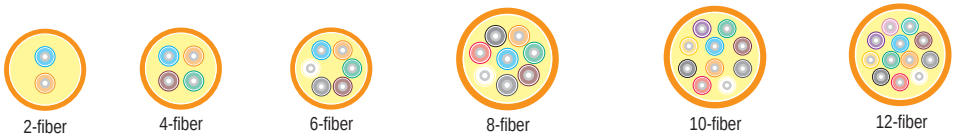


Diagram scale approx. 2:1

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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Single-Unit 2 through 24 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 900 micron buffered design recommended for easy termination.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- Each fiber is color coded for easy identification.
- Ideal intra-building cable solution.
- Flexible and easy to handle.
- Lightweight, flexible aramid yarns enhance strength.

Options

- 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.
- Wideband multimode fiber is available.

Applications

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

Standards

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

Single-Unit (Plenum) (UL) OFNP c(UL) OFNP FT6

PART NUMBERS BY FIBER COUNT

FIBERS	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

SPECIFICATIONS BY FIBER COUNT

FIBERS	CABLE O.D.		RECOMMENDED MAXIMUM LOADS INSTALL		OPERATION		CABLE WEIGHT	
	in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
2	.190	4.8	128	569	38	171	13.3	19.8
4	.190	4.8	128	569	38	171	14.5	21.6
6	.190	4.8	128	569	38	171	15.7	23.4
8	.230	5.8	160	712	48	214	20.9	31.1
10	.230	5.8	160	712	48	214	21.7	32.3
12	.230	5.8	160	712	48	214	23.0	34.3
24	.350	8.8	288	1282	86	385	52.4	78.1

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Single-Unit (Plenum) (UL) OFNP c(UL) OFNP FT6

Optical Specifications

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

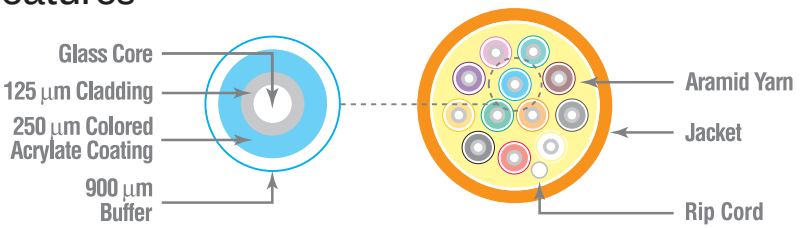
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550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

Hitachi Cable America reserves the right to revise any specifications.

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 — Flame-retardant thermoplastic

Diagram scale approx. 2:1

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Photo is for representation purposes only.

Multi-Unit 12 through 144 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 900 micron buffered design recommended for easy termination.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- Each fiber is color coded for easy identification.
- Compact distribution design.
- Ideal intra-building, multi-floor cable solution.
- Lightweight, flexible aramid yarns enhance strength.

Options

- 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.
- Wideband multimode fiber is available.

Applications

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

Standards

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

Multi-Unit (Riser) (UL) OFNR c(UL) OFNR FT4

PART NUMBERS BY FIBER COUNT

FIBERS	FIBERS/ TUBE	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
18	6	60567-18	60595-18	60581-18	61872-18	60633-18
24	6	60567-24	60595-24	60581-24	61872-24	60633-24
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
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

SPECIFICATIONS BY FIBER COUNT

					RECOMMENDED MAXIMUM LOADS					
FIBERS	FIBERS/ TUBE	TUBE LAYOUT	CABLE O.D.		INSTALL		OPERATION		CABLE WEIGHT	
			in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
18	6	3xCSM	.499	12.6	384	1709	115	513	75.0	111.8
24	6	4xCSM	.538	13.6	512	2279	154	684	93.0	138.6
36	6	6xCSM	.650	16.5	768	3418	230	1025	143.0	213.1
48	6	8xCSM	.792	20.1	1024	4557	307	1367	222.0	330.8
72	6	9x3xCSM	.903	22.9	1536	6837	461	2051	241.0	359.1
36	12	3xCSM	.579	14.7	480	2136	144	641	106.0	157.9
48	12	4xCSM	.634	16.1	640	2848	192	854	134.0	199.7
60	12	5xCSM	.701	17.8	800	3561	240	1068	169.0	251.8
72	12	6xCSM	.770	19.5	960	4272	288	1282	208.0	309.9
96	12	8xCSM	.937	237	1280	5697	384	1709	321.0	478.3
144	12	9x3xCSM	1.06	26.9	1920	8545	576	2564	355.0	529.0

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Multimode and Singlemode

Multi-Unit

Multi-Unit (Riser) (UL) OFNR c(UL) OFNR FT4

Optical Specifications

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

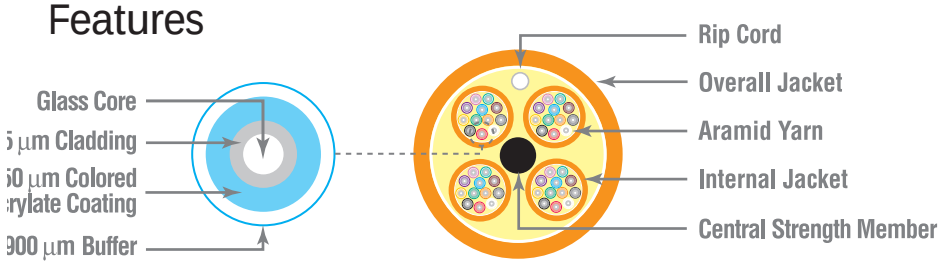
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550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

Hitachi Cable America reserves the right to revise any specifications.

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)

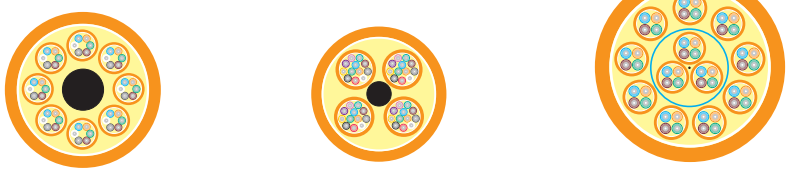
Features



DIELECTRIC MATERIALS

Overall Jacket — RISER

Flame-retardant thermoplastic



48-fibers (8 tubes of 6-fibers)

48-fibers (4 tubes of 12-fibers)

48-fibers (12 tubes of 4-fibers)

Diagram scale approx. 1:1

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

FIBER

Photo is for representation purposes only.

Multi-Unit 12 through 144 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 900 micron buffered design recommended for easy termination.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- Each fiber is color coded for easy identification.
- Compact distribution design.
- Ideal intra-building, multi-floor cable solution.
- Lightweight, flexible aramid yarns enhance strength.

Options

- 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.
- Wideband multimode fiber is available.

Applications

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

Standards

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

Multi-Unit (Plenum) (UL) OFNP c(UL) OFNP FT6

PART NUMBERS BY FIBER COUNT

FIBERS	FIBERS/ TUBE	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
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
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

SPECIFICATIONS BY FIBER COUNT

FIBERS	FIBERS/ TUBE	TUBE LAYOUT	CABLE O.D.		RECOMMENDED MAXIMUM LOADS INSTALL		OPERATION		CABLE WEIGHT	
			in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
18	6	3xCSM	.479	12.1	384	1709	115	513	77.0	114.7
24	6	4xCSM	.518	13.1	512	2279	154	684	97.0	144.5
36	6	6xCSM	.630	16.0	768	3418	230	1025	148.0	220.5
48	6	8xCSM	.792	20.1	1024	4557	307	1367	253.0	377.0
72	6	9x3xCSM	.903	22.9	1536	6837	461	2051	280.0	417.2
36	12	3xCSM	.559	14.1	480	2136	144	641	109.0	162.4
48	12	4xCSM	.614	15.5	640	2848	192	854	139.0	207.1
60	12	5xCSM	.681	17.2	800	3561	240	1068	175.0	260.8
72	12	6xCSM	.750	19.0	960	4272	288	1282	216.0	321.8
96	12	8xCSM	.937	23.7	1280	5697	384	1709	360.0	536.4
144	12	9x3xCSM	1.06	26.9	1920	8545	576	2564	404.0	602.0

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Multimode and Singlemode Multi-Unit

Multi-Unit (Plenum) (UL) OFNP c(UL) OFNP FT6

Optical Specifications

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

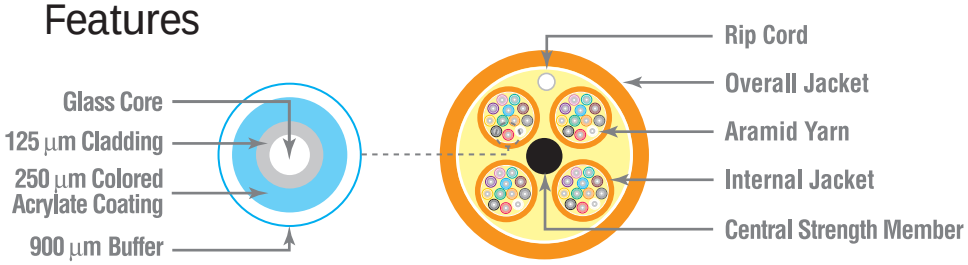
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550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

Hitachi Cable America reserves the right to revise any specifications.

