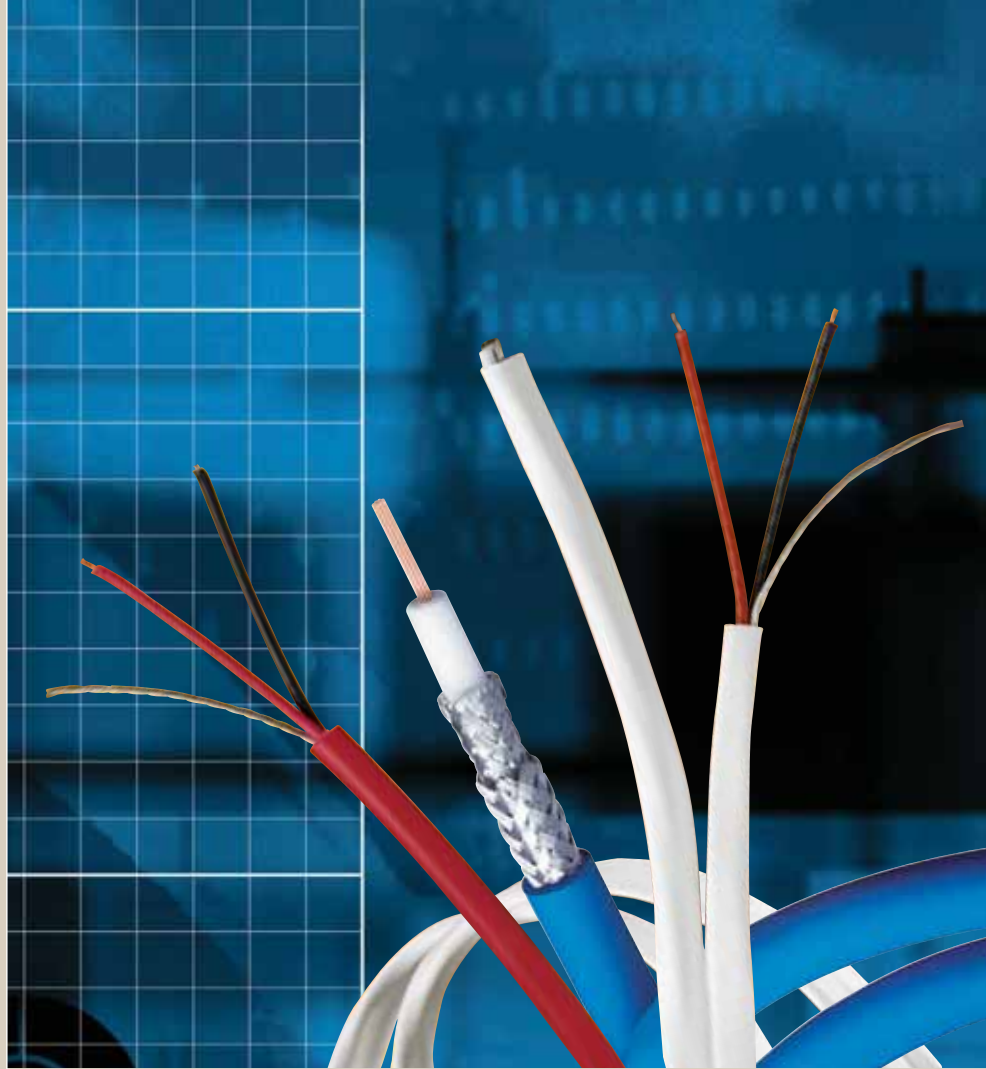


Headend Cables



High-Performance
Products For Every
Headend Application

The Evolution of Headend Technology and Belden's Full Range of Cable Solutions

Headend cables will need to be increasingly high-end in nature.

The factors that will shape the future of the headend, the heart of precision CATV activity, are already at work, changing the industry. Many challenging technology drivers are now converging, including the competitive necessity to accommodate services like these:

- High-definition TV (HDTV)
- Interactive TV services
- Video on demand (VOD)
- Internet telephony (VoIP)
- High-speed data transmission
- Targeted advertising (zoning)
- Personal communications services (PCS)
- The proliferation of educational and government channels
- Headend consolidation

By 2007, all broadcast television will be digital – by law, and satellite networks have already made the switch. Analog audio will remain viable in the headend – in order to serve both digital and analog technologies – but certainly by 2008 the overwhelming majority of services will be digitally-based. To handle this technology evolution, headend cables will need to be increasingly more high-end in nature. Belden stands alone in its ability to offer a variety of high quality, high reliability cables for every facet of the headend.

Today's consumer is looking for a range of new CATV services - all impacting the headend.





Cables for Every Headend Need

By most accounts, the future is now. We see super-headends in larger urban areas, highly digital and linked to antenna farms. To complement those, we have smaller hubs serving smaller populations and towns. Consider them "fusion zones" handling different types of data, encoding-formats and protocols. Cabling will be a mix of coax, fiber, and twisted pairs.

Reliability is crucial. Outages and downtime are not tolerated. To that effect, cable engineers are being challenged to design and build headends that will work a decade from now – an era where digital is the norm.

Today, our headend customers are increasingly being asked to squeeze more and more products and services out of the same real estate. The headend's existing square footage will be used more efficiently, learning to offer more channels per rack. As a result, we see a demand for cabling and associated connectors with a smaller form factor.

You can safely trust Belden high-performance cable products. Manufactured to the highest standards of quality with the most advanced equipment, controls and processes, Belden products will give you the edge you're going to need, now and in the future.



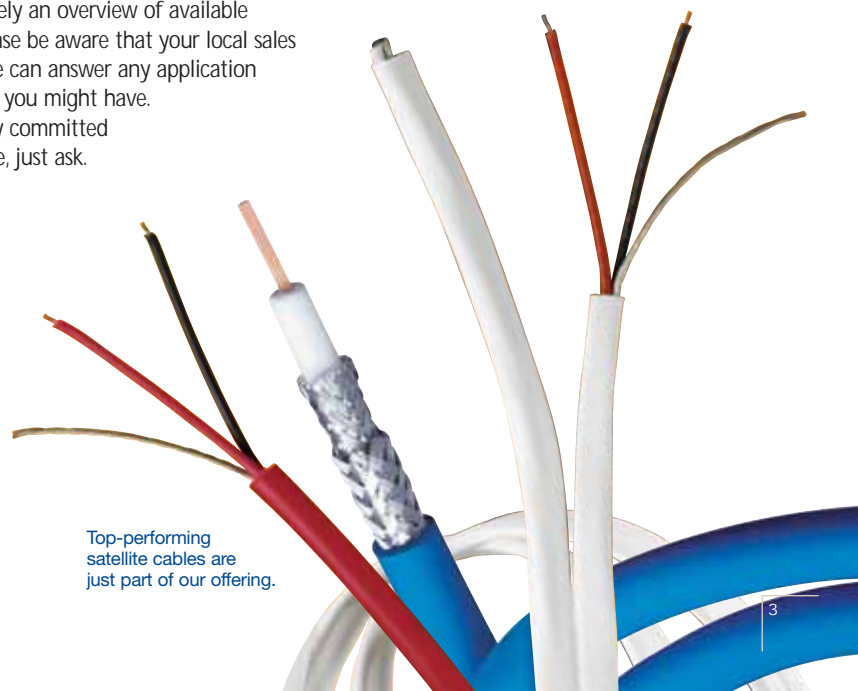
Built for the Future

The cables shown here are indicative of the quality and reliability that you have come to expect from Belden.

- Our Satellite to receiver cables feature Belden's superior shielding technology – all swept to 3 GHz
- To interconnect a variety of signal processing equipment we offer a number of high-end RF products – including bundled and multi-coax designs in both mini and standard coax diameters
- Our SDI cables are considered the top-performing cables in the Broadcast industry; all meet SMPTE 292M and ITU-R-BT.601 for PAL standards
- Ideal for VoIP equipment interconnects, our Data cables are networking industry leaders
- Our Single- and Double-Pair Digital Audio cables exceed AES/EBU specifications
- An extensive range of DS-3 and DS-4 cables for central office and voice
- Optical Fiber cables – for patch and distribution. High fiber counts are available

As this is merely an overview of available products, please be aware that your local sales representative can answer any application question that you might have. Belden is fully committed to your future, just ask.

TABLE OF CONTENTS	
	Page No.
Satellite Cable	4
RF Cable	6
SDI Cable	10
VoIP Cable	13
Digital Audio Cable	16
DS-3 and DS-4 Cable	17
Optional Fiber Cable	18
Technical Information	19



Top-performing satellite cables are just part of our offering.

Satellite Cable


All Belden Satellite coaxes are swept to 3 GHz, plus they are available in a variety of shield types, including Duobond® II (Foil/Braid), Duobond IV (Quad Shield) and the superior Duobond Plus® (Foil/Braid/Foil). Attributes include solid copper conductors or copper covered steel conductors and PVC or Flammarrest® jackets. Although not listed here, we also offer Single- and Dual-pair constructions with 22 AWG stranded tinned copper conductors, overall Beldfoil® shields and drain wires.


