# **Detailed Specifications & Technical Data**

#### METRIC MEASUREMENT VERSION



## 4794R Coax - Low Loss Serial Digital Coax

For more Information please call

1-800-Belden1



# General Description:

12 GHz, 4K UHD Precision Video Cable, 75 Ohm 16 AWG solid 0.051" silver-plated copper conductor, gas-injected foamed high-density polyethylene insulation, Duofoil® bonded to the core + tinned copper braid shield (95% coverage) plus Beldfoil® with shorting fold, PVC jacket.

#### **Usage (Overall)**

Suitable Applications:

SMPTE 2082-1 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	16	Solid	SPC - Silver Plated Copper	1.295

Total Number of Conductors:

#### Insulation

#### Insulation Material:

Insulation Material	Dia. (mm)
Gas-injected FHDPE - Foam High Density Polyethylene	5.715

#### **Outer Shield**

#### Outer Shield Material:

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

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#### Outer Jacket

#### Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

### **Overall Cable**

Overall Nominal Diameter:

8.128 mm

### **Mechanical Characteristics (Overall)**

Operating Temperature Range:	-30°C To +75°C
Bulk Cable Weight:	87.804 Kg/Km
Max. Recommended Pulling Tension:	493.750 N
Min. Bend Radius/Minor Axis:	82.550 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
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

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MII Order #39 (China RoHS):	Yes		
Series Type:	Series 7		
lame Test			
UL Flame Test:	UL1666 Vertical Shaft		
CSA Flame Test:	FT4		
Suitability			
Suitability - Indoor:	Yes		
Plenum/Non-Plenum			
Plenum (Y/N):	No		

## **Electrical Characteristics (Overall)**

Nom. Characteristic Impedance:

Impedance (Ohm) 75

Nom. Inductance:

Inductance (µH/m) 0.299

Nom. Capacitance Conductor to Shield:

Capacitance (pF/m) 52.824

Nominal Velocity of Propagation:

**VP (%)** 84.000

Nominal Delay:

**Delay (ns/m)** 3.970

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km) 13.124

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/km) 6.234

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100m)				
1.000	0.558				
3.580	0.984				
5.000	1.148				
6.000	1.247				
7.000	1.312				
10.000	1.575				
12.000	1.706				
25.000	2.428				
55.000	3.543				
67.500	3.937				
71.500	4.068				
88.500	4.495				
100.000	4.790				
135.000	5.578				
143.000	5.742				
180.000	6.464				
270.000	7.973				
360.000	9.285				
540.000	11.484				
720.000	13.419				
750.000	13.715				
1000.000	16.044				
1500.000	20.014				
2000.000	23.623				
2250.000	25.231				
3000.000	29.791				
4500.000	35.993				
6000.000	42.653				

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12000.000 64.308

Max. Operating Voltage - UL:

300 V RMS

Other Electrical Characteristic 1: TDR Impedance: 75 +/- 3 Ohms

Other Electrical Characteristic 2: 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 tested 5 MHz to 12 GHz. Sweep Testing:

#### **Put Ups and Colors:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
4794R 0101000	1,000 FT	60.000 LB	BLACK	С	#16 LDPE/GIFHDLDPE SH FRPVC
4794R 0102500	2,500 FT	145.000 LB	BLACK	CZ	#16 LDPE/GIFHDLDPE SH FRPVC

#### Notes:

C = CRATE REEL PUT-UP.

Z = FINAL PUT-UP LENGTH MAY VARY (+ OR -) 10% FOR SPOOLS OR REELS AND(+ OR -) 5% FOR UNREEL CARTONS FROM LENGTH SHOWN.

Revision Number: 1 Revision Date: 07-15-2016

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