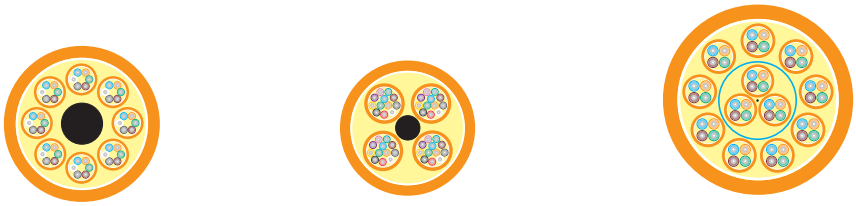
Cable Temperature Ranges

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	Flame-retardant thermoplastic



48-fibers (8 tubes of 6-fibers)

48-fibers (4 tubes of 12-fibers)

48-fibers (12 tubes of 4-fibers)

Diagram scale approx. 1:1

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Photo is for representation purposes only.

NanoCore® 2 Through 24 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- 250 micron loose tube design allows for higher fiber strand counts in a smaller overall diameter cable.
- LSZH with OFNR rating enables use in riser-rated environments. Some constructions are now available with UL's new LSHF listing. See note under part number table.
- Halogen free design offers improved safety performance.
- Ideal for MPO (MTP™) style connectors.
- Each fiber is color coded for easy identification.
- Flexible and easy to handle.
- Lightweight, flexible Aramid yarns enhance strength.
- When necessary, color-coded binders separate fiber strands into bundles of 12.

Options

- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Erika Violet for OM4 is available
- 16 Fiber colors are available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Wideband multimode fiber is available.

Applications

- Applications include 10, 40 & 100 gigabit Ethernet, Fibre Channel, Video, Security and Automation.

Standards

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE
- OS2 glass is compliant to ITU-T G.657.A1

NanoCore® Interconnect (Single Unit)
Micro Distribution (LSZH/Riser & LSHF/Riser)

Low Smoke No Halogens
(UL) OFNR c(UL) OFNR FT4

PART NUMBERS BY FIBER COUNT

FIBERS	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	50 UM OM4+	8.3 UM OS2
2	62424-2*	62425-2*	62426-2*	62427-2*	62428-2*	62429-2*
2	62338-2	61631-2	61632-2	61941-2	62438-2	61772-2
4	62424-4*	62425-4*	62426-4*	62427-4*	62428-4*	62429-4*
4	62338-4	61631-4	61632-4	61941-4	62438-4	61772-4
6	62424-6*	62425-6*	62426-6*	62427-6*	62428-6*	62429-6*
6	62338-6	61631-6	61632-6	61941-6	62438-6	61772-6
12	62424-12*	62425-12*	62426-12*	62427-12*	62428-12*	62429-12*
12	62338-12	61631-12	61632-12	61941-12	62438-12	61772-12
24	62424-24*	62425-24*	62426-24*	62427-24*	62428-24*	62429-24*

***These cable constructions come with a UL LSHF/OFNR rating. LSHF (Low Smoke Halogen Free) testing includes IEC 61034-2 (UL) and IEC 60754 1 & 2 (UL).**

LSHF (Low Smoke Halogen Free) is a new flame rating developed by Underwriters Laboratories (UL). It identifies the cable as being low smoke while also containing zero halogens.

SPECIFICATIONS BY FIBER COUNT

			RECOMMENDED MAXIMUM LOADS							
FIBERS	CABLE OD		INSTALL		OPERATION		COMPRESSION	IMPACT	CABLE WEIGHT	
	in.	mm	lbs	N	lbs	N	N/cm	N-m	lbs/kft	Kg/Km
2	0.078	2.0	50	223	15	67	35	0.74	2.5	3.7
2	0.118	3.0	100	445	30	134	100	2.94	4.8	7.2
4	0.078	2.0	50	223	15	67	35	0.74	2.6	3.8
4	0.118	3.0	100	445	30	134	100	2.94	4.9	7.4
6	0.078	2.0	50	223	15	67	35	0.74	2.7	4.0
6	0.118	3.0	100	445	30	134	100	2.94	5.0	7.5
12	0.078	2.0	50	223	15	67	35	0.74	3.0	4.4
12	0.118	3.0	100	445	30	134	100	2.94	5.3	7.9
24	0.118	3.0	150	668	45	200	100	0.74	5.9	8.8

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Micro Distribution

Multimode and Singlemode

NanoCore® Interconnect (Single Unit)
Micro Distribution (LSZH/Riser & LSHF/Riser)

Low Smoke No Halogens
(UL) OFNR c(UL) OFNR FT4

Optical Specifications

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

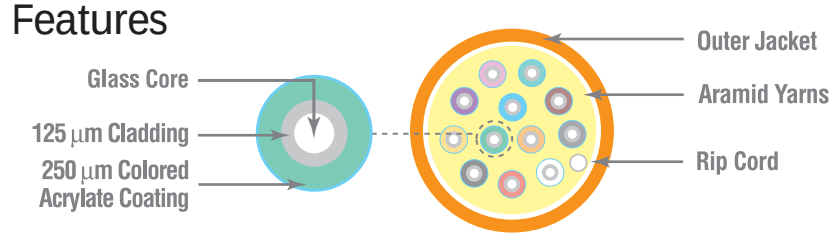
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	2.8	1.0	700	500	950	N/A	750	550	150	N/A
OM3	2.8	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	2.8	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM4+	2.8	1.0	3500	500	5350	N/A	N/A	N/A	600	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	>25,000	>40,000	10,000-25,000	40,000

Hitachi Cable America reserves the right to revise any specifications.

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	LSZH/RISER
Overall Jacket	Flame-retardant thermoplastic

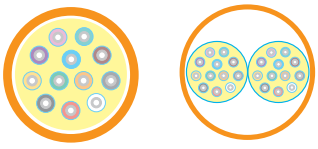
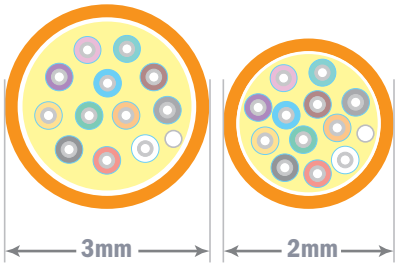


Diagram scale approx. 5:1

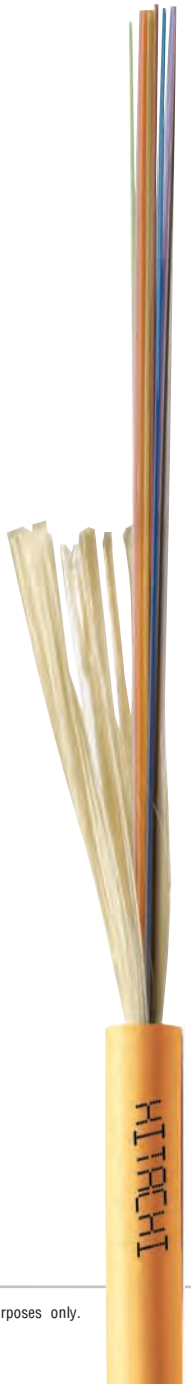


New 2mm cable has 33% smaller OD and 56% smaller area than 3mm cable.

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber



FIBER

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NanoCore®

2 Through 24 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- 250 micron loose tube design allows for higher fiber strand counts in a smaller overall diameter cable.
- Ideal for MPO (MTP™) style connectors.
- Each fiber is color coded for easy identification.
- Flexible and easy to handle.
- Lightweight, flexible Aramid yarns enhance strength.
- Now available with a smaller outside diameter.
- When necessary, color-coded binders separate fiber strands into bundles of 12.

Options

- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Erika Violet for OM4 is available
- 16 Fiber colors are available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- Wideband multimode fiber is available.

Applications

- Applications include 10, 40 & 100 gigabit Ethernet, Fibre Channel, Video, Security and Automation.