RG-6/U Type Coax

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m

18 AWG Solid .040" Bare Copper or Bare Copper-covered Steel Conductor • Duobond® II + Aluminum Braid Shield (60% Coverage)


Gas-injected Foam Polyethylene Insulation • PVC Jacket (Black, Gray, White or Neutral)

80°C	1829A 	NEC:	U-1000	U-304.8	27.0	12.3	18 AWG (solid) .040" BCCS 28.0Ω/M' 91.9Ω/km	.180	4.57	Duobond II* + 60% Aluminum Braid 9.0Ω/M' 29.5Ω/km	.270	6.86	75	83%	16.2	53.2	5	.5	1.6
		CATV CM	1000	304.8	27.0	12.3											55	1.4	4.6
		CEC:															211	2.6	8.5
		CM															500	4.1	13.5
																	750	5.1	16.7
																	862	5.5	18.0
																	1000	6.0	19.7
																	1450	7.8	25.6
																	1800	8.6	28.2
																	2250	9.8	32.2
					3000	11.3	37.1												

80°C	1829AC 	NEC:	U-1000 [▲]	U-304.8	27.0	12.3	18 AWG (solid) .040" BCAC 6.4Ω/M' 21.0Ω/km	.180	4.57	Duobond II* + 60% Aluminum Braid 9.0Ω/M' 29.5Ω/km	.270	6.86	75	83%	16.2	53.2	5	.5	1.6
		CATV CM	1000 ^{▲▲}	304.8	27.0	12.3											55	1.4	4.6
		CEC:															211	2.6	8.5
		CM															500	4.1	13.5
																	750	5.1	16.7
																	862	5.5	18.0
																	1000	6.0	19.7
																	1450	7.8	25.6
																	1800	8.6	28.2
																	2250	9.8	32.2
					3000	11.3	37.1												


▲U-1000 ft. put-up available in Black, White or Gray only.

▲▲1000 ft. available in White or Black only.

80°C	1829R 	NEC:	U-1000 [▲]	U-304.8	31.0	14.1	18 AWG (solid) .040" BCCS 28.0Ω/M' 91.9Ω/km	.180	4.57	Duobond II* + 60% Aluminum Braid 9.0Ω/M' 29.5Ω/km	.270	6.86	75	83%	16.2	53.2	5	.5	1.6
		CATVR, CMR															55	1.4	4.6
		CEC:															211	2.6	8.5
		CMG FT4															500	4.1	13.5
																	750	5.1	16.7
																	862	5.5	18.0
																	1000	6.0	19.7
																	1450	7.8	25.6
																	1800	8.6	28.2
																	2250	9.8	32.2
					3000	11.3	37.1												

▲U-1000 ft. put-up not available in Neutral.

Plenum • Foam FEP Insulation • Natural Flammarrest® Jacket

75°C	1829P 	NEC:	U-1000	U-304.8	27.0	12.3	18 AWG (solid) .040" BCCS 28.0Ω/M' 91.9Ω/km	.170	4.32	Duobond II* + 60% Aluminum Braid 9.0Ω/M' 29.5Ω/km	.235	5.97	75	83%	16.3	53.5	1	.3	1.0
		CATVP, CMP	1000	304.8	27.0	12.3											10	.7	2.3
		CEC:															50	1.5	4.9
		CMP FT6															100	2.1	6.9
																	200	3.0	9.8
																	400	4.4	14.4
																	700	6.1	20.0
																	900	7.2	23.6
																	1000	7.6	24.9
																	1450	9.6	31.5
					1800	11.0	36.1												
					2250	12.7	41.7												
					3000	15.1	49.5												

BCAC = Bare Copper Anti-corrosion • BCCS = Bare Copper-covered Steel • DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene

* Duobond II = Bonded Duofoil® (100% coverage + aluminum braid (67% coverage).




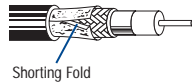
Satellite Cable (continued)

RG-6/U Type Coax


Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m

18 AWG Solid .040" Bare Copper Conductor • Duobond Plus® + Aluminum Braid Shield (77% Coverage) + Aluminum Foil


Gas-injected Foam Polyethylene Insulation • PVC Jacket (Black or White)																				
80°C	7915A 	NEC:	U-500	U-152.4	16.5	7.5	18 AWG	.180	4.57	Duobond Plus**	.275	6.99	75	83%	16.2	53.2	5	.5	1.6	
		CATV CM	500	152.4	18.0	8.2	(solid)			77%								55	1.4	4.6
		CEC:	U-1000	U-304.8	30.0	13.6	.040"			Aluminum								211	2.6	8.5
		CM	1000	304.8	30.0	13.6	BC			Braid								500	4.1	13.5
						6.4Ω/M'			4.6Ω/M'								750	5.1	16.7	
						21.0Ω/km			15.1Ω/km								862	5.5	18.0	
																	1000	6.0	19.7	
																	1450	7.8	25.6	
																	1800	8.6	28.2	
																	2250	9.8	32.2	
																	3000	11.3	37.1	



18 AWG Solid .040" Bare Copper Conductor • Duobond + Aluminum Braid Shields (60% and 40% Coverage)

Gas-injected Foam Polyethylene Insulation • PVC Jacket (Black or White)																				
80°C	7916A 	NEC:	U-500	U-152.4	18.5	8.4	18 AWG	.170	4.32	Duobond IV*	.248	6.30	75	83%	16.2	53.2	5	.5	1.6	
		CATV CM	500	152.4	16.5	7.5	(solid)			60% &								55	1.4	4.6
		CEC:	U-1000	U-304.8	33.0	15.0	.040"			40%								211	2.6	8.5
		CM	1000	304.8	35.0	15.9	BC			Aluminum								500	4.1	13.5
						6.4Ω/M'			Braids								750	5.1	16.7	
						21.0Ω/km			4.8Ω/M'								862	5.5	18.0	
									15.7Ω/km								1000	6.0	19.7	
																	1450	7.8	25.6	
																	1800	8.6	28.2	
																	2250	9.8	32.2	
																	3000	11.3	37.1	




80°C	7916AP 	NEC:	U-1000	U-304.8	33.0	15.0	18 AWG	.170	4.32	Duobond IV*	.248	6.30	75	83%	16.2	53.2	1	.3	1.0	
		CATV, CMP	1000	304.8	35.0	15.9	(solid)			60% &								10	.7	2.3
		CEC:					.040"			40%								50	1.5	4.9
		CMP FT6					BC			Aluminum								100	2.1	6.9
						6.4Ω/M'			Braids								200	3.0	9.8	
						21.0Ω/km			4.8Ω/M'								400	4.4	14.4	
									15.7Ω/km								700	6.1	20.0	
																	900	7.2	23.6	
																	1000	7.6	24.9	
																	1450	9.6	31.5	
																	1800	11.0	36.1	
																	2250	12.7	41.7	
																	3000	15.1	49.5	



RG-11/U Type Coax

14 AWG Solid .064" Bare Copper-covered Steel Conductor • Duobond IV + Aluminum Braid Shield (60% and 40% Coverage)

Foam FEP Insulation • Solef PVDF Jacket																				
80°C	7999AP 	NEC:	1000	304.8	69.0	31.4	14 AWG	.274	6.96	Duobond IV*	.372	9.45	75	83%	16.3	53.5	1	.2	.7	
		CATV, CMP					(solid)			60% &								10	.5	1.6
		CEC:					.064"			40%								50	.9	3.0
		CMP FT6					BC			Aluminum								100	1.3	4.3
						11.0Ω/M'			Braids								200	1.9	6.2	
						36.1Ω/km			3.0Ω/M'								400	2.8	9.2	
									9.84Ω/km								700	3.9	12.8	
																	900	4.7	15.4	
																	1000	5.0	16.4	
																	1450	6.7	22.0	
																	1800	7.7	25.3	
																	2250	8.5	27.9	
																	3000	9.9	32.5	

BC = Bare Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene • PVDF = Polyvinylidene Fluoride

* Duobond Plus = Bonded Duofoil® (100% coverage) + aluminum braid (67% coverage) + shorting fold

Duobond IV = Bonded Duofoil (100% coverage) + aluminum braid (67% coverage) + Duofoil (100% coverage) + aluminum braid (46% coverage)

Satellite Cable (continued)

RG-11/U Type Coax

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m
14 AWG Solid .064" Bare Copper-covered Steel Conductor • Duobond II + Aluminum Braid Shield (60% Coverage)																			
Foam FEP Insulation • Solef PVDF Jacket																			
80°C	7999A	NEC: CATV CM CEC: CM	1000 [▲]	304.8	67.0	30.4	14 AWG (solid) .064" BCCS 11.0Ω/M' 36.1Ω/km	.280	7.11	Duobond II* + 60% Aluminum Braid 4.1Ω/M' 13.4Ω/km	.400	10.16	75	83%	16.2	53.2	1	.2	.7
																	10	.5	1.6
																	50	.9	3.0
																	100	1.3	4.3
																	200	1.9	6.2
																	400	2.8	9.2
																	700	3.9	12.8
																	900	4.7	15.4
																	1000	5.0	16.4
																	1450	6.7	22.0
																	1800	7.7	25.3
																	2250	8.5	27.9
																	3000	9.9	32.5

▲1000 ft. put-up also available in White.

