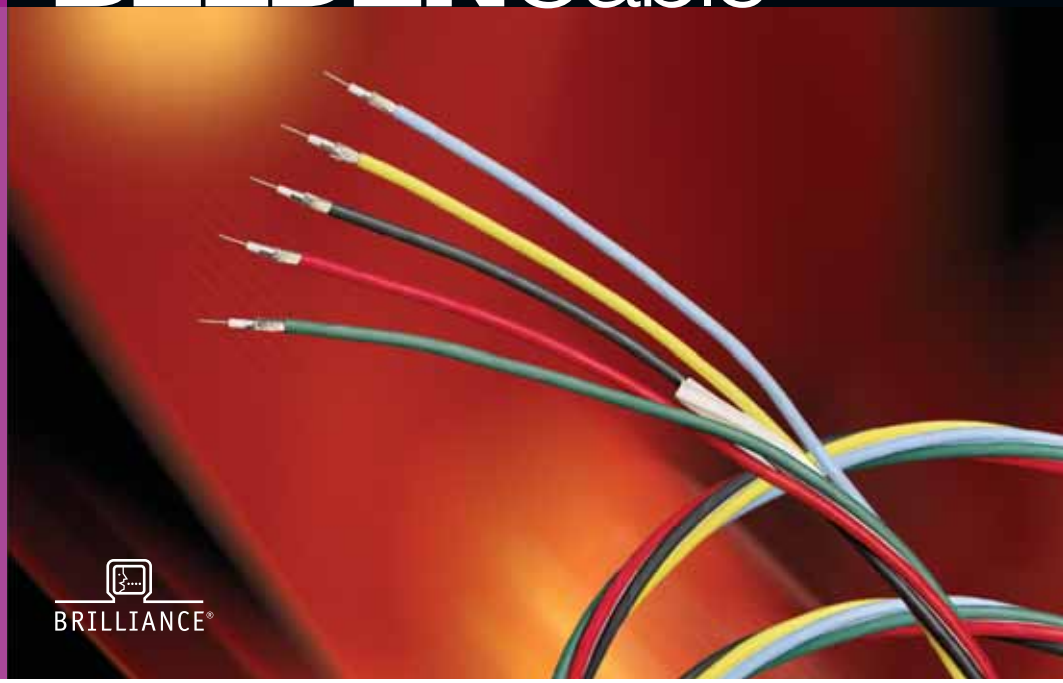
BELDENCable™

By affixing the individual coax cables to a center spline and eliminating the outer jacket, these Brilliance® Banana Peel® component video cables cut installation labor/costs. Precise 75-ohm impedance offers end-users optimized whole-system performance.



NEW PRODUCT BULLETIN

NP 217

Belden Brilliance® Banana Peel® Hi-Res Component Video Cables Provide Optimum Performance and Reduce Installation Time/Labor

The RGB standards were designed to address analog video's ability to capture and transmit complex moving images, loaded with information, utilizing analog-only equipment and frequency-limited cables. Most RGB cables available today are still designed for these outdated standards, formats and frequencies.

Precision analog video cables provide greater signal integrity, delivering a better picture than typical RGB transmissions. Digital video and HDTV run at still higher frequencies and make even better use of component video for still greater picture clarity.

To accommodate the need for higher frequency, longer distance transmissions and the ability to run more demanding applications such as high resolution VGA on large screens, HDTV, Hi-Res CAD, animation, editing and special effects, a true 75 ohm, high-frequency cable with optimum design features is needed. Belden Brilliance Mini Hi-res Component Video cables meet these new high-end requirements. The unique design of these cables also makes them ideal for multiple runs of composite video signals such as SDI or HDTV (video snake cable).

To meet the needs of the installer, these cables are now available in a Banana Peel composite cable configuration.

Banana Peel® Constructions Offer Many Labor Saving and Easy-Identification Features

Banana Peel Hi-Res Composite Video cables will decrease your labor costs because the overall jacket has been eliminated. Without the overall jacket, a whole step in the termination process has been removed, plus the individual cable components are all instantly identifiable (the individual cables are color-coded and the print legends are immediately visible). And, these cables are ready for termination — just peel the individual cables off the center spline and terminate. The elimination of the overall jacket also means that the composite has a smaller diameter, so the cable's overall bend radius is improved and use of a smaller size conduit is possible.

Unprecedented Flexibility And Workability

Bundled coax cables are notoriously stiff, especially when rated for plenum use, and the jackets of traditional CMP-rated, jacketed RGB cables are also notoriously difficult to strip for termination. Banana Peel RGBs overcome both these objections.