Standards

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE
- OS2 glass is compliant to ITU-T G.657.A1

NanoCore® Interconnect (Single Unit) Micro Distribution (Plenum) (UL) OFNP c(UL) OFNP FT6

PART NUMBERS BY FIBER COUNT

FIBERS	FIBERS/TUBE (ZIP)	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	50 UM OM4+	8.3 UM OS2
2	-	62241-2	62242-2	62243-2	62244-2	62412-2	62239-2
2	-	61537-2	61506-2	61507-2	61883-2	62411-2	61538-2
4	-	62241-4	62242-4	62243-4	62244-4	62412-4	62239-4
4	-	61537-4	61506-4	61507-4	61883-4	62411-4	61538-4
6	-	62241-6	62242-6	62243-6	62244-6	62412-6	62239-6
6	-	61537-6	61506-6	61507-6	61883-6	62411-6	61538-6
12	-	62241-12	62242-12	62243-12	62244-12	62412-12	62239-12
12	-	61537-12	61506-12	61507-12	61883-12	62411-12	61538-12
12	-	62372-12	62373-12	62374-12	62375-12	62382-12	62371-12
24	-	62241-24	62242-24	62243-24	62244-24	62412-24	62239-24
24	-	62372-24	62373-24	62374-24	62375-24	62382-24	62371-24
24	-	61537-24	61506-24	61507-24	61883-24	62411-24	61538-24
12	6	-	61546-12	61539-12	61882-12	62430-12	61547-12
24	12	-	61546-24	61539-24	61882-24	62430-24	61547-24

SPECIFICATIONS BY FIBER COUNT

FIBERS	CABLE OD		RECOMMENDED MAXIMUM LOADS						CABLE WEIGHT	
			INSTALL		OPERATION		COMPRESSION	IMPACT		
	in.	mm	lbs	N	lbs	N	N/cm	N-m	lbs/kft	Kg/Km
2	0.078	2.0	50	222	15	67	35	0.74	2.5	3.7
2	0.118	3.0	100	445	30	134	100	0.74	5.5	8.2
4	0.078	2.0	50	222	15	67	35	0.74	2.6	3.8
4	0.118	3.0	100	445	30	134	100	0.74	5.6	8.3
6	0.078	2.0	50	222	15	67	35	0.74	2.7	4.0
6	0.118	3.0	100	445	30	134	100	0.74	5.6	8.3
12	0.078	2.0	50	222	15	67	35	0.74	2.9	4.4
12	0.118	3.0	100	445	30	134	100	0.74	5.9	8.8
12	0.150	3.8	150	668	45	200	35	2.94	9.1	13.6
24	0.118	3.0	150	668	45	200	100	0.74	5.7	8.5
24	0.150	3.8	150	668	45	200	35	2.94	9.7	14.5
24	0.177	4.5	150	668	45	200	100	2.94	13.1	19.5
12	.118 x .255	3.0 x 6.47	128	569	38	171	100	2.94	11.3	16.8
24	.118 x .255	3.0 x 6.47	128	569	38	171	100	2.94	11.4	17.0

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Micro Distribution

NanoCore® Interconnect (Single Unit) Micro Distribution (Plenum) (UL) OFNP c(UL) OFNP FT6

Optical Specifications

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

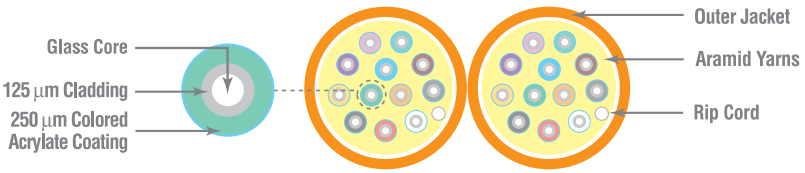
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	2.8	1.0	700	500	950	N/A	750	550	150	N/A
OM3	2.8	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	2.8	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM4+	2.8	1.0	3500	500	5350	N/A	N/A	N/A	600	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	>25,000	>40,000	10,000-25,000	40,000

Hitachi Cable America reserves the right to revise any specifications.

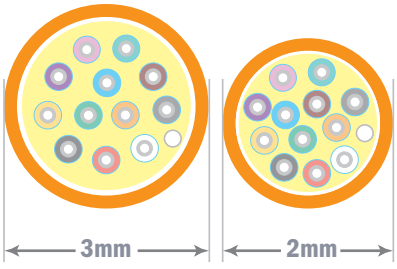
Cable Temperature Ranges

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	Flame-retardant thermoplastic



New 2mm cable has 33% smaller OD and 56% smaller area than 3mm cable.

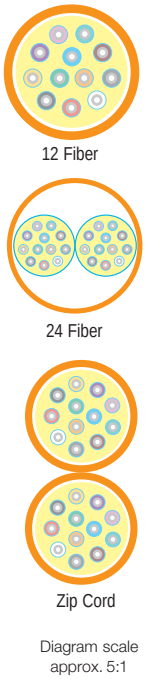


Diagram scale approx. 5:1

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Photo is for representation purposes only.

NanoCore®

24 through 144 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- Small, lightweight construction suitable for installations where space is at a premium.
- Ideal for MPO (MTP™) style connectors.
- Each fiber is color coded for easy identification.
- Flexible and easy to handle.
- OFNR rating provided by UL.
- LSHF (Low Smoke Halogen Free) rating provided by UL. LSHF testing includes IEC 61034-2 (UL), IEC 60754 1 & 2 (UL).
- Additional IEC test 60332-3-24 performed by HCA to ensure performance to industry standards.

Options

- 8 fibers per tube available for cables up to 96 strands.
- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Erika Violet for OM4 is available
- 16 Fiber colors are available.
- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3 & G.657.A2).
- Wideband multimode fiber is available.

Applications

- Ideal for high-density installations like data centers, central offices and overall premise applications where current or future data rates include 40 and 100 gigabits per second.
- For additional applications, visit the HCA website.

Standards

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE
- OS2 glass is compliant to ITU-T G.657.A1

NanoCore® Multi-Unit Micro Distribution (LSHF/Riser)

Low Smoke Halogen Free & Riser Rated
(UL) OFNR c(UL) OFNR FT4 (UL) LSHF

PART NUMBERS BY FIBER COUNT

FIBERS	FIBERS/ TUBE	TUBE LAYOUT	TUBE OD	CABLE OD	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
			mm	mm					
24	12	2+2FxCSM	2.0	8.0	62337-24	62323-24	62295-24	62296-24	62294-24
36	12	3+1FxCSM	2.0	8.0	62337-36	62323-36	62295-36	62296-36	62294-36
48	12	4xCSM	2.0	8.0	62337-48	62323-48	62295-48	62296-48	62294-48
72	12	6xCSM	2.0	8.8	62337-72	62323-72	62295-72	62296-72	62294-72
96	12	8xCSM	2.0	9.9	62337-96	62323-96	62295-96	62296-96	62294-96
144	12	9x3xCSM	2.0	11.2	62337-144	62323-144	62295-144	62296-144	62294-144

SPECIFICATIONS BY FIBER COUNT

							RECOMMENDED MAXIMUM LOADS					
FIBERS	FIBERS/ TUBE	TUBE LAYOUT	TUBE OD		CABLE OD		INSTALL		OPERATION		CABLE WEIGHT	
			in.	mm	in.	mm	lbs	N	lbs	N	lbs/kft	Kg/Km
24	12	2+2FxCSM	0.079	2.0	0.315	8.0	300	1335	90	401	36.8	54.8
36	12	3+1FxCSM	0.079	2.0	0.315	8.0	300	1335	90	401	37.4	55.7
48	12	4xCSM	0.079	2.0	0.315	8.0	300	1335	90	401	38.0	56.6
72	12	6xCSM	0.079	2.0	0.346	8.8	300	1335	90	401	47.5	70.7
96	12	8xCSM	0.079	2.0	0.388	9.9	300	1335	90	401	65.1	96.9
144	12	9x3xCSM	0.079	2.0	0.440	11.2	300	1335	90	401	64.6	96.1

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

LSHF (Low Smoke Halogen Free) is a new flame rating developed by Underwriters Laboratories (UL). It identifies the cable as being low smoke while also containing zero halogens.

Micro Distribution

NanoCore® Multi-Unit Micro Distribution (LSHF/Riser)

Low Smoke Halogen Free & Riser Rated
(UL) OFNR c(UL) OFNR FT4 (UL) LSHF

Optical Specifications

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

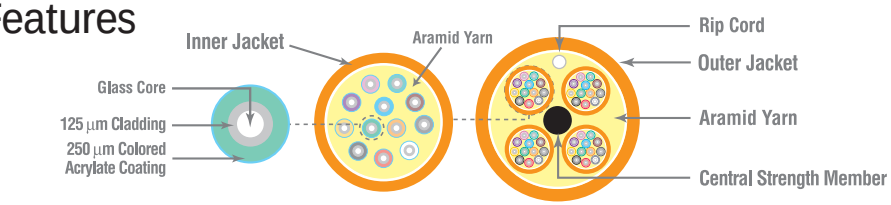
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	2.8	1.0	700	500	950	N/A	750	550	150	N/A
OM3	2.8	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	2.8	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000-25,000	40,000

Hitachi Cable America reserves the right to revise any specifications.

