



CELLFLEX® Lite 7/8" low loss flexible cable

FEATURES / BENEFITS

• **Ultra Low Attenuation**

The further reduced attenuation of CELLFLEX® premium attenuation coaxial cable results in extremely efficient signal transfer in your RF system, especially at high frequencies.

• **Complete Shielding**

The solid outer conductor of CELLFLEX® coaxial cable creates a continuous RFI/EMI shield that minimizes system interference.

• **Low VSWR**

Special low VSWR versions of CELLFLEX® coaxial cables contribute to low system noise.

• **Outstanding Intermodulation Performance**

CELLFLEX® coaxial cable's solid inner and outer conductors virtually eliminate intermods. Intermodulation performance is also confirmed with state-of-the-art equipment at the RFS factory.

• **High Power Rating**

Due to their low attenuation, outstanding heat transfer properties and temperature stabilized dielectric materials, CELLFLEX® cable provides safe long term operating life at high transmit power levels.

• **Wide Range of Application**

Typical areas of application are: feedlines for broadcast and terrestrial microwave antennas, wireless cellular, PCS and ESMR base stations, cabling of antenna arrays, and radio equipment interconnects.



7/8" CELLFLEX® Lite Low-Loss Foam Dielectric Coaxial Cable

Technical features

APPLICATIONS

| | | |
|---------------------|--|--|
| Applications | | Main feed line, intended for outdoor usage |
|---------------------|--|--|

STRUCTURE

| | | |
|---------------------------------|---------|-----------------------------|
| Size | | 7/8 |
| Jacket Option | | Black |
| Inner Conductor | mm (in) | 9.1 (0.358) |
| Inner Conductor Material | | Copper Tube |
| Dielectric | mm (in) | 21.5 (0.846) |
| Dielectric Material | | Foam Polyethylene |
| Outer Conductor | mm (in) | 25.2 (0.992) |
| Outer Conductor Material | | Corrugated Aluminium |
| Jacket | mm (in) | 27.8 (1.094) |
| Jacket Material | | Polyethylene, PE |
| Cable Type | | Foam-Dielectric, Corrugated |

TESTING AND ENVIRONMENTAL

| | | |
|---------------------------------|---------|------------------------|
| Fire Performance | | Halogene Free |
| Installation Temperature | °C(°F) | -40 to 60 (-40 to 140) |
| Storage Temperature | °C (°F) | -70 to 85 (-94 to 185) |
| Operation Temperature | °C(°F) | -50 to 85 (-58 to 185) |



ELECTRICAL SPECIFICATIONS

| | | |
|--------------------------------|-------------------------|--|
| Impedance | Ω | 50 +/- 1 |
| Maximum Frequency | GHz | 5 |
| Velocity | % | 88 |
| Capacitance | pF/m (pF/ft) | 75 (22.9) |
| Inductance | uH/m (uH/ft) | 0.188 (0.057) |
| Peak Power Rating | kW | 85 |
| RF Peak Voltage | Volts | 2920 |
| Jacket Spark | Volt RMS | 8000 |
| Inner Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 2.05 (0.62) |
| Outer Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 1.6 (0.48) |
| Return Loss (VSWR) Performance | | Standard (for 40-2700, 3300-4200, 4400-5000 MHz) or Premium |
| Min. Return Loss (Max. VSWR) | dB (VSWR) | Standard 20 (1.222), Premium 24 (1.135)/ 23 (1.152) |
| Phase Stabilized | | Phase stabilized and phase matched cables and assemblies are available upon request. |
| Temperature & Power | | Standard |

MECHANICAL SPECIFICATIONS

| | | |
|--|--------------|-----------------------|
| Cable Weight, Nominal | kg/m (lb/ft) | 0.31 (0.2) |
| Minimum Bending Radius, Single Bend | mm (in) | 120 (5) |
| Minimum Bending Radius, Repeated Bends | mm (in) | 250 (10) |
| Bending Moment | Nm (lb-ft) | 13 (10) |
| Tensile Strength | N (lb) | 1440 (324) |
| Recommended / Maximum Clamp Spacing | m (ft) | 0.8 / 1 (2.75 / 3.25) |



ATTENUATION @ 20°C (68°F) AND POWER RATING @ 40°C (104°F)

| Frequency, MHz | dB per 100m | dB per 100ft | Power, kW |
|----------------|-------------|--------------|-----------|
| 0.5 | 0.09 | 0.03 | 85 |
| 1 | 0.12 | 0.04 | 85 |
| 1.5 | 0.15 | 0.05 | 70.20 |
| 2 | 0.18 | 0.05 | 60.60 |
| 10 | 0.39 | 0.12 | 27 |
| 20 | 0.56 | 0.17 | 19.10 |
| 30 | 0.68 | 0.21 | 15.50 |
| 50 | 0.89 | 0.27 | 12 |
| 88 | 1.18 | 0.36 | 8.98 |
| 100 | 1.26 | 0.38 | 8.41 |
| 108 | 1.31 | 0.40 | 8.09 |
| 150 | 1.55 | 0.47 | 6.84 |
| 174 | 1.67 | 0.51 | 6.35 |
| 200 | 1.80 | 0.55 | 5.89 |
| 300 | 2.22 | 0.68 | 4.77 |
| 400 | 2.58 | 0.79 | 4.11 |
| 450 | 2.74 | 0.84 | 3.87 |
| 500 | 2.90 | 0.88 | 3.66 |
| 512 | 2.94 | 0.90 | 3.61 |
| 600 | 3.19 | 0.97 | 3.32 |
| 700 | 3.46 | 1.06 | 3.06 |
| 750 | 3.59 | 1.10 | 2.95 |
| 800 | 3.72 | 1.13 | 2.85 |
| 824 | 3.78 | 1.15 | 2.80 |
| 894 | 3.95 | 1.20 | 2.68 |
| 900 | 3.96 | 1.21 | 2.68 |
| 925 | 4.02 | 1.22 | 2.64 |
| 960 | 4.10 | 1.25 | 2.59 |
| 1000 | 4.19 | 1.28 | 2.53 |
| 1250 | 4.72 | 1.44 | 2.25 |
| 1400 | 5.02 | 1.53 | 2.11 |
| 1500 | 5.21 | 1.59 | 2.03 |
| 1700 | 5.58 | 1.70 | 1.90 |
| 1800 | 5.76 | 1.76 | 1.84 |
| 2000 | 6.10 | 1.86 | 1.74 |
| 2100 | 6.27 | 1.91 | 1.69 |
| 2200 | 6.43 | 1.96 | 1.65 |
| 2400 | 6.75 | 2.06 | 1.57 |
| 2500 | 6.90 | 2.10 | 1.54 |
| 2600 | 7.05 | 2.15 | 1.50 |



LCF78-50JL

7/8" CELLFLEX® Lite Low-Loss Foam-Dielectric Coaxial Cable

| | | | |
|------|-------|------|------|
| 2700 | 7.20 | 2.20 | 1.47 |
| 3000 | 7.64 | 2.33 | 1.39 |
| 3500 | 8.33 | 2.54 | 1.27 |
| 4000 | 8.98 | 2.74 | 1.18 |
| 4900 | 10.10 | 3.07 | 1.05 |
| 5000 | 10.20 | 3.11 | 1.04 |

External Document Links

[Installation Instruction](#)

Notes