

## 4731R Coax - 4K Ultra-High-Definition Coax Cable for 12G-SDI



For more Information  
please call

1-800-Belden1



### General Description:

RG-11/U type, 14 AWG solid .064" silver-plated copper conductor, gas-injected foam HDPE insulation, Duofoil® bonded to core + tinned copper braid shield (95% coverage) + bonded to jacket, PVC jacket.

### Usage (Overall)

**Suitable Applications:** SMPTE 2081-2 12 Gb/s UHDTV, SMPTE 2081-1 6 Gb/s UHDTV, SMPTE 424M 3 Gb/s HD-SDI 1080p

### Physical Characteristics (Overall)

#### Conductor

**AWG:**

# Coax	AWG	Stranding	Conductor Material	Dia. (mm)
1	14	Solid	SPC - Silver-Plated Copper	1.626

**Total Number of Conductors:** 1

#### Insulation

**Insulation Material:**

Insulation Material	Dia. (mm)
Gas-injected FHDPE - Foam High Density Polyethylene	7.112

#### Outer Shield

**Outer Shield Material:**

Layer #	Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)	Description
1	Bonded Duofoil®	Tape	Aluminum Foil-Polyester Tape-Aluminum Foil	100.000	Bonded to insulation
2		Braid	TC - Tinned Copper	95.000	
3	Bonded Beldfoil® with shorting fold	Tape	Polyester Tape-Aluminum Foil		Bonded to jacket

#### Outer Jacket

**Outer Jacket Material:**

Outer Jacket Material
PVC - Polyvinyl Chloride

#### Overall Cable

**Overall Nominal Diameter:** 10.160 mm

### Mechanical Characteristics (Overall)

**Operating Temperature Range:** -30°C To +75°C

**Bulk Cable Weight:** 129.473 Kg/Km

**Max. Recommended Pulling Tension:** 644.989 N

**Min. Bend Radius/Minor Axis:** 101.600 mm

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

**NEC/(UL) Specification:** CMR

**CEC/C(UL) Specification:** CMG

**EU Directive 2011/65/EU (ROHS II):** Yes

**EU CE Mark:** Yes

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EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2004
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes
RG Type:	11/U

### Flame Test

UL Flame Test:	UL1666 Vertical Shaft
CSA Flame Test:	FT4

### Suitability

Suitability - Indoor:	Yes
Suitability - Outdoor:	Yes - Black only.
Suitability - Aerial:	Yes - Black only, when supported by messenger wire.
Suitability - Burial:	No

### Plenum/Non-Plenum

Plenum (Y/N):	No
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## Electrical Characteristics (Overall)

### Nom. Characteristic Impedance:

Impedance (Ohm)
75

### Nom. Inductance:

Inductance (µH/m)
0.318257

### Nom. Capacitance Conductor to Shield:

Capacitance (pF/m)
52.496

### Nominal Velocity of Propagation:

VP (%)
85

### Nominal Delay:

Delay (ns/m)
3.97001

### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)
8.2025

### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/km)
4.9215

### Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100m)
1.000	0.525
3.580	0.984
5.000	1.116
6.000	1.214
7.000	1.280
10.000	1.476

## 4731R Coax - 4K Ultra-High-Definition Coax Cable for 12G-SDI

12.000	1.608
25.000	2.198
67.500	3.412
71.500	3.511
88.500	3.839
100.000	4.068
135.000	4.626
143.000	4.757
180.000	5.282
270.000	6.431
360.000	7.448
540.000	9.220
720.000	10.729
750.000	10.959
1000.000	12.763
1500.000	15.847
2000.000	18.538
2250.000	19.752
3000.000	23.197
4500.000	28.906
6000.000	34.286
12000.000	53.776

### Max. Operating Voltage - UL:

<b>Voltage</b>
300 V RMS

### Other Electrical Characteristic 1:

Return Loss: Fixed bridge and termination.

### Minimum Return Loss:

Start Freq. (MHz)	Stop Freq. (MHz)	Min. RL (dB)
5.000	1600.000	23.000
1600.000	4500.000	21.000
4500.000	12000.000	15.000

### Sweep Test

#### Sweep Testing:

Sweep tested 5 MHz to 12 GHz.

## Notes (Overall)

**Notes:** Print legend includes sequential footage marks.

## Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
4731R N3U1000	1,000 FT	95.000 LB	GREEN, MIL	C	#14 PE/GIFHDLDP SH FRPVC
4731R 0021000	1,000 FT	95.000 LB	RED	C	#14 PE/GIFHDLDP SH FRPVC
4731R 0031000	1,000 FT	95.000 LB	ORANGE	C	#14 PE/GIFHDLDP SH FRPVC
4731R 0061000	1,000 FT	95.000 LB	BLUE, LIGHT	C	#14 PE/GIFHDLDP SH FRPVC
4731R 0071000	1,000 FT	95.000 LB	VIOLET	C	#14 PE/GIFHDLDP SH FRPVC
4731R 0101000	1,000 FT	96.000 LB	BLACK	C	#14 PE/GIFHDLDP SH FRPVC
4731R 0104000	4,000 FT	388.000 LB	BLACK		#14 PE/GIFHDLDP SH FRPVC

### Notes:

C = CRATE REEL PUT-UP.

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## METRIC MEASUREMENT VERSION

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