Banana Peel® Hi-Res Component Coax bundles hold together without an overall jacket making them markedly more flexible than jacketed versions. And instead of using a fluorocopolymer jacket that makes the individual coaxes difficult to dress, plenum styles 1282 and 1283 have plenum-rated PVC Flamarrest® individual jackets.

Two Sizes Available to Cover Any Distance and Fill Any Need

Banana Peel Hi-Res Component Video Cables are available in two sizes:

25 AWG: *Series 1281 and 1282 Series* bundled cables are comprised of Mini RG-59 coaxes. Series 1281 cables are CMR-rated, Banana Peel versions of Belden's extremely popular 1279R jacketed styles. Series 1282 cables are CMP-rated, Banana Peel versions of 1279P jacketed styles.

Series 1281 and 1282 are enhanced versions of traditional RGB cables and feature 25 AWG solid copper center conductors for lower attenuation and easier termination, flexible PVC jackets and high frequency Beldfoil® foil shields that are used in combination with Belden's unique interlocked serve copper shield for 100% coverage. This unique shielding design also prevents the shields from bunching up when flexed, yet the shield is easier to comb out than a full braid.

Series 1281 and 1282 cables are sweep tested to 850 MHz and their Return Loss levels are fully documented and guaranteed. Depending on the horizontal scan rate, unamplified SVGA signals can be transmitted 150 to 180 feet over 1281 and 1282 Series cables — based on a 6dB loss budget.

Older RGB-style cables are ill suited for today's high frequency analog and digital transmissions. 1279 jacketed styles, and the new 1281 and 1282 styles, are the upgrade you need — especially since they are compatible with older, standard RGB-style connectors and tooling.

20 AWG: *Series 1283* bundled cables are comprised of RG-59 style Plenum-rated Precision Video coaxes. Based on Belden 1506A, these cables feature 20 AWG solid copper center conductors, Beldfoil foil shields in combination with 95% bare copper braid shields, and flexible PVC jackets rated for plenum use. Since these cables are based on 1506A, installers can also use the standard 1506A connectors and tools.

These cables are sweep tested to 3 GHz and their Return Loss levels are fully documented and guaranteed. Depending on the horizontal scan rate, unamplified SVGA signals can be transmitted 330-390 feet — based on a 6dB loss budget.

1283 Series cables replace Belden 1824A and 1826A which were discontinued. The non-plenum alternatives, 7794A-7798A, are only available in jacketed versions at this time.

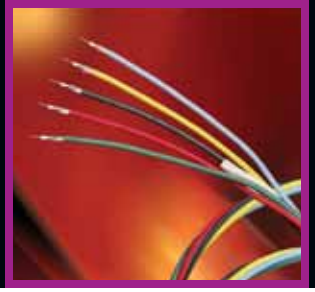
Applications

Brilliance Banana Peel Hi-Res Component Video cables are ideal for high-resolution monitor and projection imaging in the following situations/facilities:

- Corporate boardrooms
- Command and control centers
- Multi-purpose auditoriums
- Teleconferencing centers
- Home theater
- Performance venues
- Post-production facilities
- Houses of worship

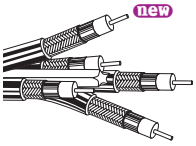
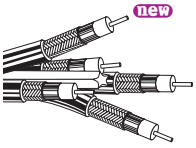
Connector and Tool Availability

Manufacturer	Style	Part No. 1281, 1282 Styles	Part No. 1283 Styles
ADC	BNC	BNC-16	BNC 6
Belden	BNC	1B25A	—
	RCA	1R25A	—
	Stripping Tool	HCST	—
	Compression Tool	HCCT	—
ICM	RCA	FSRCA-1RGB	—
Kings	BNC	2065-25-9	2065-2-9
Trompeter	BNC	105-2053-9	UPL-2000-DB



