

4505R Coax - 4K Ultra-High-Definition Coax Cable for 12G-SDI



For more Information
please call

1-800-Belden1



General Description:

12 GHz, 4K UHD Precision Video Cable, 75 Ohm, 20 AWG solid .032" silver plated copper conductor, gas-injected foam HDPE insulation, Duofoil® bonded to core + tinned copper braid shield (95% coverage), 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	20	Solid	SPC - Silver Plated Copper	0.813

Total Number of Conductors: 1

Insulation

Insulation Material:

Insulation Material	Dia. (mm)
Gas-injected FHDPE - Foam High Density Polyethylene	3.683

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	

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cable

Overall Nominal Diameter: 5.918 mm

Mechanical Characteristics (Overall)

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

Bulk Cable Weight: 46.134 Kg/Km

Max. Recommended Pulling Tension: 231.306 N

Min. Bend Radius/Minor Axis: 63.500 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

4505R Coax - 4K Ultra-High-Definition Coax Cable for 12G-SDI

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2005
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:	59/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
---------------	----

Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm)

75

Nom. Inductance:

Inductance (µH/m)

0.351067

Nom. Capacitance Conductor to Shield:

Capacitance (pF/m)

52.824

Nominal Velocity of Propagation:

VP (%)

83.000

Nominal Delay:

Delay (ns/m)

4.003

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)

33.466

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/km)

11.155

Nom. Attenuation:

Freq. (MHz) Attenuation (dB/100m)

1.000	0.984
3.600	1.969
5.000	2.067
6.000	2.264
7.000	2.428
10.000	2.953

4505R Coax - 4K Ultra-High-Definition Coax Cable for 12G-SDI

12.000	2.986
25.000	4.265
67.500	6.726
71.500	6.890
88.500	7.218
100.000	7.546
135.000	8.859
143.000	9.187
180.000	10.171
270.000	12.468
360.000	14.436
540.000	18.046
720.000	20.998
750.000	21.327
1000.000	24.936
1500.000	30.513
2000.000	35.435
2250.000	37.732
3000.000	43.965
4500.000	54.793
6000.000	64.636
12000.000	94.165

Max. Operating Voltage - UL:

Voltage
300 V RMS

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 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
4505R N3U1000	1,000 FT	32.000 LB	GREEN, MIL		#20 PE/GIFHDLDPPE SH FRPVC
4505R 0021000	1,000 FT	32.000 LB	RED		#20 PE/GIFHDLDPPE SH FRPVC
4505R 00210000	10,000 FT	330.000 LB	RED		#20 PE/GIFHDLDPPE SH FRPVC
4505R 0025000	5,000 FT	160.000 LB	RED		#20 PE/GIFHDLDPPE SH FRPVC
4505R 0031000	1,000 FT	32.000 LB	ORANGE		#20 PE/GIFHDLDPPE SH FRPVC
4505R 0061000	1,000 FT	32.000 LB	BLUE, LIGHT		#20 PE/GIFHDLDPPE SH FRPVC
4505R 00610000	10,000 FT	330.000 LB	BLUE, LIGHT		#20 PE/GIFHDLDPPE SH FRPVC
4505R 0065000	5,000 FT	160.000 LB	BLUE, LIGHT		#20 PE/GIFHDLDPPE SH FRPVC
4505R 0071000	1,000 FT	32.000 LB	VIOLET		#20 PE/GIFHDLDPPE SH FRPVC
4505R 00710000	10,000 FT	330.000 LB	VIOLET		#20 PE/GIFHDLDPPE SH FRPVC
4505R 0075000	5,000 FT	160.000 LB	VIOLET		#20 PE/GIFHDLDPPE SH FRPVC
4505R 0091000	1,000 FT	32.000 LB	WHITE	C	#20 PE/GIFHDLDPPE SH FRPVC
4505R 0101000	1,000 FT	32.000 LB	BLACK		#20 PE/GIFHDLDPPE SH FRPVC
4505R 01010000	10,000 FT	330.000 LB	BLACK		#20 PE/GIFHDLDPPE SH FRPVC
4505R 0105000	5,000 FT	160.000 LB	BLACK		#20 PE/GIFHDLDPPE SH FRPVC

Notes:

C = CRATE REEL PUT-UP.

4505R Coax - 4K Ultra-High-Definition Coax Cable for 12G-SDI

Revision Number: 0 Revision Date: 08-16-2017

© 2019 Belden, Inc.
All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described herein are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "AS IS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with EU RoHS (Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be in stock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, and the identification of materials listed as reportable or restricted within the Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. This Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product. Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 2014/35/EU).