# **Detailed Specifications & Technical Data**



ENGLISH MEASUREMENT VERSION

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



For more Information please call

1-800-Belden1



# **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), flooded water-resistant polyethylene jacket.

| Physical                        | Characteristic              | s (Overall)    |            |  |              | - |  |
|---------------------------------|-----------------------------|----------------|------------|--|--------------|---|--|
| Conduct                         |                             |                |            |  |              |   |  |
| AWG:                            |                             |                |            |  |              |   |  |
| # Coa                           | X AWG Stranding C           | CCA - Bare Cop |            | Dia. (in.)<br>ed Aluminum .142           |              |   |  |
| <u> </u>                        |                             |                |            |  |              |   |  |
| Insulatio<br>Insulati           | n<br>on Material:           |                |            |  |              |   |  |
|                                 | ation Material              |                | Dia. (in.) |  |              |   |  |
| FHDP                            | PE - Foam High Densit       | y Polyethylene | .370       |  |              |   |  |
| Outer Sh<br>Outer S             | ield<br>hield Material:     |                |            |  |              |   |  |
| Layer                           | # Outer Shield Trad         | e Name Type    | Outer Shie | Id Material                              | Coverage (%) |   |  |
| 1                               | Bonded Duofoil®             |                |            | uminum Foil-Polyester Tape-Aluminum Foil | 100          |   |  |
| 2                               |                             | Braid          | TC - Tinne | d Copper                                 | 90           |   |  |
| Outer                           | Shield Flooding G           | Grease:        |            | PO - Polyolefin                          |              |   |  |
| Overall C<br>Overa              | Cable<br>all Nominal Diamet | er:            |            | 0.500 in.                                |              |   |  |
| lechani                         | cal Characteris             | stics (Over    | all)       |  |              |   |  |
| Opera                           | ating Temperature           | Range:         |            | -40°C To +80°C                           |              |   |  |
| Non-L                           | JL Temperature Ra           | ating:         |            | 80°C                                     |              |   |  |
| Bulk                            | Cable Weight:               |                |            | 120 lbs/1000 ft.                         |              |   |  |
| Max.                            | Recommended Pu              | lling Tension  | :          | 235 lbs.                                 |              |   |  |
| Min. E                          | Bend Radius (Insta          | ll)/Minor Axis | 6:         | 5 in.                                    |              |   |  |
| pplicab                         | le Specificatio             | ns and Ag      | ency Co    | ompliance (Overall)                      |              |   |  |
| Applicab                        | le Standards & I            | Environmen     | tal Prog   | rams                                     |              |   |  |
| EU CE                           | E Mark:                     |                |            | No                                       |              |   |  |
| EU Di                           | rective 2000/53/EC          | ; (ELV):       |            | Yes                                      |              |   |  |
| EU Directive 2002/95/EC (RoHS): |                             |                | Yes        |  |              |   |  |
| EU Ro                           | oHS Compliance D            | ate (mm/dd/y   | уууу):     | 01/01/2005                               |              |   |  |
| EU Di                           | rective 2002/96/EC          | (WEEE):        |            | Yes                                      |              |   |  |
| EU Di                           | rective 2003/11/EC          | (BFR):         |            | Yes                                      |              |   |  |
|                                 |                             |                |            |  |              |   |  |

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| CA Prop 65 (CJ for Wire & Cable): | Yes                                      |  |  |  |
|-----------------------------------|--|--|--|--|
| MII Order #39 (China RoHS):       | Yes                                      |  |  |  |
| Series Type:                      | RF 500                                   |  |  |  |
| Suitability                       |  |  |  |  |
| Suitability - Outdoor:            | Yes                                      |  |  |  |
| Suitability - Aerial:             | Yes - when supported by a messenger wire |  |  |  |
| Suitability - Burial:             | Yes                                      |  |  |  |
| Plenum/Non-Plenum                 |  |  |  |  |
| Plenum (Y/N):                     | No                                       |  |  |  |

# **Electrical Characteristics (Overall)**

| No | om. Characteristi | c Imp | bedance: |
|----|-------------------|-------|----------|
|    | 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.)

| Freq. (IMHZ) | 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                      |

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| 6000 | 9.5 |  |
|------|-----|--|
|------|-----|--|

#### Max. Power Rating:

| Freq. (MHz) | Rating (W) |  |  |  |  |
|-------------|------------|--|--|--|--|
| 30          | 4187       |  |  |  |  |
| 50          | 3168       |  |  |  |  |
| 150         | 1947       |  |  |  |  |
| 220         | 1602       |  |  |  |  |
| 450         | 1086       |  |  |  |  |
| 900         | 741        |  |  |  |  |
| 1500        | 558        |  |  |  |  |
| 1800        | 504        |  |  |  |  |
| 2000        | 474        |  |  |  |  |
| 2500        | 418        |  |  |  |  |
| 3000        | 376        |  |  |  |  |
| 3500        | 345        |  |  |  |  |
| 4500        | 299        |  |  |  |  |
| 5800        | 258        |  |  |  |  |
| 6000        | 252        |  |  |  |  |
|             |            |  |  |  |  |

#### Max. Operating Voltage - Non-UL:

Voltage

300 V RMS

## Notes (Overall)

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

#### **Related Documents:**

No related documents are available for this product

## Put Ups and Colors:

| Item #         | Putup    | Ship Weight | Color | Notes | Item Desc        |
|----------------|----------|-------------|-------|-------|------------------|
| 7976WB 0101000 | 1,000 FT | 106.000 LB  | BLACK | С     | #7 GIFPE SH LDPE |
| 7976WB 010500  | 500 FT   | 56.500 LB   | BLACK | С     | #7 GIFPE SH LDPE |

Notes:

C = CRATE REEL PUT-UP.

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