RF Cable

Belden is the industry leader in high-end RF products that are used in the interconnect of a variety of signal processing equipment in the Headend. These cables feature the following shields: Duobond II (Fold/Braid), Duobond IV (Quad Shield) and the superior Duobond Plus® (Foil/Braid/Foil). There are also many variations of bundled and multi-coax Banana Peel® designs (available by special request) to suit any application. Most RF products are available in 12 colors.

RG-59/U Type Coax

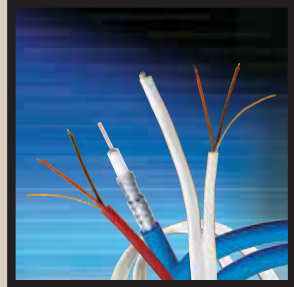
Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m
20 AWG Solid .032" Silver-plated, Copper-covered Steel Conductor • Duobond Plus® + Aluminum Braid Shield (95% Coverage)																			
Gas-injected Foam Polyethylene Insulation • PVC Jacket (Available in 13 colors)*																			
80°C	9167	NEC: CATVR CMR CEC: CMG FT4	1000	304.8	24.0	10.9	20 AWG (solid) .032" SPCCS 25.8Ω/M' 84.6Ω/km	.144	3.66	Duobond Plus* + 95% Aluminum Braid 4.5Ω/M' 14.8Ω/km	.242	6.15	75	83%	16.2	53.2	1	.75	2.46
																	55	1.84	6.04
																	211	3.36	11.02
																	216	3.41	11.19
																	240	3.57	11.71
																	270	3.79	12.43
																	300	3.99	13.09
																	325	4.16	13.65
																	350	4.33	14.21
																	375	4.49	14.73
																	400	4.66	15.29
																	450	4.96	16.27
																	500	5.22	17.13
																	550	5.48	17.98
																	600	5.75	18.86
																	650	6.03	19.78
																	700	6.28	20.60
																	750	6.51	21.36
																	800	6.71	22.01
																	862	6.97	22.87
																	870	7.00	22.97
																	900	7.14	23.42
																	1000	7.68	25.20

*Available in Black, Gray, White, Red, Blue, Yellow, Brown, Orange, Green, Purple, Beige, Pink or Aqua.

BCCS = Bare Copper-covered Steel • DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • PVDF = Polyvinylidene Fluoride • SPCCS = Silver-plated, Copper-covered steel

* Duobond II = Bonded Duofoil® (100% coverage + aluminum braid (67% coverage).

Duobond IV = Bonded Duofoil (100% coverage) + aluminum braid (67% coverage) + Duofoil (100% coverage) + aluminum braid (46% coverage)



RF Cable (continued)

RG-59/U Type Coax

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m
20 AWG Solid .032" Silver-plated, Copper-covered Steel Conductor • Bonded Duofoil + 2 Aluminum Braid Shields (95% Coverage) + Duobond Plus Gas-injected Foam Polyethylene Insulation • PVC Jacket (Available in 13 colors)*																			
80°C	V100177	— —	1000	304.8	39.0	17.17	20 AWG .032" SPCCS 25.8Ω/M' 84.6Ω/km	.144	3.66	Bonded Duofoil + 95% + 95% Aluminum Braid + Duobond Plus 6.6Ω/M' 21.1Ω/km	.270	6.86	75	83%	16.2	53.2	5	.75	2.46
																	55	1.84	6.04
																	211	3.36	11.02
																	216	3.41	11.19
																	240	3.57	11.71
																	270	3.79	12.43
																	300	3.99	13.09
																	325	4.16	13.65
																	350	4.33	14.21
																	375	4.49	14.73
																	400	4.66	15.29
																	450	4.96	16.27
																	500	5.22	17.13
																	550	5.48	17.98
																	600	5.75	18.86
																	650	6.03	19.78
																	700	6.28	20.60
																	750	6.51	21.36
																	800	6.71	22.01
																	862	6.97	22.87
																	870	7.00	22.97
																	900	7.14	23.42
																	1000	7.68	25.20

*Available in Black, White, Pink, Tan, Green, Gray, Brown, Red, Orange, Yellow, Aqua, Blue or Violet

Mini RG-59/U Type Coax • 3.0 GHz Sweep Test, Guaranteed Return Loss Specs

Gas-injected Foam HDPE Insulation • Overall PVC Jacket (See available colors)																			
	YR46940	NEC: 250 [▲]	76.2	4.5	2.0	23 AWG	.102	2.59	Duobond® II	.159	4.03	75	83%	16.3	53.5	5	.9	3.0	
		CMR: U-500 [▲]	U-152.4	9.0	4.1	(solid)			+ 95%								42	2.3	7.5
		CEC: 1000	304.8	17.0	7.7	.023"			TC Braid								55	2.6	8.5
		CMG FT4				BC			7.6Ω/M'								65	2.8	9.2
						20.1Ω/M'			24.9Ω/km								70	3.0	9.8
						65.9Ω/km											211	4.7	15.4
																	216	4.8	15.8
																	240	5.1	16.7
																	270	5.4	17.7
																	300	5.7	18.6
																	325	5.9	19.4
																	350	6.1	20.0
																	375	6.3	20.8
																	400	6.6	21.5
																	450	7.0	22.9
																	500	7.4	24.2
																	550	7.8	25.6
																	600	8.3	27.3
																	650	8.8	28.9
																	700	9.3	30.4
																	750	9.6	31.5
																	800	9.8	32.1
																	862	10.0	32.8
																	870	10.1	33.1
																	900	10.2	33.5
																	950	10.3	33.8
																	1000	10.5	34.4
																	1500	13.0	42.6
																	2250	16.0	52.5
																	3000	18.5	60.7


Meets ANSI/SCTE 117 2006

[▲]250 ft. and U-500 ft. put-ups available in Black only.

BC = Bare Copper • DCR = DC Resistance • HDPE = High-density Polyethylene • SPCCS = Silver-plated, Copper-covered steel • TC = Tinned Copper

RF Cable (continued)

RG-59/U Type Coax

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Coax	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation																																																																													
				Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m																																																																											
Bundled RG-59/U Type Coax • 3.0 GHz Sweep Test, Guaranteed Return Loss Specs, Coax Identification: Numbered																																																																																															
Gas-injected Foam HDPE Insulation • Overall PVC Jacket (See available colors)																																																																																															
	YR48335 NEC: CMR CEC: CMG FT4	4	500 1000	152.4 304.8	55.5 109.0	25.2 49.5	23 AWG (solid) .023" BC 20.1Ω/M' 65.9Ω/km	.102 .159	2.59 4.03	Duobond II* + 95% TC Braid 7.6Ω/M' 24.9Ω/km	.481 12.22	75	83%	16.3	53.5	5 42 55 65 70 211 216 240 270	.9 2.3 2.6 2.8 3.0 4.7 4.8 5.1 5.4	.9 7.5 8.5 9.2 9.8 15.4 15.8 16.7 17.7	3.0 7.5 8.5 9.2 9.8 15.4 15.8 16.7 17.7																																																																												
																				Meets ANSI/SCTE 117 2006	NEC: CMR CEC: CMG FT4	8	500 1000	152.4 304.8	107.0 214.0	48.6 97.2	same as above	same as above	same as above	.638 16.21	75	83%	16.3	53.5	300 325 350 375 400 450 500 550 600 650 700	5.7 6.1 6.3 6.6 7.0 7.4 7.8 8.3 8.8 9.3	18.6 19.4 20.0 20.8 21.5 22.9 24.2 25.6 27.3 28.9 30.4	18.6 19.4 20.0 20.8 21.5 22.9 24.2 25.6 27.3 28.9 30.4																																																									
																																							Meets ANSI/SCTE 117 2006	NEC: CMR CEC: CMG FT4	10	1000	304.8	319.0	145.0	same as above	same as above	same as above	.796 20.22	75	83%	16.3	53.5	750 800 862 870 900 950 1000 1500 2250	9.6 9.8 10.0 10.1 10.2 10.3 10.5 13.0 16.0	31.5 32.1 32.8 33.1 33.5 33.8 34.4 42.6 52.5	31.5 32.1 32.8 33.1 33.5 33.8 34.4 42.6 52.5																																						
																																																										Meets ANSI/SCTE 117 2006	NEC: CMR CEC: CMG FT4	12	500 1000	152.4 304.8	171.5 353.0	78.0 160.3	same as above	same as above	same as above	.825 20.96	75	83%	16.3	53.5	3000	18.5	60.7	60.7																			
																																																																													Meets ANSI/SCTE 117 2006	NEC: CMR CEC: CMG FT4	16	1000	304.8	464.0	210.7	same as above	same as above	same as above	.916 23.27	75	83%	16.3	53.5	5	.9	3.0	3.0

BC = Bare Copper • DCR = DC Resistance • HDPE = High-density Polyethylene • TC = Tinned Copper

*Duobond II = Bonded Duofoil® (100% coverage + aluminum braid (67% coverage)).