Mini Hi-Res Component Video Cable

Banana Peel® Unjacketed Coax Bundled
CMR and CMP Rated

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Nominal Core OD Inch	Nominal Core OD mm	Shielding Materials Nom. DCR	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/Ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 Ft.	Nominal Attenuation dB/ 100m
Miniature • 25 AWG Solid .018″ Bare Copper Conductors • Duobond® Foil + Tinned Copper Interlocked Serve Shield (100% Coverage)																				
Foam HDPE Insulation • PVC Jackets in Colors (See Chart) **• 5 Bundles Also in All Black • Center Spline Binder**																				
	**1281S3** new	NEC: CMR CEC: CMG	3	500 † 1000 †	152.4 304.8	24.2 45.6	11.0 20.7	25 AWG (solid) .018″ TC 32.4Ω/M′ 106.3Ω/km	.074	1.88	Duobond (100%) + TC Serve 5.4Ω/M′ 17.7Ω/km	Single: .114 Overall: .246	2.9 6.2	75	81%	17.0	55.8	1 5 10 20 50 71 100 135 180 200 270 400 750 1000 2250 3000	.50 1.2 1.6 2.4 3.8 4.4 4.9 5.6 6.4 6.7 7.7 9.5 13.4 15.8 26.1 31.2	1.6 3.9 5.2 7.9 12.1 14.1 16.1 18.4 21.0 22.0 25.2 31.1 44.0 51.8 85.6 102.3
	1281S4 new	NEC: CMR CEC: CMG	4	1000 †	304.8	57.0	25.9	same as above	.074	1.88	same as above	Single: .114 Overall: .275	2.9 7.0							
	1281S5 new	NEC: CMR CEC: CMG	5	500 † 1000 †	152.4 304.8	38.5 76.0	17.5 34.5	same as above	.074	1.88	same as above	Single: .114 Overall: .308	2.9 7.8							
	1281S6 new	NEC: CM CEC: CMG	6	500 † 1000 †	152.4 304.8	41.8 82.7	19.0 37.6	same as above	.074	1.88	same as above	Single: .114 Overall: .342	2.9 8.7	100% Sweep tested. 5 MHz to 850 MHz. Patent Pending.						
Plenum • Foam FEP Insulation • Flamarrest® Jackets in Colors (See Chart) **• 5 Bundles Also in All Black • Center Spline Binder**																				
	**1282S3** new	NEC: CMP CEC: CMP	3	500 1000	152.4 304.8	21.9 42.8	10.0 19.5	25 AWG (solid) .018″ TC 32.4Ω/M′ 106.3Ω/km	.074	1.88	Duobond (100%) + TC Serve 5.4Ω/M′ 17.7Ω/km	Single: .114 Overall: .246	2.9 6.2	75	81%	17.0	55.8	1 5 10 20 50 71 100 135 180 200 270 400 750 1000 2250 3000	.50 1.2 1.6 2.4 3.8 4.5 5.2 5.9 6.8 7.1 8.2 10.0 14.3 16.9 25.5 33.9	1.6 3.9 5.2 7.9 12.1 14.8 17.1 19.5 22.2 23.1 26.9 32.9 47.0 55.4 83.6 111.3
	1282S4 new	NEC: CMP CEC: CMP	4	500 1000	152.4 304.8	25.7 50.4	11.7 22.9	same as above	.074	1.88	same as above	Single: .114 Overall: .275	2.9 7.0							
	1282S5 new	NEC: CMP CEC: CMP	5	500 1000	152.4 304.8	33.3 65.6	15.1 29.8	same as above	.074	1.88	same as above	Single: .114 Overall: .308	2.9 7.8	100% Sweep tested. 5 MHz to 850 MHz. Patent Pending.						
	1282S6 new	NEC: CMP CEC: CMP	6	500 1000	152.4 304.8	39.0 76.0	17.7 34.5	same as above	.074	1.88	same as above	Single: .114 Overall: .342	2.9 8.7							

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

Contact the Belden Customer Service Department for a more Comprehensive Connector Cross Reference. **1-800-BELDEN-1**. Request quotations of cables not listed.

†Spools are one piece, but length may vary ±10% from length shown.

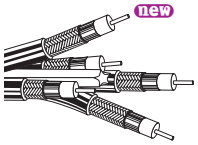
Color Code Chart:

Cond.	Color	Cond.	Color
1	Red	4	Yellow
2	Green	5	Black
3	Blue	6	White

BRILLIANCE®

Hi-Res Component Video Cable

Banana Peel® Unjacketed Coax Bundled
Plenum Rated

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Standard Lengths Ft.	Standard Lengths m	Standard Unit Weight Lbs.	Standard Unit Weight kg	Conductor (stranding) Diameter Nom. DCR	Nominal Core OD Inch	Nominal Core OD mm	Shielding Materials Nom. DCR	Nominal OD Inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/Ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 Ft.	Nominal Attenuation dB/ 100m
20 AWG Solid .032″ Bare Copper Conductors • Duofoil® + Tinned Copper Braid Shield (95% Coverage)																				
Foam FEP Insulation • Flamarrest® Jackets in Colors (See Chart) **• 5 and 6 Bundles Also in All Black • Center Spline Binder**																				
300V RMS 	**1283S3** new	NEC: CMP CEC: CMP	3	500 1000	152.4 304.8	60.0 119.0	27.3 54.0	20 AWG (solid) .032″ BC 10.0Ω/M′ 32.8Ω/km	.133	3.38	Duofoil (95%) + TC Braid 5.4Ω/M′ 17.7Ω/km	Single: .196 Overall: .422	4.8 10.7	75	84%	16.1	52.8	1 3.6 10 71.5 135 270 360 540 720 750 1000 1500 2500 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 23.9 24.6 30.8 42.0 57.4 71.8
	1283S5 new	NEC: CMP CEC: CMP	5	500 1000	152.4 304.8	112.0 224.0	51.0 102.0	same as above	.133	3.38	same as above	Single: .196 Overall: .529	4.8 13.4	Sweep tested. 5 MHz to 3 GHz. Patent Pending: Banana Peel technology						
	1283S6 new	NEC: CMP CEC: CMP	6	500 1000	152.4 304.8	129.0 257.0	58.6 116.8	same as above	.133	3.38	same as above	Single: .196 Overall: .588	4.8 14.9							

BC = Bare Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • TC = Tinned Copper

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Maximum Recommended Transmission Distance (without Using an Interface)

Resolution	RGB	VGA — 640 x 480			SVGA — 800 x 600			XGA — 1024 x 768			SXGA — 1280 x 1024			UXGA — 1600 x 1200			HDTV*
Image Refresh Rate	—	60 Hz	75 Hz	85 Hz	60 Hz	75 Hz	85 Hz	60 Hz	75 Hz	85 Hz	60 Hz	75 Hz	85 Hz	60 Hz	75 Hz	85 Hz	60 Hz
Horizontal Scan Rate	—	31.5 KHz	39 KHz	45 KHz	38 KHz	50 KHz	54 KHz	48 KHz	60 KHz	68 KHz	64 KHz	80 KHz	91 KHz	75 KHz	94 KHz	107 KHz	—
Bandwidth Frequency	5 MHz	27.6 MHz	34.5 MHz	39.2 MHz	43.2 MHz	54 MHz	61.2 MHz	70.7 MHz	88.5 MHz	100 MHz	118 MHz	147.4 MHz	167 MHz	172.8 MHz	216 MHz	244.8 MHz	74.25 MHz
Part Number	**dB Loss @ Bandwidth Frequency**																
1281 Series	1.2	2.75	3.08	3.3	3.48	3.91	4.11	4.37	4.89	4.9	5.28	5.81	6.17	6.26	6.93	7.33	4.45
1282 Series	1.2	2.75	3.08	3.3	3.48	3.93	4.17	4.47	4.91	5.2	5.58	6.14	6.54	6.64	7.35	7.79	4.57
1283 Series	.71	1.45	1.58	1.67	1.75	1.96	2.1	2.28	2.93	2.7	2.95	3.33	3.53	3.59	4.04	4.33	2.34
Part Number	**Maximum Recommended Transmission Distance (Ft.) at -1 dB (3rd Harmonic)**																
1281 Series	83	36	32	30	29	26	24	23	21	20	19	17	16	16	14	14	22
1282 Series	83	36	32	30	29	25	24	22	20	19	18	16	15	15	14	13	22
1283 Series	141	69	63	60	57	51	48	44	40	37	34	30	28	28	25	23	43
Part Number	**Maximum Recommended Transmission Distance (Ft.) at -3 dB (3rd Harmonic)**																
1281 Series	250	109	97	91	88	77	73	69	64	61	57	52	49	48	43	41	67
1282 Series	250	109	97	91	88	76	72	67	61	58	54	49	46	45	41	39	66
1283 Series	423	207	190	180	171	153	143	132	119	111	101	90	85	84	74	69	128
Part Number	**Maximum Recommended Transmission Distance (Ft.) at -6 dB (3rd Harmonic)**																
1281 Series	500	218	195	182	172	153	146	137	128	122	114	103	97	98	87	82	135
1282 Series	500	218	195	182	172	153	144	134	122	115	108	98	92	90	82	77	131
1283 Series	845	414	380	359	343	306	286	263	237	222	203	180	170	187	149	139	256

*HDTV per SMPTE 240M Television — Signal Parameters -1125 Line High-Definition Production Systems.

For More Information: **www.belden.com**

Belden CDT Electronics Division Technical Support **1-800-BELDEN-1** or **1-800-BELDEN-3**