Cable Temperature Ranges

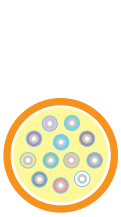
Storage: -40° to 70°C (-40°F to 158°F)
Installation: -10° to 60°C (14°F to 140°F)
Operating: -20° to 70°C (-4°F to 158°F)

Features



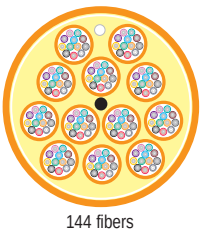
DIELECTRIC MATERIALS — LSHF/RISER

Overall Jacket — Flame-retardant thermoplastic


12 fibers


24 fibers


48 fibers


144 fibers

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

FIBER

Photo is for representation purposes only.

NanoCore®

24 through 144 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- Small, lightweight construction suitable for installations where space is at a premium.
- Ideal for MPO (MTP™) style connectors.
- Each fiber is color coded for easy identification.
- Flexible and easy to handle.

Options

- 8 fibers per tube available for cables up to 96 strands.
- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1 & OM2
  Aqua: OM3 & OM4
  Note: Erika Violet for OM4 is available
- 16 Fiber colors are available.
- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3).
- Wideband multimode fiber is available.

Applications

- Ideal for high-density installations like data centers, central offices and overall premise applications where current or future data rates include 40 and 100 gigabits per second.
- For additional applications, visit the HCA website.

Standards

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE
- OS2 glass is compliant to ITU-T G.657.A1

NanoCore® Multi-Unit Micro Distribution (Plenum)

(UL) OFNP c(UL) OFNP FT6

PART NUMBERS BY FIBER COUNT

FIBERS	FIBERS/ TUBE	TUBE LAYOUT	TUBE OD	CABLE OD	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	50 UM OM4+	8.3 UM OS2
			mm	mm						
24	12	2+2FxCSM	2.0	6.4	62220-24	62214-24	62216-24	62218-24	62413-24	62205-24
36	12	3+1FxCSM	2.0	6.4	62220-36	62214-36	62216-36	62218-36	62413-36	62205-36
48	12	4xCSM	2.0	6.4	62220-48	62214-48	62216-48	62218-48	62413-48	62205-48
72	12	6xCSM	2.0	7.5	62220-72	62214-72	62216-72	62218-72	62413-72	62205-72
96	12	8xCSM	2.0	8.7	62220-96	62214-96	62216-96	62218-96	62413-96	62205-96
144	12	9x3xCSM	2.0	9.9	62220-144	62214-144	62216-144	62218-144	62413-144	62205-144
144	48	3XCSM	5.3	13.2	62172-144	62171-144	62168-144	62169-144	62414-144	62166-144

SPECIFICATIONS BY FIBER COUNT

							RECOMMENDED MAXIMUM LOADS					
FIBERS	FIBERS/ TUBE	TUBE LAYOUT	TUBE OD		CABLE OD		INSTALL		OPERATION		CABLE WEIGHT	
			in.	mm	in.	mm	lbs	N	lbs	N	lbs/kft	Kg/Km
24	12	2+2FxCSM	0.079	2.0	0.251	6.4	150	668	45	200	25.45	37.9
36	12	3+1FxCSM	0.079	2.0	0.251	6.4	150	668	45	200	26.03	38.7
48	12	4xCSM	0.079	2.0	0.251	6.4	150	668	45	200	26.61	39.6
72	12	6xCSM	0.079	2.0	0.295	7.5	150	668	45	200	36.0	53.6
96	12	8xCSM	0.079	2.0	0.344	8.7	150	668	45	200	48.5	72.2
144	12	9x3xCSM	0.079	2.0	0.390	9.9	150	668	45	200	54.1	80.5
144	48	3XCSM	0.210	5.3	0.522	13.2	320	1424	160	712	81.72	121.6

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

NanoCore® Multi-Unit Micro Distribution (Plenum) (UL) OFNP c(UL) OFNP FT6

Optical Specifications

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

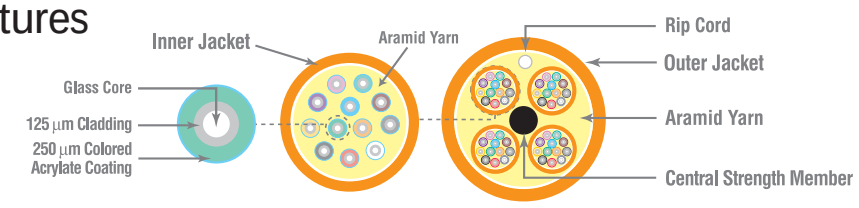
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	2.8	1.0	700	500	950	N/A	750	550	150	N/A
OM3	2.8	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	2.8	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM4+	2.8	1.0	3500	500	5350	N/A	N/A	N/A	600	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	>25,000	>40,000	10,000-25,000	40,000

Hitachi Cable America reserves the right to revise any specifications.

Cable Temperature Ranges

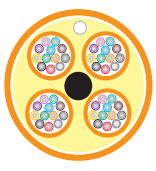
Storage: -40° to 70°C (-40° to 158°F)
Installation: 0° to 60°C (32° to 140°F)
Operating: 0° to 70°C (32° to 158°F)

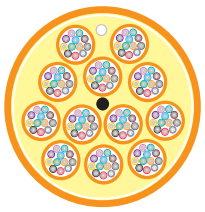
Features



DIELECTRIC MATERIALS	PLENUM
Overall Jacket	Flame-retardant thermoplastic


24 fibers


48 fibers


144 fibers

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

FIBER

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Armored

24 through 144 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- Eliminates need for inner duct or conduit.
- Ideal for MPO (MTP™) style connectors.
- Aluminum interlock armor.
- Each fiber is color coded for easy identification.
- Flexible and easy to handle.

Options

- 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: Erika Violet for OM4 is available
- 16 Fiber colors are available.
- OM4 (OM4+) optical fibers with extended 10 gigabit Ethernet distances are available.
- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3).
- Steel interlock armor available.
- Wideband multimode fiber is available.

Applications

- Ideal for high-density installations like data centers, central offices and overall premise applications where current or future data rates include 40 and 100 gigabits per second.
- For additional applications, visit the HCA website.

Standards

- TIA/EIA-568-C.3
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE
- OS2 glass is compliant to ITU-T G.657.A1

Armored NanoCore® Micro Distribution (Plenum)

(UL) OFCP c(UL) OFCP FT6

PART NUMBERS BY FIBER COUNT

FIBERS	FIBERS/ TUBE	TUBE LAYOUT	TUBE OD		62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
			in.	mm					
24	12	2+2FxCSM	0.079	2.0	62285-24	62286-24	62251-24	62257-24	62255-24
36	12	3+1FxCSM	0.079	2.0	62285-36	62286-36	62251-36	62257-36	62255-36
48	12	4xCSM	0.079	2.0	62285-48	62286-48	62251-48	62257-48	62255-48
72	12	6xCSM	0.079	2.0	62285-72	62286-72	62251-72	62257-72	62255-72
96	12	8xCSM	0.079	2.0	62285-96	62286-96	62251-96	62257-96	62255-96
144	12	9x3xCSM	0.079	2.0	62285-144	62286-144	62251-144	62257-144	62255-144

SPECIFICATIONS BY FIBER COUNT

FIBERS	FIBERS/ TUBE	TUBE LAYOUT	TUBE OD		CABLE OD		RECOMMENDED MAXIMUM LOADS INSTALL		RECOMMENDED MAXIMUM LOADS OPERATION		CABLE WEIGHT	
			in.	mm	in.	mm	lbs	N	lbs	N	lbs/kft	Kg/Km
24	12	2+2FxCSM	0.079	2.0	0.583	14.8	150	668	45	200	132	196
36	12	3+1FxCSM	0.079	2.0	0.583	14.8	150	668	45	200	133	198
48	12	4xCSM	0.079	2.0	0.583	14.8	150	668	45	200	154	229
72	12	6xCSM	0.079	2.0	0.647	16.4	150	668	45	200	183	272
96	12	8xCSM	0.079	2.0	0.675	17.1	150	668	45	200	194	289
144	12	9x3xCSM	0.079	2.0	0.723	18.4	150	668	45	200	212	315

