

## 7976R Coax - Low Loss 50 Ohm Wireless RF Transmission Cable



For more Information  
please call

1-800-Belden1



### General Description:

7 AWG solid .142" bare copper-covered aluminum conductor, foam HDPE insulation, Duobond® II (100% coverage) plus a tinned copper braid shield (90% coverage), PVC jacket.

### Physical Characteristics (Overall)

#### Conductor

##### AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
1	7	Solid	BCCA - Bare Copper Covered Aluminum	.142

Total Number of Conductors: 1

#### Insulation

##### Insulation Material:

Insulation Material	Dia. (in.)
FHDPE - Foam High Density Polyethylene	.370

#### Outer Shield

##### Outer Shield Material:

Layer #	Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
1	Bonded Duofoil®	Tape	Bonded Aluminum Foil-Polyester Tape-Aluminum Foil	100
2		Braid	TC - Tinned Copper	90

#### Outer Jacket

##### Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

#### Overall Cable

Overall Nominal Diameter: 0.500 in.

### Mechanical Characteristics (Overall)

Operating Temperature Range: -40°C To +80°C

UL Temperature Rating: 60°C

Bulk Cable Weight: 120 lbs/1000 ft.

Max. Recommended Pulling Tension: 235 lbs.

Min. Bend Radius/Minor Axis: 5 in.

### 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

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

Series Type: RF 500

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### Flame Test

UL Flame Test: UL1666 Vertical Shaft

C(UL) Flame Test: FT4

### Suitability

Suitability - Indoor: Yes

Suitability - Aerial: Yes - when supported by a messenger wire

### Plenum/Non-Plenum

Plenum (Y/N): No

### Electrical Characteristics (Overall)

#### Nom. Characteristic Impedance:

Impedance (Ohm)

50

#### Nom. Inductance:

Inductance (µH/ft)

0.060

#### Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)

25.1

#### Nominal Velocity of Propagation:

VP (%)

84

#### Nominal Delay:

Delay (ns/ft)

1.21

#### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

.82

#### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

1.6

#### Maximum VSWR:

Start Freq. (MHz)	Stop Freq. (MHz)	Max. VSWR
5.000	2690.000	1.25:1
2690.000	3290.000	2.00:1
3290.000	6000.000	1.43:1

#### Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
30	.55
50	.73
150	1.2
220	1.5
450	2.2
900	3.2
1500	4.2
1800	4.7
2000	5.0
2500	5.7
3000	6.3
3500	6.9
4500	8.0
5800	9.3
6000	9.5

#### Max. Power Rating:

Freq. (MHz)	Rating (W)
30	4187
50	3168
150	1947
220	1602
450	1086
900	741
1500	558

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1800	504
2000	474
2500	418
3000	376
3500	345
4500	299
5800	258
6000	252

**Max. Operating Voltage - UL:**

<b>Voltage</b>
300 V RMS

### Notes (Overall)

**Notes:** 100% Sweep tested. Belden® The Wire in Wireless®.

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7976R 0101000	1,000 FT	135.000 LB	BLACK	C	#7 FPE SH FRPVC
7976R 010500	500 FT	71.000 LB	BLACK	C	#7 FPE SH FRPVC

**Notes:**

C = CRATE REEL PUT-UP.

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