

# Part Number: 4731R

12 GHz Coax, 4K UHD Precision Video Cable, RG-11/U Type, 75 Ohm, 14 AWG Solid, CMR

## Product Description

RG-11/U Coax, 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.

## 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 |
|---|---|---|---|---|
| 14 | Solid | SPC - Silver Plated Copper | 0.064 in | 1 |

| | |
|---|---|
| Conductor Size: | 14 AWG |

**Insulation**

| Material | Nominal Diameter |
|---|---|
| Gas-injected FHDPE - Foam High Density Polyethylene | .280 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 % |
| Tape | 3 | Aluminum/Polyester | Bonded Beldfoil® with shorting fold (bonded to jacket) | 100 % |

**Outer Jacket Material**

| Material | Nominal Diameter |
|---|---|
| PVC - Polyvinyl Chloride | 0.400 in |

### Electrical Characteristics

**Conductor DCR**

| Nominal Conductor DCR | Outer Conductor DCR |
|---|---|
| 2.5 Ohm/1000ft | 1.5 Ohm/1000ft |

**Capacitance**

| Nom. Capacitance Conductor to Shield |
|---|
| 15.5 pF/ft |

**Inductance**

| Nominal Inductance |
|---|
| 0.097 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 | 0.16 dB/100ft |
| 3.58 MHz | 0.30 dB/100ft |
| 5 MHz | 0.34 dB/100ft |
| 6 MHz | 0.37 dB/100ft |
| 7 MHz | 0.39 dB/100ft |
| 10 MHz | 0.45 dB/100ft |
| 12 MHz | 0.49 dB/100ft |
| 25 MHz | 0.67 dB/100ft |
| 55 MHz | 0.95 dB/100ft |
| 67.5 MHz | 1.04 dB/100ft |
| 71.5 MHz | 1.07 dB/100ft |
| 88.5 MHz | 1.17 dB/100ft |
| 100 MHz | 1.24 dB/100ft |
| 135 MHz | 1.41 dB/100ft |
| 143 MHz | 1.45 dB/100ft |
| 180 MHz | 1.61 dB/100ft |
| 270 MHz | 1.96 dB/100ft |
| 360 MHz | 2.27 dB/100ft |
| 540 MHz | 2.81 dB/100ft |
| 720 MHz | 3.27 dB/100ft |
| 750 MHz | 3.34 dB/100ft |
| 1000 MHz | 3.89 dB/100ft |
| 1500 MHz | 4.83 dB/100ft |
| 2000 MHz | 5.65 dB/100ft |
| 2250 MHz | 6.02 dB/100ft |
| 3000 MHz | 7.07 dB/100ft |
| 4500 MHz | 8.81 dB/100ft |
| 6000 MHz | 10.45 dB/100ft |
| 12000 MHz | 16.39 dB/100ft |

**Delay**

| Nominal Delay | Nominal Velocity of Propagation (VP) [%] |
|---|---|
| 1.2 ns/ft | 85 % |

**Voltage**

| UL Voltage Rating |
|---|
| 300 V RMS |

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

## Temperature Range

| | |
|---|---|
| Operating Temp Range: | -30°C To +75°C |

## Mechanical Characteristics

| | |
|---|---|
| UV Resistance: | Yes |
| Bulk Cable Weight: | 87 lbs/1000ft |
| Max Recommended Pulling Tension: | 145 lbs |
| Min Bend Radius/Minor Axis: | 4 in |

## Standards

| | |
|---|---|
| NEC/(UL) Specification: | CMR |
| CEC/C(UL) Specification: | CMG |

| | |
|---|---|
| RG Type: | 11/U Type |
| Series Type: | Series 11 |

## 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 2000/53/EC (ELV); EU Directive 2002/96/EC (WEEE); EU Directive 2003/11/EC (BFR); EU Directive 2011/65/EU (ROHS II) |
| 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, LS0H, Toxicity Testing

| | |
|---|---|
| C(UL) Flammability: | FT4 |
| UL Flammability: | UL1666 Vertical Shaft |
| UL voltage rating: | 300 V RMS |

## Plenum/Non-Plenum

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

## Part Number

**Variants**

| Item # | Color | UPC | Length |
|---|---|---|---|
| 4731R 0101000 | Black | 612825396963 | 1,000 ft |
| 4731R 0105000 | Black | 612825396970 | 5,000 ft |
| 4731R 0061000 | Blue, Light | 612825396949 | 1,000 ft |
| 4731R N3U1000 | Mil Green | 612825396918 | 1,000 ft |
| 4731R 0031000 | Orange | 612825396932 | 1,000 ft |
| 4731R 0071000 | Purple | 612825396956 | 1,000 ft |
| 4731R 0021000 | Red | 612825396925 | 1,000 ft |

## Product Notes

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

## History

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|---|---|
| Update and Revision: | Revision Number: 0.217 Revision Date: 07-11-2019 |

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