RF Cable (continued)

RG-59/U Type Coax

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Coax	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation	
				Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.

Bundled RG-59/U Type Coax • 3.0 GHz Sweep Test, Guaranteed Return Loss Specs, Coax Identification: **Numbered**

Gas-injected Foam HDPE Insulation • Overall PVC Jacket (See available colors)																						
	YR46941 	NEC:	3	500	152.4	46.5	21.1	23 AWG	.102	2.59	Duobond II	.440	11.18	75	83%	16.3	53.5	5	.9	3.0		
		CMR		1000	304.8	93.0	42.3	(solid)			Coax OD:	+ 95%							42	2.3	7.5	
		CEC:						.023"		.159	4.03	TC Braid							55	2.6	8.5	
		CMG FT4						BC				7.6Ω/M'							65	2.8	9.2	
									20.1Ω/M'				24.9Ω/km							70	3.0	9.8
									65.9Ω/km											211	4.8	15.6
																				216	4.8	15.8
																				240	5.1	16.7
																				270	5.4	17.7
																				300	5.7	18.6
																		325	5.9	19.4		
																		350	6.1	20.0		
																		375	6.3	20.8		
																		400	6.6	21.5		
																		450	7.0	22.9		
																		500	7.4	24.2		
																		550	7.8	25.6		
																		600	8.3	27.3		
																		650	8.8	28.9		
																		700	9.3	30.4		
																		750	9.6	31.5		
																		800	9.8	32.1		
																		862	10.0	32.8		
																		870	10.1	33.1		
																		900	10.2	33.5		
																		950	10.3	33.8		
																		1000	10.5	34.4		
																		1500	13.0	42.6		
																		2250	16.0	52.5		
																		3000	18.5	60.7		

BC = Bare Copper • DCR = DC Resistance • HDPE = High-density Polyethylene • TC = Tinned Copper

See Connector Reference Guide at www.belden.com for connector recommendations.

Compatible
White Sands Connectors

Description	F Crimp (Cisco)	MCX	F Compression (Non Cisco)
Connector	ASFP	MCXFP	ASFP/SLC
Crimper	ACT-270	C47-10120	CT-21R
Stripper	CPT-7538	CPT-7538-125	CPT-7538-125
Header Block	—	MCXHEADERBK	—
MCX Removal Tool	—	REMT00L	—

Color Code Chart:
YR46941, YR46942 and YR46943

Cond.	Color	Cond.	Color
1	Red	6	Brown
2	Green	7	Orange
3	Blue	8	Gray
4	White	9	Violet
5	Yellow	10	Black

SDI Cable

Belden SDI cables are the Broadcast industry's standard. They are made with either solid copper conductors or highly stranded and compacted bare copper conductors with either highly crush resistant gas injected foam polyethylene or foam FEP insulations. Shields are either 100% coverage foil (Duofoil®) or 95% coverage tinned copper braid. Belden leads the industry with 3 GHz sweep testing, but is now testing to 4.5 GHz. All cables meet SMPTE 292M for HDTV transmissions, SMPTE 34M for widescreens and ITU-R-BT.601 for PAL transmission standards in the international community. These cables are available in both low temp and high temp jackets.

RG-59/U Type and Double Braided RG-59/U Type Coax

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation	
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.

20 AWG Solid .032" Bare Copper • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Available in 10 colors)

SDI/HDTV	1505A	NEC:	500 [▲]	152.4	17.0	8.0	20 AWG	.145	3.68	Duofoil	.233	5.92	75	83%	16.3	53.5	1	.3	1.0
Digital Video		CMR	1000 ^{▲▲}	304.8	35.0	16.4	(solid)			+ 95%							3.6	.6	2.0
75°C		CEC:	5000 ^{▲▲▲}	1524.0	165.0	74.8	.032"			TC Braid							5	.6	2.1
		CMG FT4					BC			3.8Ω/M'							7	.7	2.4
							10.0Ω/M'			12.5Ω/km							10	.9	3.0
							32.8Ω/km										67.5	2.1	6.7
																	71.5	2.1	6.9
																	88.5	2.2	7.2
																	100	2.3	7.6
																	135	2.7	8.9
																	143	2.8	9.2
																	180	3.1	10.2
																	270	3.8	12.5
																	360	4.4	14.4
																	540	5.5	18.0
																	720	6.4	21.0
																	750	6.5	21.3
																	1000	7.6	24.9
																	1500	9.3	30.5
																	2000	10.9	35.8
																	2250	11.6	38.1
																	3000	13.4	44.0
																	4500	16.4	53.8

▲ 500 ft. put-up available in Black, Red or Blue only.

▲▲ 5000 ft. put-up may vary -0% to 10%.

▲▲▲ 1000 ft. and 5000 ft. put-ups available in all ten colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray or White.

22 AWG Stranded (7x29) .031" Bare Compacted Copper Conductor[†] • TC Double Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Matte Black, Red, Green, Blue, Yellow, White, Purple or Orange)

High-Flex	1505F	NEC:	1000	304.8	45.0	20.4	22 AWG	.145	3.68	TC Double	.242	6.15	75	80%	17.0	55.8	1	.2	.7
SDI/HDTV		CM					(7x29)			Braid							3.6	.5	1.6
Video Patch		CEC:					.031"			94% Shield							5	.6	2.0
75°C		CM					BCC			Coverage							7	.7	2.4
							12.2Ω/M'			2.4Ω/M'							10	.9	3.0
							40.0Ω/km			7.8Ω/km							67.5	2.4	7.9
																	71.5	2.5	8.2
																	88.5	2.8	9.2
																	100	3.0	9.8
																	135	3.5	11.5
																	143	3.6	11.8
																	180	4.1	13.5
																	270	5.1	16.7
																	360	6.0	19.7
																	540	7.4	24.3
																	720	8.7	28.5
																	750	8.9	29.2
																	1000	10.5	34.5
																	1500	13.3	43.6
																	2000	15.7	51.5
																	2250	16.9	55.4
																	3000	20.3	66.6

[†]Compacted conductor combines impedance uniformity of solid conductors and "nick-resistance" of stranded conductor.

BC = Bare Copper • BCC = Bare Compacted Copper • DCR = DC Resistance • HDPE = High-density Polyethylene • TC = Tinned Copper

Suitable for Outdoor and Direct Burial applications.



SDI Cable (continued)

RG-59/U Type and Double Braided RG-59/U Type Coax

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m

20 AWG Solid .032" Bare Copper Conductor • Duofoil (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Plenum • Foam FEP Insulation • Flamarrest® Jacket (Available in 10 colors)																			
SDI/HDTV Digital Video 75°C	1506A	NEC: CMP CEC: CMP FT6	500 [▲] 1000 ^{▲▲}	152.4 304.8	16.0 31.0	7.3 14.1	20 AWG (solid) .032" BC 10.0Ω/M' 32.8Ω/km	.133	3.38	Duofoil + 95% TC Braid 3.2Ω/M' 10.5Ω/km	.196	4.93	75	84%	16.1	52.8	1 3.6 10 71.5 135 270 360 540 720 750 1000 1500 2250 3000	.3 .6 1.1 2.3 3.2 4.6 5.3 6.4 7.3 7.5 9.4 12.8 17.5 21.9	1.0 2.0 3.4 7.4 10.5 14.9 17.2 21.0 24.0 24.6 30.8 42.0 57.4 71.8
															100% Sweep tested. 5 MHz to 3 GHz.				

▲ 500 ft. put-up available in Black or Natural only.

▲▲ 1000 ft. put-up available in all ten colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray or Natural.

RG-6/U Type Coax

18 AWG Solid .040" Bare Copper Conductor • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Gas-injected Foam HDPE Insulation • PVC Jacket (Available in 10 colors)																			
SDI/HDTV Digital Video 75°C	1694A	NEC: CMR CEC: CMG FT4	500 [▲] 1000 ^{▲▲} 4500 ^{▲▲▲}	152.4 304.8 1371.6	22.5 45.0 202.5	10.2 20.5 91.9	18 AWG (solid) .040" BC 6.4Ω/M' 21.0Ω/km	.180	4.57	Duofoil + 95% TC Braid 2.8Ω/M' 9.2Ω/km	.274	6.96	75	82%	16.2	53.2	1 3.6 10 71.5 135 270 360 540 720 750 1000 1500 2250 3000 4500	.2 .5 .7 1.6 2.1 3.0 3.4 4.3 4.9 5.0 5.9 7.3 9.1 10.7 13.3	.8 1.5 2.4 5.3 6.9 9.7 11.3 13.9 16.1 16.4 19.3 24.0 30.0 35.0 43.6
															100% Sweep tested. 5 MHz to 3 GHz.				

▲ 500 ft. put-up available in Black only

▲▲ 1000 ft. put-up available in Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray or White.

▲▲▲ 4500 ft. put-up available in Brown, Red, Blue, Violet, Gray, Black and Green.

BC = Bare Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • HDPE = High-density Polyethylene • TC = Tinned Copper

† Compacted conductor combines impedance uniformity of solid conductor and "nick-resistance" of stranded conductor.