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Armored NanoCore® Micro Distribution (Plenum) (UL) OFCP c(UL) OFCP FT6

Optical Specifications

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

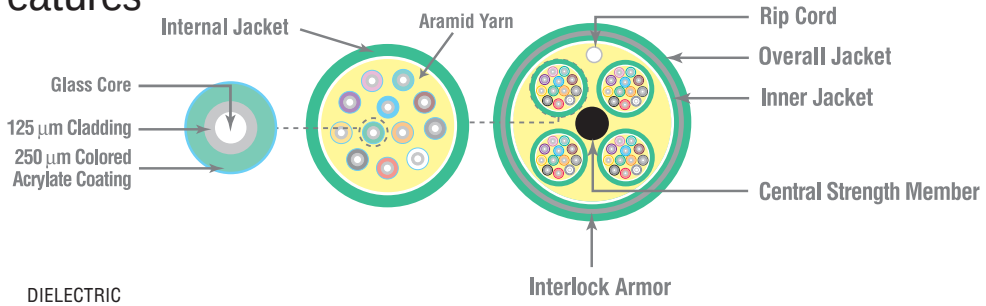
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	2.8	1.0	700	500	950	N/A	750	550	150	N/A
OM3	2.8	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	2.8	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000-25,000	40,000

Hitachi Cable America reserves the right to revise any specifications.

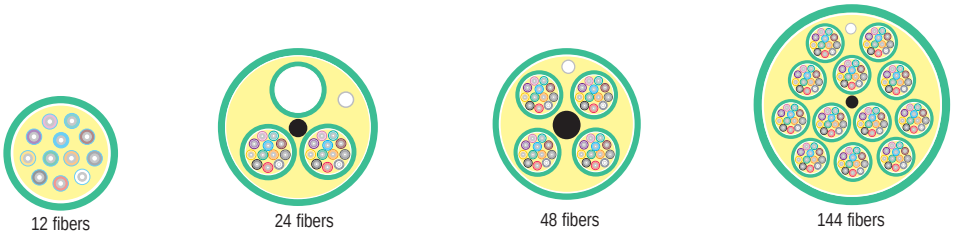
Cable Temperature Ranges

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	Flame-retardant thermoplastic



Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

FIBER

Photo is for representation purposes only.

Armored

2 through 24 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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.
- 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.
- Wideband multimode fiber is available.

Applications

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

Standards

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

Armored Tight Buffered (Riser) (UL) OFCR c(UL) OFCR FT4

PART NUMBERS BY FIBER COUNT

FIBERS	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

SPECIFICATIONS BY FIBER COUNT

			RECOMMENDED MAXIMUM LOADS					
FIBERS	CABLE O.D.		INSTALL		OPERATION		CABLE WEIGHT	
	in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
2	.48	12.192	128	570	38	171	93.4	139.2
4	.48	12.192	128	570	38	171	94.9	141.4
6	.48	12.192	128	570	38	171	96.4	143.6
8	.52	13.208	160	712	48	214	109.9	163.8
10	.52	13.208	160	712	48	214	111.4	166.0
12	.52	13.208	160	712	48	214	112.9	168.2
24	.65	16.332	288	1282	86	385	164.1	244.5

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Multimode and Singlemode

Armored

Armored Tight Buffered (Riser) (UL) OFCR c(UL) OFCR FT4

Optical Specifications

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

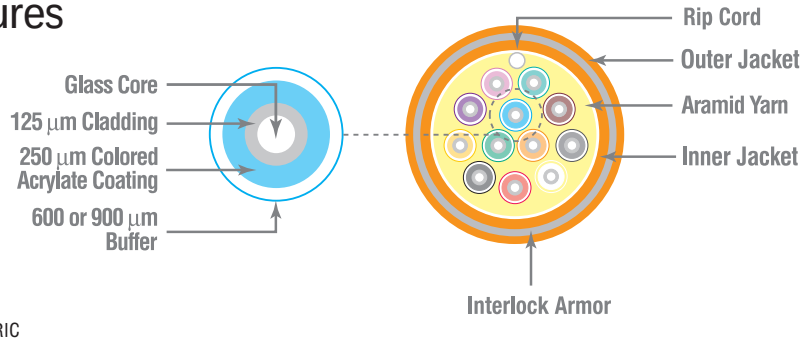
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550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

Hitachi Cable America reserves the right to revise any specifications.

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

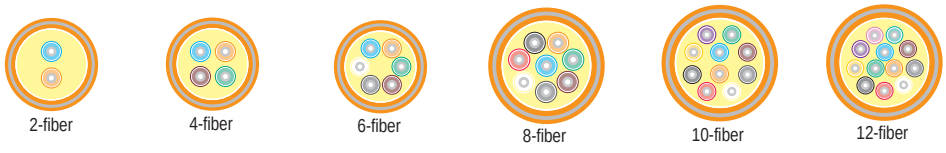


Diagram scale approx. 2:1

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Photo is for representation purposes only.

Armored

2 through 144 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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.
- Wideband multimode fiber is available.

Applications

- Applications include 10, 40 & 100 gigabit Ethernet, Fibre Channel, Video, Security and Automation.

Standards

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

Armored Tight Buffered (Plenum) (UL) OFCP c(UL) OFCP FT6

PART NUMBERS BY FIBER COUNT

FIBERS	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

SPECIFICATIONS BY FIBER COUNT

FIBERS	CABLE O.D.		RECOMMENDED MAXIMUM LOADS				CABLE WEIGHT	
			INSTALLATION		OPERATION			
	in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
2	.48	12.192	128	570	38	171	99.2	147.8
4	.48	12.192	128	570	38	171	100.4	149.6
6	.48	12.192	128	570	38	171	101.6	151.4
8	.52	13.208	160	712	48	214	116.7	173.9
10	.52	13.208	160	712	48	214	117.5	175.1
12	.52	13.208	160	712	48	214	118.8	177.0
24	.64	16.332	288	1282	86	385	164.1	244.5
48	0.94	23.876	640	2849	192	855	385.7	574.0
72	1.086	27.584	960	4273	288	1282	506.6	753.9
96	1.279	32.487	1280	5697	384	1709	694.5	1033.6
144	1.4	35.560	1920	8546	576	2564	782.4	1164.4

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Multimode and Singlemode **Armored**

Armored Tight Buffered (Plenum) (UL) OFCP c(UL) OFCP FT6

Optical Specifications

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

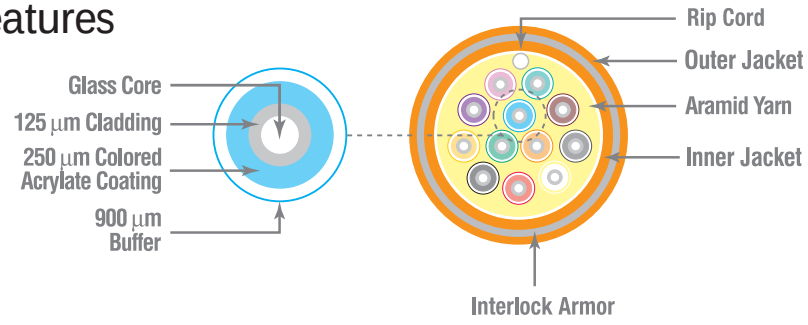
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550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

Hitachi Cable America reserves the right to revise any specifications.

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	Flame-retardant thermoplastic

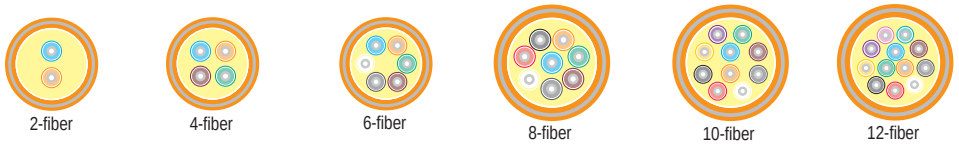


Diagram scale approx. 2:1

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Photo is for representation purposes only.

Armored

2 Through 24 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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 absorbent polymers (SAPs) eliminate water migration in cable interstices.
- Suitable for lashed aerial, duct, underground conduit and indoor plenum applications.
- 900um buffered design recommended for easy termination.

Options

- Standard color configuration is a black outer jacket with a black inner jacket. 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.
- Wideband multimode fiber is available.

