



## Part Number: 4505R

12 GHz Coax, 4K UHD Precision Video Cable, RG-59, 75 Ohm, 20 AWG Solid, CMR

### Product Description

12 GHz Coax, 4K UHD Precision Video Cable, RG-59, 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.

### Technical Specifications

#### Product Overview

Environmental Space:	Outdoor - Aerial
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	Stranding	Material	Nominal Diameter	No. of Coax
20	Solid	SPCCS - Silver Plated Copper Covered Steel	0.032 in	1

Conductor Size:	20 AWG
-----------------	--------

##### Insulation

Material	Nominal Diameter
Gas-injected FHDPE - Foam High Density Polyethylene	0.145 in

##### Outer Shield Material

Type	Layer	Material	Material Trade Name	Coverage [%]
Tape	1	Aluminum/Polyester/Aluminum	Bonded Duofoil® (Bonded to Dielectric)	100 %
Braid	2	TC - Tinned Copper		95 %

##### Outer Jacket Material

Material	Nominal Diameter
PVC - Polyvinyl Chloride	0.233 in

#### Electrical Characteristics

##### Conductor DCR

Nominal Conductor DCR
10.2 Ohm/1000ft

##### Capacitance

Nom. Capacitance Conductor to Shield
16.1 pF/ft

Shielding:	Foil + Braid(s)
------------	-----------------

##### Inductance

Nominal Inductance
0.107 µH/ft

##### Impedance

Nominal Characteristic Impedance
75 Ohm

##### Return Loss (RL)

Frequency [MHz]	Minimum Return (RL)
5 MHz - 1600 MHz	23 dB
1600 MHz - 4500 MHz	21 dB
4500 MHz - 12000 MHz	15 dB

#### High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
1 MHz	0.30 dB/100ft
3.58 MHz	0.60 dB/100ft
5 MHz	0.63 dB/100ft
6 MHz	0.69 dB/100ft
7 MHz	0.74 dB/100ft
10 MHz	0.90 dB/100ft
12 MHz	0.91 dB/100ft
25 MHz	1.30 dB/100ft
55 MHz	1.98 dB/100ft
67.5 MHz	2.05 dB/100ft
71.5 MHz	2.1 dB/100ft
88.5 MHz	2.2 dB/100ft
100 MHz	2.3 dB/100ft
135 MHz	2.7 dB/100ft
143 MHz	2.8 dB/100ft
180 MHz	3.1 dB/100ft
270 MHz	3.8 dB/100ft
360 MHz	4.4 dB/100ft
540 MHz	5.5 dB/100ft
720 MHz	6.4 dB/100ft
750 MHz	6.5 dB/100ft
1000 MHz	7.6 dB/100ft
1500 MHz	9.3 dB/100ft
2000 MHz	10.8 dB/100ft
2250 MHz	11.5 dB/100ft
3000 MHz	13.4 dB/100ft
4500 MHz	16.7 dB/100ft
6000 MHz	19.7 dB/100ft
12000 MHz	28.7 dB/100ft

#### Delay

Nominal Delay	Nominal Velocity of Propagation (VP) [%]
1.22 ns/ft	83 %

#### Voltage

UL Voltage Rating
300 V RMS

Electrical Characteristics Notes:	Return Loss: Fixed bridge and termination
-----------------------------------	---

#### Temperature Range

UL Temp Rating:	75°C
Operating Temp Range:	-30°C To +75°C

#### Mechanical Characteristics

UV Resistance:	Yes
Bulk Cable Weight:	31 lbs/1000ft
Max Recommended Pulling Tension:	52 lbs
Min Bend Radius/Minor Axis:	2.5 in

#### Standards

NEC/(UL) Specification:	CMR
CEC/C(UL) Specification:	CMG
RG Type:	59/U Type

## Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/96/EC (BFR):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2004-01-01
CA Prop 65 (CJ for Wire & Cable):	Yes

## Suitability

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

## Flammability, LSOH, Toxicity Testing

UL Flammability:	UL1666 Vertical Shaft
CSA Flammability:	FT4
UL voltage rating:	300 V RMS

## Plenum/Non-Plenum

Plenum (Y/N):	No
---------------	----

## Part Number

### Variants

Item #	Color
4505R 0091000	
4505R 0101000	Black
4505R 0105000	Black
4505R 0061000	Blue, Light
4505R N3U1000	Mil Green
4505R 0031000	Orange
4505R 0071000	Purple
4505R 0021000	Red

© 2018 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 here in 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 "ASIS" 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 all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information 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. The 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.