SDI Cable (continued)

RG-6/U Type Coax

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m
19 AWG Stranded (7x27) .040" Bare Compacted Copper† • Double Tinned Copper Braid Shield																			
Gas-injected Foam HDPE Insulation • PVC Jacket (Matte Black, Red, Green, Blue, Yellow, White or Violet)																			
High Flex SD1/HDTV Video Patch 75°C	1694F	NEC: CMR CEC: CMG FT4	1000	304.8	54.0	24.7	19 AWG (7X27) .040" BC 8.5Ω/M' 27.9Ω/km	0.18	4.57	Double 93% TC Braid 99% Total Coverage 1.7Ω.M' 5.6Ω/km	.274	7.00	75	81%	16.2	53.2	1	2	.7
																	3.6	.5	1.6
																	10	.7	2.3
																	71.5	2.0	6.6
																	135	2.8	9.2
																	270	4.0	13.1
																	360	4.7	15.4
																	540	5.9	19.4
																	720	6.9	22.6
																	750	7.0	23.0
																	1000	8.2	26.9
																	1500	10.4	34.1
																	2250	13.2	43.3
																	3000	15.6	51.2
																	4500	19.8	64.9

BC = Bare Copper • DCR = DC Resistance • HDPE = High-density Polyethylene • TC = Tinned Copper

†Compacted conductor combines impedance uniformity of solid conductor and "nick-resistance" of stranded conductor.





VoIP Cable

Belden Data cables, the highest quality products in the industry, are ideal for equipment interconnects such as Voice Over Internet Protocols (VoIP). They are available in both Bonded-pair and Nonbonded-pair versions, Category 3 to Category 6 – plenum or non-plenum.

Enhanced Category 5e Bonded-pair UTP Cable

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nominal OD		Max. DCR (Ω / 100m)	Max. DCR Unbal. (%)	Max. Cap. Unbal. (pF/ 100m)	Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)
				Ft.	m	Lbs.	kg	Inch	mm										

24 AWG Bonded-Pairs • Solid Bare Copper Conductors • Rip Cord • See Color Code Chart (below)

Non-Plenum • Polyolefin Insulation • PVC Jacket (Red, Orange, White, Black, Yellow, Green, Blue, Purple, Light Gray or Gray)

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nominal OD		Max. DCR (Ω / 100m)	Max. DCR Unbal. (%)	Max. Cap. Unbal. (pF/ 100m)	Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)		
				Ft.	m	Lbs.	kg	Inch	mm												
	1700A	NEC: CM CEC: CM	4	U-1000	U-304.8	22.0	10.0	.204	5.08	9.0	3.0	66.0	1	2.0	65.3	63.3	60.8	100±12	20.0		
				1000 [▲]	304.8	22.0	10.0								4	4.0	56.3	52.3	48.8	100±12	23.0
				1640 ^{▲▲}	500.0	36.1	16.4								8	5.7	51.8	46.1	42.7	100±12	24.5
				3000 ^{▲▲▲}	914.4	63.0	28.6								10	6.4	50.3	43.9	40.8	100±12	25.0
				3280 ^{▲▲▲▲}	1000.0	72.2	32.8								16	8.1	47.3	39.1	36.7	100±12	25.0
																25	10.3	44.3	34.1	32.8	100±15
												31.25	11.6	42.9	31.3	30.9	100±15	23.6			
												62.5	16.8	38.4	21.6	24.9	100±15	21.5			
												100	21.7	35.3	17.1	20.8	100±15	20.1			
												155	27.7	32.5	4.7	16.9	100±18	19.0			
												200	32.0	30.8	3.0	14.7	100±18	19.0			
												250	36.4	29.3	—	12.8	100±20	18.0			
												350	44.3	27.2	—	9.9	100±22	17.0			

▲ 1000 ft. put-up not available in Gray.

▲▲ 1640 ft. available in Lt. Gray or Blue only.

▲▲▲ 3000 ft. put-up available in Red, Blue, White or Lt. Gray only.

▲▲▲▲ 3280 ft. available in Lt. Gray only.

Jacket sequentially marked at 2 ft. intervals. • U.S. Patents 5,606,151 and 5,734,126

Third party verified to TIA/EIA-568-B.2, Category 5e

Banana Peel® Composite Bonded-pair Category 5e UTP Cable

24 AWG Bonded-pairs • Solid Bare Copper Conductors • Spline • See Color Code Chart (below)

Non-Plenum • Polyolefin Insulation • PVC Jacket (Red, Orange, White, Black, Yellow, Green, Blue, Purple, Light Gray or Gray)

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nominal OD		Max. DCR (Ω / 100m)	Max. DCR Unbal. (%)	Max. Cap. Unbal. (pF/ 100m)	Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)		
				Ft.	m	Lbs.	kg	Inch	mm												
	1700S4	NEC: CMR CEC: CMG FT4	16	U-1000	U-304.8	22.0	10.0	.204	5.18	9.0	3.0	66.0	1	2.0	65.3	63.3	60.8	100±12	20.0		
				1000 [▲]	304.8	22.0	10.0								4	4.0	56.3	52.3	48.8	100±12	23.0
				1640 ^{▲▲}	500.0	36.1	16.4	.492	12.50						8	5.7	51.8	46.1	42.7	100±12	24.5
				3000 ^{▲▲▲}	914.4	63.0	28.6								10	6.4	50.3	43.9	40.8	100±12	25.0
				3280 ^{▲▲▲▲}	1000.0	72.2	32.8								16	8.1	47.3	39.1	36.7	100±12	25.0
																25	10.3	44.3	34.1	32.8	100±15
												31.25	11.6	42.9	31.3	30.9	100±15	23.6			
												62.5	16.8	38.4	21.6	24.9	100±15	21.5			
												100	21.7	35.3	17.1	20.8	100±15	20.1			
												155	27.7	32.5	4.7	16.9	100±18	19.0			
												200	32.0	30.8	3.0	14.7	100±18	19.0			
												250	36.4	29.3	—	12.8	100±20	18.0			
												350	44.3	27.2	—	9.9	100±22	17.0			

▲ 1000 ft. put-up not available in Gray.

▲▲ 1640 ft. available in Lt. Gray or Blue only.

▲▲▲ 3000 ft. put-up available in Red, Blue, White or Lt. Gray only.

▲▲▲▲ 3280 ft. available in Lt. Gray only.

U.S. Patents 5,606,151; 5,734,126; 7,049, 523

Third party verified to ANSI/TIA/EIA 568-B.2-1, Category 5e

24 AWG Bonded-pairs • Solid Bare Copper Conductors • Spline Filler • Ripcord • See Color Code Chart (below)

Non-Plenum • Polyolefin Insulation • PVC Inner Jacket (Available in Light Blue or Gray) • No Overall Jacket

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nominal OD		Max. DCR (Ω / 100m)	Max. DCR Unbal. (%)	Max. Cap. Unbal. (pF/ 100m)	Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)			
				Ft.	m	Lbs.	kg	Inch	mm													
	1700S6	NEC: CMR CEC: CMG FT4	24	500	152.4	77.5	35.19	.204	5.18	9.0	3.0	66.0	1	2.0	65.3	63.3	60.8	100±12	20.0			
				1000	304.8	149.0	67.65								4	4.0	56.3	52.3	48.8	100±12	23.0	
																8	5.7	51.8	46.1	42.7	100±12	24.5
																10	6.4	50.3	43.9	40.8	100±12	25.0
																16	8.1	47.3	39.1	36.7	100±12	25.0
																25	10.3	44.3	34.1	32.8	100±15	24.3
												31.25	11.6	42.9	31.3	30.9	100±15	23.6				
												62.5	16.8	38.4	21.6	24.9	100±15	21.5				
												100	21.7	35.3	17.1	20.8	100±15	20.1				
												155	27.7	32.5	4.7	16.9	100±18	19.0				
												200	32.0	30.8	3.0	14.7	100±18	19.0				
												250	36.4	29.3	—	12.8	100±20	18.0				
												350	44.3	27.2	—	9.9	100±22	17.0				

U.S. Patents 5,606,151; 5,734,126; 7,049, 523

Third party verified to ANSI/TIA/EIA 568-B.2-1, Category 5e

ACR = Attenuation Crosstalk Ratio • DCR = DC Resistance • ELFEXT = Equal Level Far-end Crosstalk
• NEXT = Near-end Crosstalk • PSUM = PowerSum • RL = Return Loss • UTP = Unshielded Twisted Pair(s)

Color Codes: Composite UTP

Pair No.	Color Combination
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

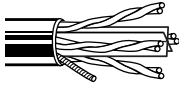

VoIP Cable (continued)

Enhanced Category 6 Bonded-pair UTP Cable

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nominal OD		Max. DCR (Ω/ 100m)	Max. DCR Unbal. (%)	Max. Cap. Unbal. (pF/ 100m)	Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)
				Ft.	m	Lbs.	kg	Inch	mm										

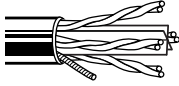

23 AWG Bonded-Pairs Solid Bare Copper Conductors • Patented E-Spline Center Member • Rip Cord • See Color Code Chart (below)

