



**Product:** [4505R](#)

4K UHD Coax for 12G-SDI, 75 Ohm, RG-59, 20 AWG Solid SC, Foil + 95% TC Braid, PVC Jkt, CMR

**Product Description**

75 Ohm SDI Coax, RG-59, 20 AWG Solid Silvered Copper Conductor, PE Insulation, Foil + 95% Tinned Copper Braid Shield, PVC Jacket, CMR

**Technical Specifications**

**Product Overview**

|                        |                                                                                                                  |
|------------------------|------------------------------------------------------------------------------------------------------------------|
| Suitable Applications: | Ultra-High Definition Digital Video, 4K Single-link 12 Gb/s UHDTV, 4K D-Cinema, 8K Quad-link UHDTV, HD-SDI 1080p |
|------------------------|------------------------------------------------------------------------------------------------------------------|

**Construction Details**

|          |    |
|----------|----|
| RG Type: | 59 |
|----------|----|

**Conductor**

| Size   | Stranding | Nom. Diameter | Material             |
|--------|-----------|---------------|----------------------|
| 20 AWG | Solid     | 0.032 in      | SC - Silvered Copper |

**Insulation**

| Material                 | Nom. Insulation Diameter | Color Code | Notes        |
|--------------------------|--------------------------|------------|--------------|
| PE - Polyethylene (Foam) | 0.145 in (3.68 mm)       | White      | Gas Injected |

**Outer Shield**

| Layer | Outer Shield Type | Material                      | Material Trade Name | Coverage |
|-------|-------------------|-------------------------------|---------------------|----------|
| 1     | Tape              | Tri-Laminate (Alum+Poly+Alum) | Duobond® II         | 100%     |
| 2     | Braid             | Tinned Copper (TC)            |                     | 95%      |

**Outer Jacket**

| Material                 | Nom. Diameter      |
|--------------------------|--------------------|
| PVC - Polyvinyl Chloride | 0.233 in (5.92 mm) |

|                                   |                    |
|-----------------------------------|--------------------|
| Overall Cable Diameter (Nominal): | 0.233 in (5.92 mm) |
|-----------------------------------|--------------------|

**Electrical Characteristics**

**Return Loss (RL)**

| Frequency        | Min. Return Loss |
|------------------|------------------|
| 5 - 1600 MHz     | 23 dB            |
| 1600 - 4500 MHz  | 21 dB            |
| 4500 - 12000 MHz | 15 dB            |

**Attenuation**

| Frequency | Nom. Attenuation |
|-----------|------------------|
| 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 |

Electricals

| Nom. Conductor DCR | Nom. Outer Shield DCR      | Nom. Capacitance Cond-to-Shield | Nom. Characteristic Impedance | Nom. Velocity of Prop. |
|--------------------|----------------------------|---------------------------------|-------------------------------|------------------------|
| 10.1 Ohm/1000ft    | 3.4 Ohm/1000ft (11 Ohm/km) | 16.1 pF/ft (52.8 pF/m)          | 75 Ohm                        | 83%                    |

Voltage

| UL Voltage Rating |
|-------------------|
| 300 V (CMR, CMG)  |

Mechanical Characteristics

Temperature

| UL Temperature | Operating      |
|----------------|----------------|
| 60°C           | -20°C to +75°C |

Bend Radius

| Installation Min. |
|-------------------|
| 2.3 in (58 mm)    |

|                    |                |
|--------------------|----------------|
| Max. Pull Tension: | 52 lbs (24 kg) |
| Bulk Cable Weight: | 30 lbs/1000ft  |

Standards and Compliance

|                                  |                                                                                                                                  |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Environmental Suitability:       | Indoor - Riser, Indoor, Aerial - Black only, When supported by messenger wire                                                    |
| Sustainability:                  | CA Prop 65                                                                                                                       |
| Flammability / Reaction to Fire: | UL1666 Vertical Shaft                                                                                                            |
| CPR Compliance:                  | CPR Euroclass: Eca; CPR UKCA Class: Eca                                                                                          |
| NEC / UL Compliance:             | CMR                                                                                                                              |
| CEC / C(UL) Compliance:          | CMG                                                                                                                              |
| European Directive Compliance:   | EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), REACH, EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE) |
| UK Regulation Compliance:        | UKCA Mark                                                                                                                        |
| APAC Compliance:                 | China RoHS II (GB/T 26572-2011)                                                                                                  |
| Plenum Number:                   | 4505P                                                                                                                            |

History

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Update and Revision: | Revision Number: 0.444 Revision Date: 04-29-2024 |
|----------------------|--------------------------------------------------|

Part Numbers

Variants

| Item # | Color | Putup Type | Length | UPC |
|--------|-------|------------|--------|-----|
|--------|-------|------------|--------|-----|

|                |             |      |           |              |
|----------------|-------------|------|-----------|--------------|
| 4505R 0101000  | Black       | Reel | 1,000 ft  | 612825396895 |
| 4505R 0105000  | Black       | Reel | 5,000 ft  | 612825396901 |
| 4505R 01010000 | Black       | Reel | 10,000 ft | 612825436157 |
| 4505R 0061000  | Blue, Light | Reel | 1,000 ft  | 612825396871 |
| 4505R 0065000  | Blue, Light | Reel | 5,000 ft  | 612825436621 |
| 4505R 00610000 | Blue, Light | Reel | 10,000 ft | 612825436546 |
| 4505R N3U1000  | Mil Green   | Reel | 1,000 ft  | 612825396840 |
| 4505R 0031000  | Orange      | Reel | 1,000 ft  | 612825396864 |
| 4505R 0071000  | Purple      | Reel | 1,000 ft  | 612825396888 |
| 4505R 0021000  | Red         | Reel | 1,000 ft  | 612825396857 |
| 4505R 0025000  | Red         | Reel | 5,000 ft  | 612825436614 |
| 4505R 00210000 | Red         | Reel | 10,000 ft | 612825436539 |
| 4505R 0075000  | Violet      | Reel | 5,000 ft  | 612825436638 |
| 4505R 00710000 | Violet      | Reel | 10,000 ft | 612825436553 |
| 4505R 0091000  | White       | Reel | 1,000 ft  | 612825413257 |

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