



## 7976R

Part Number: 7976R

Low Loss 50 Ohm Wireless RF Transmission Cable

### Product 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.

### Product Specifications

#### Conductor

Total Number of Conductors:

1

### Technical Specifications

#### APAC Standard

MIL Order #39 (China RoHS):

Yes

#### Bend Radius

Min Bend Radius/Minor Axis:

5 in

#### CCB-Part Number

Notes:

100% Sweep tested. Belden® The Wire in Wireless®.

#### CCB-Sub-Part Number

Plenum (Y/N):

No

#### Connectors

Suggested Connectors:

Land Mobile Radio type connectors.

#### Contact Information

PHONE_NUM:	1-800-Belden1
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## EMEA Standard

EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
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## Environmental Characteristics

Operating Temp Range:	-40°C To +80°C
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Suitability - Indoor:	Yes
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## EU Directive

EU CE Mark:	Yes
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EU RoHS Compliance Date (yyyy-mm-dd):	2005-01-01
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## North American Standard

CA Prop 65 (CJ for Wire & Cable):	Yes
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CEC/C(UL) Specification:	CMG
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NEC/(UL) Specification:	CMR
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Series Type:	RF 500
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## Safety

UL Flammability:	UL1666 Vertical Shaft
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C(UL) Flammability:	FT4
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## Temperature Range

UL Temp Rating:	60°C
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## Use

Suitability - Aerial:	Yes - when supported by a messenger wire
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Max Recommended Pulling Tension:	235 lbs
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### Impedance:

#### Nominal Characteristic Impedance

50 Ohm
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### Inductance:

**Nominal Inductance**0.06  $\mu\text{H}/\text{ft}$ **Conductor DCR:****Nominal Conductor DCR**

0.82 Ohm/1000ft

**Nominal Outer Shield DCR**

1.6 Ohm/1000ft

**Power Rating:****Frequency [MHz]****Max. Power Rating [W]**

30 MHz

4,187 W

50 MHz

3,168 W

150 MHz

1,947 W

220 MHz

1,602 W

450 MHz

1,086 W

900 MHz

741 W

1,500 MHz

558 W

1,800 MHz

504 W

2,000 MHz

474 W

2,500 MHz

418 W

3,000 MHz

376 W

3,500 MHz

345 W

4,500 MHz

299 W

5,800 MHz

258 W

6,000 MHz

252 W

**Delay:****Nominal Delay**

1.21 ns/ft

**Nominal Velocity of Propagation (VP)**

84 %

**Voltage:****UL Voltage Rating**

300V RMS

**VSWR:**

Frequency [MHz]	Max. VSWR
2690 MHz	1.25:1
5 MHz	2.00:1
3290 MHz	1.43:1
2690 MHz	
6000 MHz	
3290 MHz	

**Capacitance:****Nominal Capacitance Conductor to Shield**

25.1 pF/ft

**High Frequency (Nominal/Typical):**

Frequency (MHz)	Nom. Insertion Loss
30 MHz	0.55 db/100ft
50 MHz	0.73 db/100ft
150 MHz	1.2 db/100ft
220 MHz	1.5 db/100ft
450 MHz	2.2 db/100ft
900 MHz	3.2 db/100ft
1500 MHz	4.2 db/100ft
1800 MHz	4.7 db/100ft
2000 MHz	5 db/100ft
2500 MHz	5.7 db/100ft
3000 MHz	6.3 db/100ft
3500 MHz	6.9 db/100ft
4500 MHz	8 db/100ft
5800 MHz	9.3 db/100ft
6000 MHz	9.5 db/100ft

## Insulation:

Material	Nominal Diameter
FHDPE - Foam High Density Polyethylene	0.37 in

## Outerjacket 1:

Material	Nominal Diameter
PVC - Polyvinyl Chloride	0.5 in

## Conductor:

AWG	Stranding	Material	Nominal Diameter	No. of Coax
7	Solid	BCCA - Bare Copper Covered Aluminum	0.142 in	1

## Outershield 1:

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

## Product Variants

Part Number	Color	Put-Up Type	Length
7976R 0101000	BLACK	Reel	1000 ft
7976R 010500	BLACK	Reel	500 ft

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