Non-Plenum • Polyolefin Insulation • PVC Jacket (Available in Red, Orange, Yellow, Green, Blue, Black, White or Gray)

	7851A  NEC: CMR CEC: CMR FT4	4	1000	304.8	38.0	17.2	.227	5.77	8.2	3.0	65.6	1	1.9	80.3	78.5	70.8	100±12	20.0		
			A-1000	A-304.8	47.0	21.3	x	x					10	5.7	65.3	59.6	50.8	100±12	25.0	
									.315	8.00				31.25	10.2	57.9	47.7	40.9	100±15	25.0
														62.5	14.7	53.4	38.7	34.9	100±15	25.0
														100	18.9	50.3	31.4	30.8	100±15	25.0
														155	23.9	47.5	23.5	27.0	100±15	22.8
														200	27.5	45.8	18.3	24.8	100±15	21.7
														250	31.2	44.3	13.2	22.8	100±20	20.5
														350	37.7	40.2	4.5	19.9	100±22	19.8
														400	40.6	39.3	0.6	18.8	100±22	19.5
											500	46.2	37.8	>0*	16.8	100±22	18.4			
											550	48.8	37.2	—	16.0	100±22	18.0			
											600	51.4	36.6	—	15.2	100±22	17.6			

Jacket sequentially marked at 2 ft. intervals.
 U.S. Patents 5,606,151; 5,734,126; 5,789,711 and 6,297,454-B1
 Third party verified to TIA/EIA-568-B.2-1, Category 6

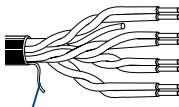

Plenum • FEP Teflon Insulation • Flamarrest® Jacket (Available in Red, Orange, Yellow, Green, Blue, Black, White or Gray)

	7852A  NEC: CMP CEC: CMP FT6	4	1000	304.8	40.0	18.1	.218	5.54	8.2	3.0	65.6	1	1.9	80.3	78.5	70.8	100±12	20.0		
			A-1000	A-304.8	49.0	22.2	x	x					10	5.7	65.3	59.6	50.8	100±12	25.0	
									.290	7.37				31.25	10.2	57.9	47.7	40.9	100±15	25.0
														62.5	14.7	53.4	38.7	34.9	100±15	25.0
														100	18.9	50.3	31.4	30.8	100±15	25.0
														155	23.9	47.5	23.5	27.0	100±15	22.8
														200	27.5	45.8	18.3	24.8	100±15	21.7
														250	31.2	44.3	13.2	22.8	100±20	20.5
														350	37.7	40.2	4.5	19.9	100±22	19.8
														400	40.6	39.3	0.6	18.8	100±22	19.5
											500	46.2	37.8	>0*	16.8	100±22	18.4			
											550	48.8	37.2	—	16.0	100±22	18.0			
											600	51.4	36.6	—	15.2	100±22	17.6			

^A-1000 ft. put-up not available in Red.
 U.S. Patents 5,606,151; 5,734,126; 5,789,711 and 6,297,454-B1
 Third party verified to TIA/EIA-568-B.2-1, Category 6 • Jacket sequentially marked at 2 ft. intervals.

Category 6 Nonbonded-pair UTP Cable

Plenum • FEP Teflon Insulation • Flamarrest® Jacket (Available in Red, Orange, Yellow, Green, Blue, Purple, Gray, Natural or Black)

	7882A  NEC: CMP CEC: CMP FT6	4	1000	304.8	29.0	13.2	.224	5.69	8.2	3.0	108.2	1	2.0	72.3	70.3	64.8	100±15	20.0		
			A-1000	A-304.8	32.0	14.5							10	6.0	57.3	51.3	44.8	100±15	25.0	
														20	8.5	52.8	44.3	38.7	100±15	25.0
														31.25	10.7	49.9	39.2	34.9	100±15	23.6
														62.5	15.4	45.4	30.0	28.8	100±15	21.5
														100	19.8	42.3	22.5	24.8	100±15	20.1
														200	29.0	37.8	8.8	18.7	100±22	18.0
											250	32.8	36.3	3.5	16.8	100±32	17.3			

Jacket sequentially marked at 2 ft. intervals.
 Third party verified to TIA/EIA-568-B.2-1, Category 6

ACR = Attenuation Crosstalk Ratio • DCR = DC Resistance • ELFEXT = Equal Level Far-end Crosstalk • FEP = Fluorinated Ethylene-propylene • NEXT = Near-end Crosstalk
 PSUM = PowerSum • RL = Return Loss • UTP = Unshielded Twisted Pair(s)

*PSUM ACR>0 is guaranteed to 460 MHz.

Color Codes: Composite UTP

Pair No.	Color Combination
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown



VoIP Cable (continued)

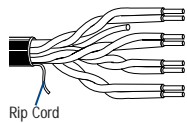
Bundled Category 6 Nonbonded-pair UTP Cable

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nominal OD		Max. DCR (Ω / 100m)	Max. DCR Unbal. (%)	Max. Cap. Unbal. (pF/ 100m)	Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)
				Ft.	m	Lbs.	kg	Inch	mm										

23 AWG Solid Bare Copper Conductors • Twisted Pairs • Central Rod Filler • Rip Cord • See Color Code Chart (below)

Non-Plenum • Polyolefin Insulation • PVC Jacket (Available in Red, Orange, Yellow, Green, Blue, Purple, Gray, White or Black)

Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nominal OD		Max. DCR (Ω / 100m)	Max. DCR Unbal. (%)	Max. Cap. Unbal. (pF/ 100m)	Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)
			Ft.	m	Lbs.	kg	Inch	mm										
7881A	NEC:	4	1000	304.8	30.0	13.6	.241	6.12	8.2	3.0	108.2	1	2.0	72.3	70.3	64.8	100±15	20.0
	CMR		A-1000	A-304.8	33.0	15.0	10	6.0					57.3	51.3	44.8	100±15	25.0	
	CEC:		20	8.5	52.8	44.3	38.8	100±15					25.0					
	CMR		31.25	10.7	49.9	39.2	34.9	100±15					23.6					
	62.5		15.4	45.4	30.0	28.9	100±15	21.5										
	100		19.8	42.3	22.5	24.8	100±15	20.1										
200	29.0	37.8	8.8	18.8	100±22	18.0												
250	32.8	36.3	3.5	16.8	100±32	17.3												



Jacket sequentially marked at 2 ft. intervals.
Features Descending Length Marking.
Third party verified to TIA/EIA-568-B.2-1, Category 6

ACR = Attenuation Crosstalk Ratio • DCR = DC Resistance • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss •
UTP = Unshielded Twisted Pair(s)

Color Codes: UTP Cable

Pair No.	Color Combination
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

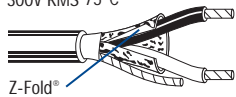

Digital and Analog Audio Cable

Single- and Double-Pair Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Insulation Thickness		Jacket Thickness		Nominal OD		Nominal Capacitance			
					Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm	* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m

22 AWG Stranded (7x30) TC Conductors • Twisted Pair • Overall Beldfoil Shield (100% Coverage) • 22 AWG Stranded TC Drain Wire



Polypropylene Insulation • Paper Wrap • Gray or Black PVC Jacket

 <p>300V RMS 75°C</p> <p>Z-Fold®</p>	 <p>8451</p>	NEC: CMR CEC: CMG FT4	1	Black, Red	100 [▲]	30.5	2.3	1.1	.008	.20	.020	.51	.138	3.51	34	111	67	220			
		U-500			U-152.4	8.5	3.9														
		500			152.4	8.0	3.6														
		U-1000			U-304.8	16.0	7.2														
					1000	304.8	16.0	7.2													

Analog Audio Cable

▲100 ft. put-up available in Black only.
Unique paper separator facilitates jacket stripping.

Polypropylene Insulation • PVC Jacket (Available in Brown, Red, Orange, Yellow, Green, Blue, Purple, Gray, White or Black)

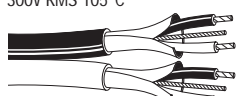

 <p>300V RMS 75°C</p>	 <p>9451</p>	NEC: CMR CEC: CMG FT4	1	Black, Red	U-500 [▲]	U-152.4	8.0	3.6	.008	.20	.020	.51	.135	3.43	34	111	67	220			
		500 [▲]			152.4	8.0	3.6														
		T-1000 [▲]			T-304.8	18.0	8.2														
		U-1000			U-304.8	16.0	7.3														
					5000	1524.0	70.0	31.8													

Analog Audio Cable

▲U-500 ft., 500 ft. and T-1000 ft. put-ups available in Gray only.
The jacket and shield are bonded so both can be removed on automatic stripping equipment. Drain wire is inside foil shield.