Applications

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

Standards

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

Armored Tight Buffered (Plenum) (UL) OFCP c(UL) OFCP FT6

PART NUMBERS BY FIBER COUNT

FIBERS	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

SPECIFICATIONS BY FIBER COUNT

			RECOMMENDED MAXIMUM LOADS					
FIBERS	CABLE O.D.		INSTALL		OPERATION		CABLE WEIGHT	
	in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	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 Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Armored Tight Buffered (Plenum) (UL) OFCP c(UL) OFCP FT6

Optical Specifications

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

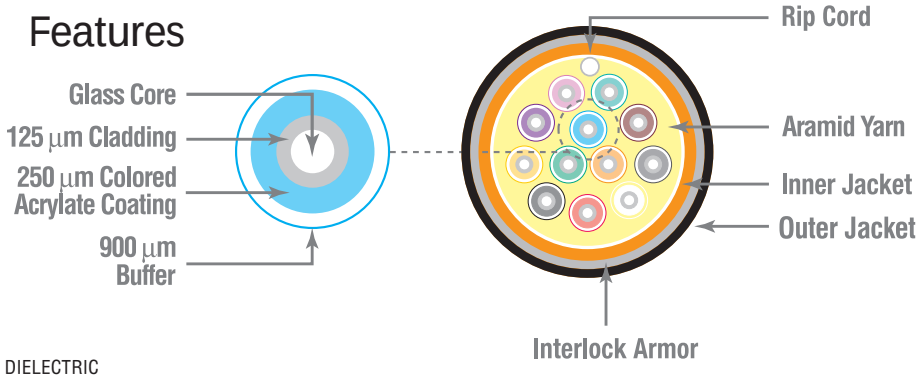
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550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

Hitachi Cable America reserves the right to revise any specifications.

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)

Features



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

12-fiber

Diagram scale approx. 2:1

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

FIBER

Photo is for representation purposes only.

Tight Buffered

2 through 144 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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 (LSZH) available.
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.
- Wideband multimode fiber is available.

Applications

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

Standards

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

I/O Tight Buffered (Riser) (UL) OFNR c(UL) OFNR FT4

PART NUMBERS BY FIBER COUNT

FIBERS	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

SPECIFICATIONS BY FIBER COUNT

			RECOMMENDED MAXIMUM LOADS					
FIBERS	CABLE O.D.		INSTALL		OPERATION		CABLE WEIGHT	
	in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
2	.190	4.83	128	570	38	171	12.6	18.8
4	.190	4.83	128	570	38	171	13.9	20.7
6	.190	4.83	128	570	38	171	15.1	22.5
8	.230	5.84	160	712	48	214	20.0	29.8
10	.230	5.84	160	712	48	214	21.3	31.7
12	.230	5.84	160	712	48	214	22.5	33.5
24	.350	8.89	288	1282	86	385	52.4	78.1
36	.424	10.77	600	2671	180	801	63.0	93.8
48	.488	11.38	600	2671	180	801	77.0	144.4
72	.555	14.10	600	2671	180	801	131.0	194.9
96	.64	16.26	600	2671	180	801	196.8	292.9
144	.78	19.81	600	2671	180	801	222.5	331.2

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Multimode and Singlemode

Tight Buffered

I/O Tight Buffered (Riser) (UL) OFNR c(UL) OFNR FT4

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)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000-25,000	40,000

Hitachi Cable America reserves the right to revise any specifications.

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)

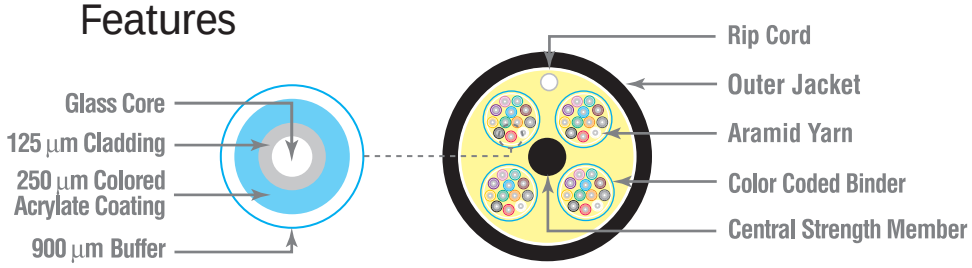
Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

FIBER

Features



DIELECTRIC MATERIALS

Overall Jacket — RISER — Flame-retardant thermoplastic

Diagram scale approx. 2:1

Photo is for representation purposes only.

Tight Buffered

2 through 144 fibers

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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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.
- Wideband multimode fiber is available.

Applications

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

Standards

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

I/O Tight Buffered (Plenum) (UL) OFNP c(UL) OFNP FT6

PART NUMBERS BY FIBER COUNT

FIBERS	FIBERS/ 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
144	12	61979-144	61956-144	61959-144	61980-144	61480-144

SPECIFICATIONS BY FIBER COUNT

					RECOMMENDED MAXIMUM LOADS					
FIBERS	FIBERS/ TUBE	TUBE LAYOUT	CABLE O.D.		INSTALL		OPERATION		CABLE WEIGHT	
			in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
2	2	-	.190	4.8	128	570	38	171	12.6	18.8
4	4	-	.190	4.8	128	570	38	171	13.9	20.7
6	6	-	.190	4.8	128	570	38	171	15.1	22.5
8	8	-	.230	5.8	160	712	48	214	20.0	29.8
10	10	-	.230	5.8	160	712	48	214	21.3	31.7
12	12	-	.230	5.8	160	712	48	214	22.5	33.5
24	24	-	.350	8.8	288	1282	86	385	52.4	78.1
48	12	4xCSM	0.627	15.9	640	2849	192	855	135.1	201.1
72	12	6xCSM	0.756	19.2	960	4273	288	1282	226.6	337.2
144	12	9x3xCSM	1.072	27.2	1920	8546	576	2564	396.8	590.5
144	12	9x3xCSM	1.072	27.2	1920	8546	960	4273	396.8	590.5

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

I/O Tight Buffered (Plenum) (UL) OFNP c(UL) OFNP FT6

Optical Specifications

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

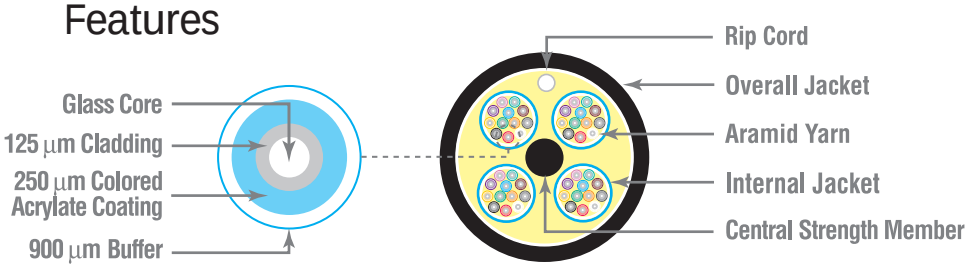
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550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

Hitachi Cable America reserves the right to revise any specifications.

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)

Features



DIELECTRIC MATERIALS

Overall Jacket — PLENUM — Flame-retardant thermoplastic

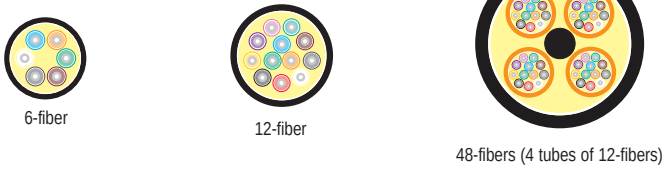


Diagram scale approx. 3:1

Mechanical Specifications

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

plus CORNING® ClearCurve® Optical Fiber

Photo is for representation purposes only.

Loose Tube

12 through 144 fibers

HITACHI
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Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- 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, and underground conduit.
- SM Fiber optic cable is RDUP approved.

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 (LSZH) available.
- Up to 432 fibers available.
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.
- Wideband multimode fiber is available.

Applications

- Applications include 10, 40 & 100 gigabit Ethernet, Fibre Channel, Video, Security and Automation.

