



## Part Number: 4731P

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

### Product Description

12 GHz, 4K UHD Precision Video Coax, 75 Ohm RG11 Type 14 AWG solid silver plated copper conductor, foam FEP core, Duofoil® bonded to core+95% tinned copper braid+Duofoil®, CMP, PVDF jacket

### Technical Specifications

#### Product Overview

|                        |   |
|------------------------|---|
| 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 |
|--|------------------|
| FFEP - Foam Fluorinated Ethylene Propylene | 0.274 in         |

##### Outer Shield Material

| Type  | Layer | Material                          | Material Trade Name                    | Coverage [%] |
|-------|-------|-----------------------------------|--|--------------|
| Tape  | 1     | Aluminum/Polyester/Aluminum       | Bonded Duofoil® (Bonded to Dielectric) | 100.0 %      |
| Braid | 2     | TC - Tinned Copper                |  | 95.0 %       |
| Tape  | 3     | Aluminium / Polyester / Aluminium | Duofoil®                               |              |

##### Outer Jacket Material

| Material                       | Nominal Diameter |
|--------------------------------|------------------|
| PVDF - Polyvinylidene Fluoride | 0.348 in         |

#### Electrical Characteristics

##### Conductor DCR

| Nominal Conductor DCR | Outer Conductor DCR |
|-----------------------|---------------------|
| 6.3 Ohm/1000ft        | 2.9 Ohm/1000ft      |

##### Capacitance

| Nom. Capacitance Conductor to Shield |
|--------------------------------------|
| 16.1 pF/ft                           |

##### Inductance

| Nominal Inductance |
|--------------------|
| 0.103 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        | 0.31 dB/100ft       |
| 5 MHz           | 0.36 dB/100ft       |
| 6 MHz           | 0.39 dB/100ft       |
| 7 MHz           | 0.41 dB/100ft       |
| 10 MHz          | 0.48 dB/100ft       |
| 12 MHz          | 0.52 dB/100ft       |
| 25 MHz          | 0.71 dB/100ft       |
| 55 MHz          | 1.03 dB/100ft       |
| 67.5 MHz        | 1.13 dB/100ft       |
| 71.5 MHz        | 1.16 dB/100ft       |
| 88.5 MHz        | 1.29 dB/100ft       |
| 100 MHz         | 1.36 dB/100ft       |
| 135 MHz         | 1.57 dB/100ft       |
| 143 MHz         | 1.62 dB/100ft       |
| 180 MHz         | 1.82 dB/100ft       |
| 270 MHz         | 2.28 dB/100ft       |
| 360 MHz         | 2.70 dB/100ft       |
| 540 MHz         | 3.46 dB/100ft       |
| 720 MHz         | 4.15 dB/100ft       |
| 750 MHz         | 4.26 dB/100ft       |
| 1000 MHz        | 5.11 dB/100ft       |
| 1500 MHz        | 6.64 dB/100ft       |
| 2000 MHz        | 8.01 dB/100ft       |
| 2250 MHz        | 8.65 dB/100ft       |
| 3000 MHz        | 10.51 dB/100ft      |
| 4500 MHz        | 13.61 dB/100ft      |
| 6000 MHz        | 16.44 dB/100ft      |
| 12000 MHz       | 25.89 dB/100ft      |

Delay

| Nominal Delay | Nominal Velocity of Propagation (VP) [%] |
|---------------|--|
| 1.22 ns/ft    | 83.0 %                                   |

Voltage

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

Temperature Range

|                       |                 |
|-----------------------|-----------------|
| Operating Temp Range: | -20°C To +125°C |
|-----------------------|-----------------|

Mechanical Characteristics

|                                  |               |
|----------------------------------|---------------|
| Bulk Cable Weight:               | 78 lbs/1000ft |
| Max Recommended Pulling Tension: | 145 lbs       |
| Min Bend Radius/Minor Axis:      | 3.5 in        |

Standards

|                         |           |
|-------------------------|-----------|
| NEC/(UL) Specification: | CMP       |
| RG Type:                | 11/U Type |

Applicable Environmental and Other Programs

|                                |     |
|--------------------------------|-----|
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2003/11/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:              | Yes        |
| EU CE Mark:                           | No         |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2018-03-20 |
| CA Prop 65 (CJ for Wire & Cable):     | Yes        |

Suitability

|                       |     |
|-----------------------|-----|
| Suitability - Indoor: | Yes |
|-----------------------|-----|

Flammability, LS0H, Toxicity Testing

|                    |           |
|--------------------|-----------|
| UL Flammability:   | NFPA 262  |
| CSA Flammability:  | FT6       |
| UL voltage rating: | 300 V RMS |

Plenum/Non-Plenum

|               |     |
|---------------|-----|
| Plenum (Y/N): | Yes |
|---------------|-----|

Part Number

|                    |       |
|--------------------|-------|
| Non-Plenum Number: | 4731R |
|--------------------|-------|

Variants

| Item #        | Color |
|---------------|-------|
| 4731P 0101000 | Black |

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