22 AWG Stranded (7x30) TC Conductors • Dual Twisted Pairs • Overall Beldfoil Shield (100% Coverage) • 22 AWG Stranded TC Drain Wire



Polyolefin Insulation • PVC Jacket in Zip-Cord Construction (Red & Green, Red & Gray, Red & Black or Red & Purple)

 <p>300V RMS 105°C</p>	 <p>9451D</p>	NEC: CMR CEC: CMG FT4	2	Black, Red	U-1000	U-304.8	29.0	13.2	.008	.20	.020	.51	.135	3.43	34	111	67	220			
		2000 [▲]			620.8	62.0	28.1									x	x				
																	.270	6.86			

Analog Audio Cable

▲2000 ft. put-up available in Red & Green only.
The jacket and shield are bonded so both can be removed on automatic stripping equipment. Drain wire is inside foil shield.

Plenum • FEP Insulation • White Flamarrest® Jacket in Zip-Cord Construction

 <p>300V RMS 60°C</p>	 <p>9451DP new</p>	NEC: CMP CEC: CMP FT6	2	Black & Red, Black & White	1000	304.8	26.0	11.8	.007	.18	.017	.43	.127	3.23	35	115	67	220			
																x	x				
																	.269	6.83			



Analog Audio Cable

The jacket and shield are bonded so both can be removed on automatic stripping equipment. Drain wire is inside foil shield.

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Nom. DCR		Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nom. Capacitance			
					Ft.	m	Lbs.	kg	Cond.	Shield	Inch	mm			* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m

24 AWG Stranded (7x32) TC Conductors • Dual Twisted Pairs • Overall Beldfoil Shield (100% Coverage) • 24 AWG Drain Wire

Datalene® Insulation • Gray or Purple PVC Jacket



 <p>60°C</p>	 <p>1800B</p>	NEC: CMG CEC: CMG FT4	1	Black, Red	500 [▲]	152.4	8.0	3.6	23.7Ω/M'	18.9Ω/M'	.177	4.57	110	76%	12	39	26	85			
		U-1000			U-304.8	17.0	7.7	77.7Ω/km	62.0Ω/km												
		1000			304.8	16.0	7.3														
		5000 [▲]			1524.0	90.0	40.8														

Digital Audio Cable

▲500 ft. put-up available in Gray only. 5000 ft. put-up available in Purple only.
The jacket and shield are bonded so both can be removed with automatic stripping equipment.

24 AWG Stranded (7x32) TC Conductors • Dual Twisted Pairs • Individual Pairs Shielded with Beldfoil Shield (100% Coverage) • 24 AWG Drain Wire

Datalene Insulation • Purple PVC Jacket in Zip-Cord Construction

 <p>60°C</p>	 <p>1802B</p>	NEC: CMG CEC: CMG FT4	2	Black, Red	500	152.4	16.5	7.5	23.7Ω/M'	18.9Ω/M'	.180	4.57	110	76%	12	39	26	85			
		U-1000			U-304.8	35.0	15.9	77.7Ω/km	62.0Ω/km												
		1000			304.8	37.0	16.8														

Digital Audio Cable

The jacket and shield are bonded so both can be removed with automatic stripping equipment.

DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene • TC = Tinned Copper


* Capacitance between conductors.


** Capacitance between one conductor and the other conductors connected to shield.




DS-3 and DS-4 Interconnect and Cross-connect Coax Cable

The cables depicted below are representative of an extensive range of Digital Sign DS-3 and DS-4 cables offered by Belden. These cables are offered with 26 AWG solid silver-plated copper conductors or 20 AWG solid bare copper conductors and include either Beldfoil® and tinned copper braid shields or tinned copper/bare copper double braid shields. Insulations are foam HDPE, foam FEP or gas-injected FHDPE; jackets are either PVC or Flammarrest®. Some Siamese, bundled and messengered versions also are available, as well as custom designs. Consult Belden's eCatalog at www.belden.com or contact your local sales representative for more information.

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. of Prop. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation																																										
				Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	Stand. Signal (Mb/s)	MHz	dB/ 100 Ft.	dB/ 100m																																							
26 AWG Solid .016" (.40mm) Silver-plated Copper Conductor(s) • Beldfoil® + Tinned Copper Braid Shield (93% Coverage)																																																												
Foam HDPE Insulation • Overall Gray PVC Jacket (Multiple coaxes feature inner Gray PVC jackets w/printed nos. for circuit ID)																																																												
	735A1*	NEC:	1	500	152.4	6.5	2.9	26 AWG (solid) .016" SPC 41.0Ω/M' 134.5Ω/km	.077	1.96	Beldfoil + 93% TC Braid 5.3Ω/M' 17.4Ω/km	.129	3.28	75	76%	17.7	58.1	2	1.0	.6	2.0																																							
		CEC:		1000	304.8	12.0	5.5											CEPT-1	1.0	.6	2.0	CEPT-2	4.2	1.1	3.6	10	5.0	1.2	3.9	20	10.0	1.7	5.6	CEPT-3	17.2	2.2	7.2	DS-3	22.4	2.5	8.2	STS-1	25.9	2.7	8.9	89.472	44.7	3.6	11.8	100	50.0	3.8	12.5	CEPT-4	69.6	4.5	14.8	STS-3	77.8	4.8

20 AWG Solid .032" (.81mm) Silver-plated Copper Conductor(s) • Beldfoil® (100% Coverage) + Tinned Copper Braid Shield (85% Coverage)																																																												
Gas-injected FHDPE Insulation • Gray PVC Jacket																																																												
	734D1*	NEC:	1	500	152.4	16.0	7.3	20 AWG (solid) .032" SPC 10.0Ω/M' 32.8Ω/km	.148	3.76	Beldfoil + 85% TC Braid 2.4Ω/M' 7.9Ω/km	.235	5.97	75	80%	16.8	55.1	2	1.0	.3	1.0																																							
		CEC:		1000	304.8	36.0	16.3											CEPT-1	1.0	.3	1.0	CEPT-2	4.2	.5	1.6	10	5.0	.6	2.0	20	10.0	.8	2.6	CEPT-3	17.2	1.0	3.3	DS-3	22.4	1.1	3.6	STS-1	25.9	1.2	3.9	89.472	44.7	1.6	5.3	100	50.0	1.7	5.6	CEPT-4	69.6	2.0	6.6	STS-3	77.8	2.1

20 AWG Solid .032" (.81mm) Bare Copper Conductor(s) • Beldfoil® (100% Coverage) + Tinned Copper Braid Shield (85% Coverage)																																																												
Gas-injected FHDPE Insulation • Gray PVC Jacket																																																												
	734A1*	NEC:	1	500	152.4	16.0	7.3	20 AWG (solid) .032" BC 10.0Ω/M' 32.8Ω/km	.148	3.76	Beldfoil + 85% TC Braid 2.4Ω/M' 7.9Ω/km	.235	5.97	75	80%	16.8	55.1	2	1.0	.3	1.0																																							
		CEC:		1000	304.8	35.0	15.9											CEPT-1	1.0	.3	1.0	CEPT-2	4.2	.5	1.6	10	5.0	.6	2.0	20	10.0	.8	2.6	CEPT-3	17.2	1.0	3.3	DS-3	22.4	1.1	3.6	STS-1	25.9	1.2	3.9	89.472	44.7	1.6	5.3	100	50.0	1.7	5.6	CEPT-4	69.6	2.0	6.5	STS-3	77.8	2.1

BC = Bare Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • FHDPE = Foam High-density Polyethylene • HDPE = High-density Polyethylene • TC = Tinned Copper
See chart on page 6.58 for maximum transmission distances.

*Lucent Technologies reference specification. Belden equivalent. Minimum return loss @ 55 MHz to 95 MHz = -35 dB

Optical Fiber Cable

Tight Buffer — Riser & Plenum Rated

Applications

- Patch panels
- Workstation equipment connections
- Horizontal distribution in open office environments

Product Description

Interconnect Cables are designed for low fiber-count premises environments. They are small and very flexible, making them ideal for confined spaces. Their aesthetic appearance makes these cables suitable for use in open office environments. Available in 1 or 2 fibers. One sub-unit is marked to permit easy identification of transmit and receive fibers. Length markings to facilitate installation.