Standards

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

Outdoor (Outside Plant) Loose Tube

PART NUMBERS BY FIBER COUNT

FIBERS	FIBERS/ TUBE	62.5 UM OM1	50 UM OM2	50 UM OM3	50 UM OM4	8.3 UM OS2
18	6	60085-18	60087-18	60940-18	61907-18	60089-18
24	6	60085-24	60087-24	60940-24	61907-24	60089-24
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

SPECIFICATIONS BY FIBER COUNT

FIBERS	FIBERS/ TUBE	TUBE LAYOUT	CABLE O.D.		RECOMMENDED MAXIMUM LOADS: INSTALL		RECOMMENDED MAXIMUM LOADS: OPERATION		CABLE WEIGHT	
			in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
18	6	5XCSM	.463	11.7	600	2670	180	800	56.0	83.4
24	6	5XCSM	.463	11.7	600	2670	180	800	60.0	89.4
12	12	5XCSM	.463	11.7	600	2670	180	800	48.0	71.5
24	12	5XCSM	.463	11.7	600	2670	180	800	52.0	77.5
36	12	5XCSM	.463	11.7	600	2670	180	800	56.0	83.4
48	12	5XCSM	.463	11.7	600	2670	180	800	60.0	89.4
60	12	5XCSM	.463	11.7	600	2670	180	800	64.0	95.4
72	12	6xCSM	.493	12.5	600	2670	180	800	76.0	113.2
84	12	7XCSM	.552	14.0	600	2670	180	800	93.0	138.6
96	12	8XCSM	.581	14.8	600	2670	180	800	106.0	157.9
108	12	9XCSM	.620	15.7	600	2670	180	800	120.0	178.8
120	12	10XCSM	.649	16.5	600	2670	180	800	137.0	204.1
132	12	11XCSM	.683	17.3	600	2670	180	800	153.0	228.0
144	12	12XCSM	.720	18.3	600	2670	180	800	171.0	255.0

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Multimode and Singlemode Loose Tube

Outdoor (Outside Plant) Loose Tube

Optical Specifications

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

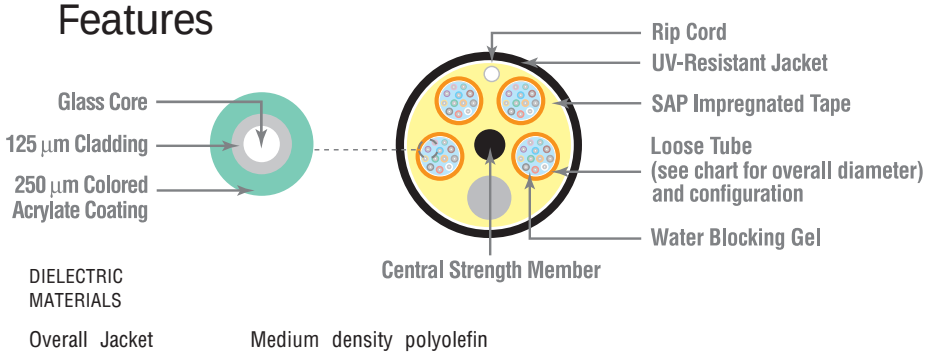
Fiber type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.25	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000-25,000	40,000

Hitachi Cable America reserves the right to revise any specifications.

Cable Temperature Ranges

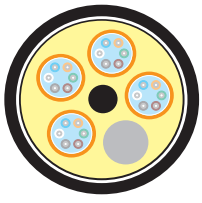
Storage: -40° to 70°C (-40° to 158°F)
Installation: -30° to 60°C (-22° to 140°F)
Operating: -40° to 70°C (-40° to 158°F)

Features

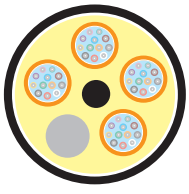


DIELECTRIC MATERIALS

Overall Jacket — Medium density polyolefin



24-fibers (4 tubes of 6-fibers)



48-fibers (4 tubes of 12-fibers)

Diagram scale approx. 1:1

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

Photo is for representation purposes only.

Loose Tube

12 through 144 fibers

HITACHI
Inspire the Next

Product Highlights

- REACH & RoHS 2 compliant.
- Made in USA.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers.
- 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, underground conduit and direct bury applications.

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 (LSZH) available.
- OM4 optical fibers with extended 10 gigabit Ethernet distances are available.
- Wideband multimode fiber is available.

Applications

- Applications include 10, 40 & 100 gigabit Ethernet, Fibre Channel, Video, Security and Automation.

Standards

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

Outdoor (Outside Plant) Armored

PART NUMBERS BY FIBER COUNT

FIBERS	FIBERS/ 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

SPECIFICATIONS BY FIBER COUNT

					RECOMMENDED MAXIMUM LOADS					
FIBERS	FIBERS/ TUBE	TUBE LAYOUT	CABLE O.D.		INSTALL		OPERATION		CABLE WEIGHT	
			in.	mm	lbs-f	N	lbs-f	N	lbs/1000 ft	kg/1000m
24	2	12xCSM	0.748	19.0	600	2670	600	800	228.0	339.7
48	4	12xCSM	0.748	19.0	600	2670	600	800	229.0	341.2
48	6	8XCSM	0.613	15.6	600	2670	600	800	147.0	219.0
12	12	5XCSM	0.508	13.1	600	2670	600	800	97.0	144.5
24	12	5XCSM	0.508	13.1	600	2670	600	800	101.0	150.0
48	12	5XCSM	0.508	13.1	600	2670	600	800	110.0	163.9
144	12	12xCSM	0.768	19.5	600	2670	600	800	241.0	359.1

Cable Characteristics

Note: Part number rows in upper table directly correspond to cable characteristic rows in the same location of the lower table.

Outdoor (Outside Plant) Armored

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)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.25	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000-25,000	40,000

Hitachi Cable America reserves the right to revise any specifications.

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

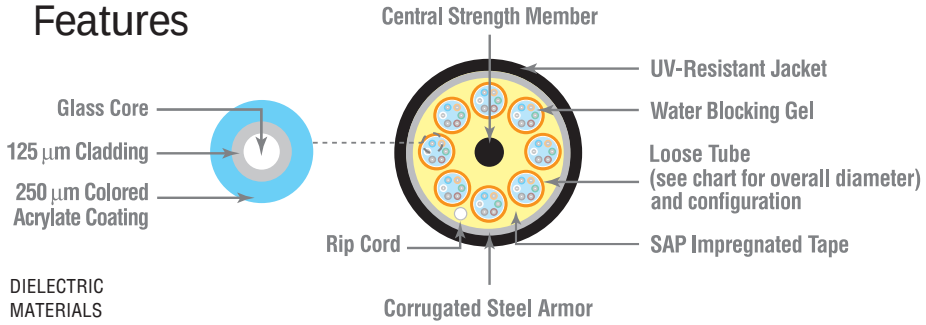
- No load = 10x cable overall diameter
- Load = 20x cable overall diameter

Loose Tube Diameter

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

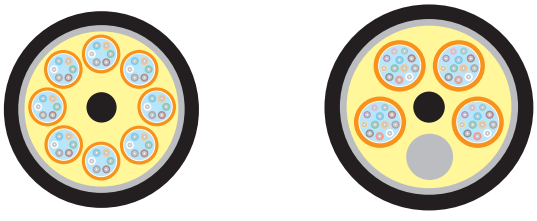
plus CORNING® ClearCurve® Optical Fiber

Features



DIELECTRIC MATERIALS

Overall Jacket — Medium density polyolefin



48-fibers (8 tubes of 6-fibers) — 48-fibers (4 tubes of 12-fibers)

Diagram scale approx. 1:1

Photo is for representation purposes only.

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

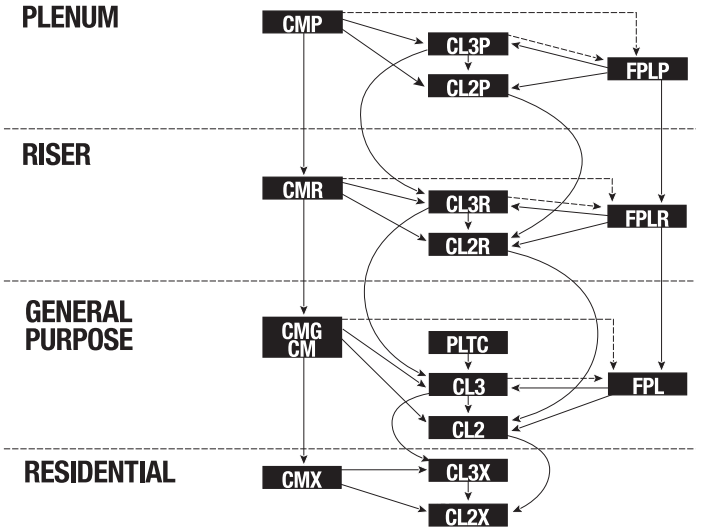
Fiber #	Fiber/Buffer Color
1	Blue
2	Orange
3	Green
4	Brown
5	Gray
6	White
7	Red
8	Black
9	Yellow
10	Violet
11	Pink
12	Aqua
13	Lime
14	Tan
15	Olive
16	Magenta

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)

Applications

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		■	■	■	■
HDBase-T		■	■	■	■
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 IEEE 1000BASE-T throughput at the University of New Hampshire's Interoperability Lab and found to fully support the IEEE 1000BASE-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™ Enhanced Category 6 provides guaranteed 10 gigabit support up to 100 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

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-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.

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.

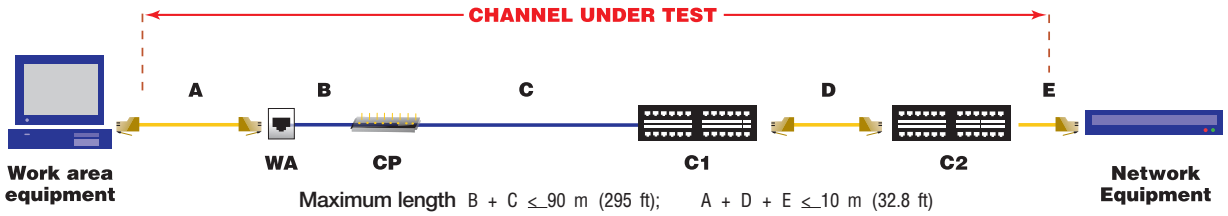
ISO/IEC 11801, 2nd edition "Generic cabling for Customer Premises (2002)" This standard is the international counterpart to the TIA/EIA-568-B family of standards. It contains requirements for balanced twisted-pair and fiber optic components and cabling systems.

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.

Configurations

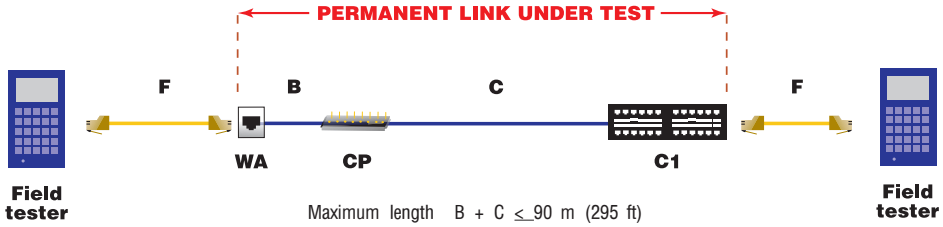
Channel Configuration

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

A = Work area cord
B = Optional transition cabling
C = Horizontal cabling
D = Patch cord or jumper cable
E = Telecommunications room equipment cord
F = Test equipment cord

Connecting Hardware

WA = Telecommunications outlet/connector
CP = Optional transition/consolidation point connector
C1, C2 = Horizontal cross-connect or interconnect

Recommended Backbone Fiber Lengths

The table below is for network design purposes and can be used for establishing the maximum fiber optic cable lengths based on the fiber optic glass type and the maximum data rate at that distance. The maxim lengths are guidelines only. The number of fiber optic strands used and the type of electronics and their transmit speeds will determine the actual maximum performance length.

Backbone Fiber Type	Recommened Backbone Max. Length	Max. Data Rates
OM1	2000 m (6562 ft.)	155 Mb/s
OM2	550 m (1804 ft.)	1 GB/s
OM3	300 m (984 ft.)	10 GB/s, 100 GB/s
OM4	550 m (1804 ft.)	10 GB/s, 100 GB/s
OS2	10,000 m (32,808 ft.)	100 GB/s

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

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

Glossary

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).

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.

Glossary

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.

Glossary

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

Part Number

Fiber

Part #	Page #	Part #	Page #	Part #	Page #	Part #	Page #
60001	54	60086	88	60473	58	60944	90
60002	54	60087	88	60474	58	60945	90
60003	54	60088	88	60475	58	60946	90
60004	54	60089	88	60489	54	60954	90
60005	54	60090	88	60490	58	61319	80
60006	64	60097	90	60491	58	61337	80
60007	54	60098	90	60492	58	61345	84
60008	58	60101	90	60501	54	61347	84
60009	64	60102	90	60502	58	61348	84
60010	64	60258	66	60514	54 & 60	61349	84
60011	64	60258	66	60515	60	61378	50
60012	54 & 60	60288	54	60516	62	61379	58
60014	60	60289	54	60517	62	61421	78
60015	64	60345	90	60518	60	61433	80
60022	58	60346	90	60520	60	61444	58
60023	58	60376	54	60522	62	61457	58
60024	58 & 62	60405	80	60524	78	61459	86
60026	58 & 62	60425	54	60567	64	61460	86
60027	66	60430	58	60581	64	61464	86
60028	66	60431	58	60595	64	61468	86
60029	62	60432	58	60596	66	61480	86
60030	58	60462	54	60598	66	61483	54
60031	58 & 62	60463	54 & 60	60613	64	61497	90
60033	68	60464	54	60614	66	61506	70
60037	54	60465	54	60633	64	61507	70
60038	54	60466	54	60634	66	61537	70
60039	54	60467	54	60932	90	61538	70
60040	54	60468	58	60933	90	61539	70
60042	58	60469	58	60934	90	61540	78
60044	58	60470	58	60937	90	61542	78
60063	54 & 60	60471	58 & 62	60940	88	61546	70
60085	88	60472	58	60943	88	61547	70

Part Number

Fiber

Part #	Page #	Part #	Page #	Part #	Page #	Part #	Page #
61577	82	61907	88	62144	56	62255	76
61578	82	61908	88	62145	56	62257	76
61579	82	61909	90	62147	56	62274	56
61580	82	61910	90	62148	56	62275	56
61631	68	61911	90	62149	56	62276	56
61632	68	61912	90	62150	56	62277	56
61769	56	61941	68	62151	56	62285	76
61772	68	61956	86	62153	56	62286	76
61791	54	61959	86	62154	56	62294	72
61792	54	61979	86	62155	56	62295	72
61793	54	61980	86	62156	56	62296	72
61838	54 & 60	61986	58	62157	56	62323	72
61842	54	61988	54	62166	74	62337	72
61844	58	62029	56	62169	74	62338	68
61851	58	62068	82	62171	74	62371	70
61852	58	62124	56	62172	74	62372	70
61853	58	62125	56	62183	80	62373	70
61854	58	62126	56	62184	80	62374	70
61855	58 & 62	62127	56	62185	80	62375	70
61857	58	62129	56	62186	80	62382	70
61865	60	62130	56	62187	80	62411	70
61868	62	62131	56	62205	74	62412	70
61872	64	62132	56	62214	74	62424	68
61874	64	62133	56	62216	74	62425	68
61877	66	62135	56	62218	74	62426	68
61879	66	62136	56	62220	74	62427	68
61882	70	62137	56	62239	70	62428	68
61883	70	62138	56	62241	70	62429	68
61893	84	62139	56	62242	70	62430	70
61894	86	62141	56	62243	70	62438	68
61896	78	62142	56	62244	70		
61897	80	62143	56	62251	76		

Part Number

Copper			
Part #	Page #	Part #	Page #
30016	22	30234	14
30022	22	30237	28
30024	26	30238	28
30025	26	30245	10
30086	42	30250	8
30093	40	30263	18
30111	44	30265	18
30120	42	30287	48
30129	20	38653	32
30132	30	38696	36
30134	46	38718	44
30145	50	38730	42
30154	20	38743	42
30172	40	38886	38
30180	50	38891	34
30183	24	38893	34
30203	40	39092	32
30212	24	39228	46
30218	16	39419	36
30222	16	41684	12
30233	14		

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.

Installation

Conduit Fill Chart

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"
Cable Diameter	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.

Cable Ampacity

The table below is derived from one approved by the National Fire Protection Agency for use in the next edition of the National Electrical Code known as NFPA-70. The complete table will be found in section 725.144 of the code. It will also be referenced in Article 800 Communication Circuits. The table identifies the ampacity of each conductor (in Amperes) in a 4-pair Class 2 or Class 3 data cable. Ambient temperature used for development of the table is 30°C (86°F) with all conductors in all cables carrying current. The table is based on 60°C (140°F), 75°C (167°F) and 90°C (194°F) rated cables.

AWG	Number of 4-Pair Cables in a Bundle																				
	1			2-7			8-19			20-37			38-61			62-91			92-192		
	Temp Rating			Temp Rating			Temp Rating			Temp Rating			Temp Rating			Temp Rating			Temp Rating		
	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C
24	2.0	2.0	2.0	1.0	1.4	1.6	0.8	1.0	1.1	0.6	0.7	0.9	0.1	0.1	0.7	0.4	0.5	0.6	0.3	0.4	0.5
23	2.5	2.5	2.5	1.2	1.5	1.7	0.8	1.1	1.2	0.6	0.8	0.9	0.5	0.7	0.8	0.5	0.7	0.8	0.4	0.5	0.6
22	3.0	3.0	3.0	1.4	1.8	2.1	1.0	1.2	1.4	0.7	0.9	1.1	0.6	0.8	0.9	0.1	0.7	0.8	0.5	0.6	0.7

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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