Jacket Material	PVC
Tight Buffer	PVC
Strength Member	Aramid Yarn
Color Code (Tight Buffer)	Per EIA/TIA 598-A, see page 10.2
Jacket Color	
Single-mode	Yellow
62.5/125 μm	Orange
50/125 μm / 1 Gbe	Orange
50/125 μm / 10 Gbe	Aqua

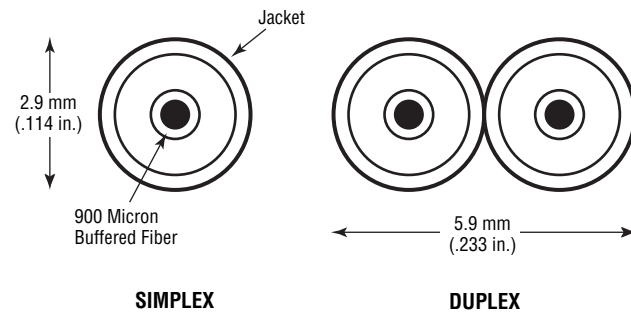
Ratings

Riser	
UL Type	OFNR
cUL Type	OFN FT4
Flame Resistance	UL 1666
Plenum	
UL Type	OFNP
cUL Type	OFN FT6
Flame Resistance	NFPA 262

Specifications

Temperature Range	
Storage	-40 to +70°C
Operating	-20 to +70°C
Crush Resistance (EIA-455-41)	200 N/cm
Impact Resistance (EIA-455-25)	20 Impacts @ 1.0 N-m
Cyclic Flexing (EIA-455-104)	2000 cycles, min.
Min. Bend Radius	
Installation	15 x OD
Long Term	10 x OD
Optical Specifications	See page 10.2

Fiber Bundle Detail



No. of Fibers	Belden Part Number				Outside Diameter		Weight		Max. Install Load	
	62.5 / 125μm Std. / 1 Gbe	50 / 125μm Std. / 1 Gbe	50 / 125μm 10 Gbe – 300M	Single-mode Enhanced	Inch	mm	Lbs./1000'	kg/km	Lbs.	N

Interconnect Cable Series

Riser (NEC/CEC OFNR/OFN FT4)										
1	M97112	M9A001	M9C001	M9W001	0.114	2.9	6	9	90	400
2	M96915	M9A002	M9C002	M9W002	0.11 x 0.23	2.9 x 5.9	12	18	180	801
Plenum (NEC/CEC OFNP/OFN FT6)										
1	M98086	M9A003	M9C003	M9W003	0.114	2.9	6	9	90	400
2	M96919	M9A004	M9C004	M9W004	0.11 x 0.23	2.9 x 5.9	13	19	180	801

All optical fiber products can be supplied in compliance with RoHS regulations. Please contact Customer Service for more details.



Technical Information

Data Rate:		143 Mb/s		177 Mb/s		270 Mb/s		360 Mb/s		540 Mb/s		1.5 Gb/s	
Spec:		SMPTE 259M		ITU-R BT. 601		SMPTE 259M		SMPTE 259M		SMPTE 344M*		SMPTE 252M	
Application:		Composite NTSC		Composite PAL		Component Video		Component Widescreen		Component Widescreen		HDTV	
Part No.	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	
1505A	1430	436	1320	402	1100	338	960	293	790	241	300	91	
1505F	1200	366	1071	326	857	261	732	223	588	179	225	69	
1506A	1360	415	1200	366	940	286	810	247	670	204	270	82	
1694A	1760	536	1620	494	1360	415	1180	360	970	296	370	113	
7855A	2220	677	2000	610	1670	509	1460	445	1210	369	470	143	

*Values proposed at time of printing.

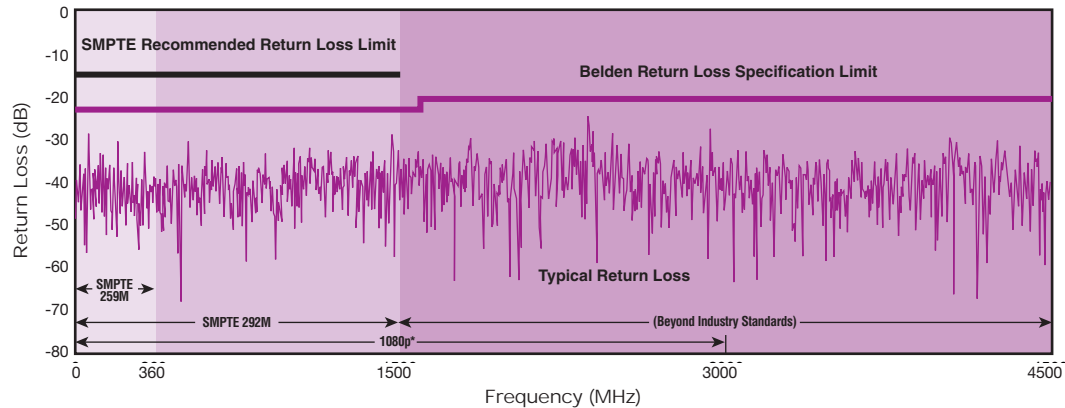
The serial digital interconnect standards are designed to operate where the signal loss at 1/2 the clock frequency does not exceed the approximate loss values listed below. The maximum length values shown are based on typical attenuation values for the cables listed and the following criteria:

Maximum length = 30 dB loss at 1/2 the clock frequency: SMPTE 259M, PAL, Widescreen.

Maximum length = 20 dB loss at 1/2 the clock frequency: SMPTE 292M.

The bit error rate (BER) can vary dramatically as the calculated distances are approached. BER is dependent on receiver design and the losses of the actual coax used. Distribution and routing equipment manufacturers should be contacted to verify their maximum recommended transmission.

Return Loss Headroom (1694A)



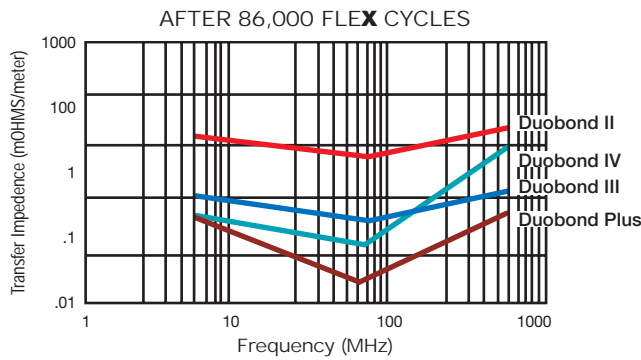
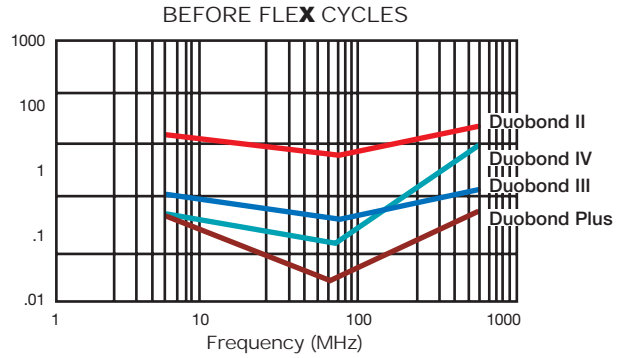
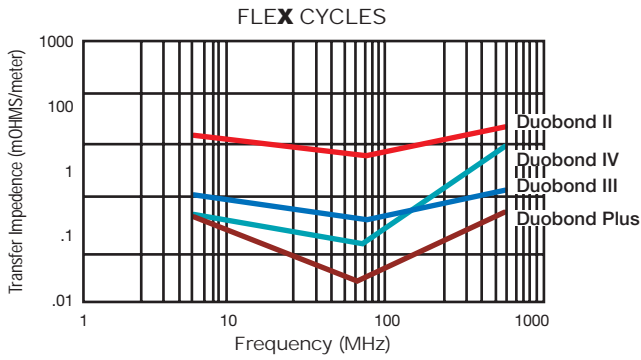
Typical Maximum Cabling Distances

Data Rate:	DS-3 (44.746 Mb/s)		STS-1 (51.86 Mb/s)		DS-4NA (CEPT-4) (139.264 Mb/s)		STS-3 (155.520 Mb/s)		DS-4 (274.176 Mb/s)	
	Interconnect	X-Connect	Interconnect	X-Connect	Interconnect	X-Connect	Interconnect	X-Connect	Interconnect	X-Connect
735A1 Series	225 ft. (68m)	21 ft. (6m)	210 ft. (64m)	20 ft. (6m)	125 ft. (38m)	13 ft. (4m)	120 ft. (37m)	11 ft. (3m)	90 ft. (27m)	8 ft. (2m)
734D1 Series	450 ft. (137m)	43 ft. (13m)	420 ft. (128m)	40 ft. (12m)	250 ft. (76m)	24 ft. (7m)	240 ft. (73m)	22 ft. (6m)	180 ft. (55m)	17 ft. (5m)
734A1 Series	435 ft. (132m)	43 ft. (13m)	410 ft. (125m)	40 ft. (12m)	240 ft. (73m)	24 ft. (7m)	225 ft. (68m)	22 ft. (8m)	170 ft. (52m)	17 ft. (5m)

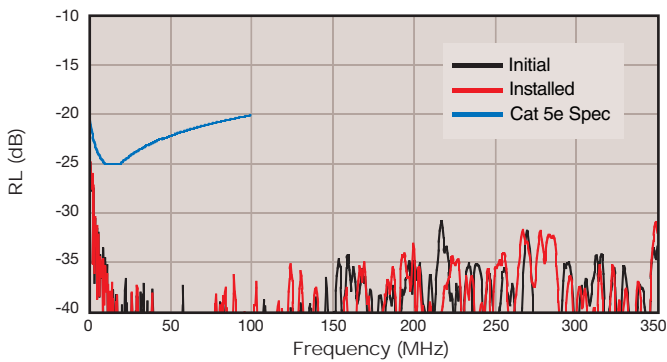
DS = Digital Signal • STS = Synchronous Transmission Signal • CEPT = European Conference of Postal and Telecommunications Administrations

Please note: The signal loss budget for individual installations will affect the exact transmission distance.

Duobond Plus® Shielding – Flex Cycles



Belden Data Cable—Return Loss



Belden Data Cable—Return Loss
(20-100 MHz)

