

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

## Product Description

CELLFLEX® Lite 7/8" low loss flexible cable

Application: Main feed line, Riser-rated In-Building



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

## Features/Benefits

- **It represents a light-weight transmission line solution**  
The light weight of CELLFLEX® Lite coaxial cable results in reduced work-force and lifting gear.
- **It is easy to transport, handle and install**  
CELLFLEX® Lite coaxial cables enable savings in shipping cost.
- **It exhibits a cost-efficient alternative to copper transmission line**  
CELLFLEX® Lite coaxial cable helps to reduce CAPEX spending.
- **It offers a user-friendly compatibility with RFS's existing range of accessories**  
CELLFLEX® Lite coaxial cable requires less inventory additions, thus reduced OPEX.
- **It enables trouble-free installation and operation**  
CELLFLEX® Lite coaxial cable avoids downtime and reduces OPEX.
- **The attenuation is comparable to the industry standard in traditional cable**  
CELLFLEX® Lite coaxial cable maintains uncompromised coverage.
- **Specially developed connectors exhibit low and stable intermodulation performance**  
CELLFLEX® Lite coaxial cable exceeds present PIM standards ensuring no dropped calls.
- **It is available with UV-resistant polyethylene or flame-retardant jackets**  
CELLFLEX® Lite coaxial cable can be used outside and in indoor applications where restrictions apply.
- **It exceeds industry standard for return loss performance**  
CELLFLEX® Lite coaxial cable means zero risk in network planning.

## Technical Features

## Structure

|                  |  |           |             |
|------------------|--|-----------|-------------|
| Inner conductor: | Copper Tube                              | [mm (in)] | 9.32 (0.37) |
| Dielectric:      | Foam Polyethylene                        | [mm (in)] | 22.4 (0.88) |
| Outer conductor: | Corrugated Aluminium                     | [mm (in)] | 25.2 (0.99) |
| Jacket:          | Polyethylene, PE, Metalhydroxite Filling | [mm (in)] | 27.8 (1.09) |

## Mechanical Properties

|  |                |                       |
|--|----------------|-----------------------|
| Weight, approximately                    | [kg/m (lb/ft)] | 0.41 (0.28)           |
| Minimum bending radius, single bending   | [mm (in)]      | 120 (5)               |
| Minimum bending radius, repeated bending | [mm (in)]      | 250 (10)              |
| Bending moment                           | [Nm (lb-ft)]   | 13 (9.6)              |
| Max. tensile force                       | [N (lb)]       | 1440 (324)            |
| Recommended / maximum clamp spacing      | [m (ft)]       | 0.8 / 1 (2.75 / 3.25) |

## Electrical Properties

|                               |                   |                |
|-------------------------------|-------------------|----------------|
| Characteristic impedance      | [Ω]               | 50 +/- 1       |
| Relative propagation velocity | [%]               | 90             |
| Capacitance                   | [pF/m (pF/ft)]    | 75 (22.9)      |
| Inductance                    | [μH/m (μH/ft)]    | 0.1875 (0.057) |
| Max. operating frequency      | [GHz]             | 5              |
| Jacket spark test RMS         | [V]               | 8000           |
| Peak power rating             | [kW]              | 85             |
| RF Peak voltage rating        | [V]               | 2920           |
| DC-resistance inner conductor | [Ω/km (Ω/1000ft)] | 1.54 (0.47)    |
| DC-resistance outer conductor | [Ω/km (Ω/1000ft)] | 1.42 (0.43)    |

## Recommended Temperature Range

|                          |           |                        |
|--------------------------|-----------|------------------------|
| Storage temperature      | [°C (°F)] | -70 to 85 (-94 to 185) |
| Installation temperature | [°C (°F)] | -25 to 60 (-13 to 140) |
| Operation temperature    | [°C (°F)] | -50 to 85 (-58 to 185) |

## Other Characteristics

|                   |  |             |            |
|-------------------|--|-------------|------------|
| Fire Performance: | Flame Retardant, LS0H  |             |            |
| VSWR Performance: | Standard   | [dB (VSWR)] | 24 (1.135) |
| Other Options:    | Phase stabilized and phase matched cables and assemblies are available upon request. |             |            |

| Frequency<br>[ MHz ] | Attenuation<br>[ dB/100m ] [ dB/100ft ] |        | Power<br>[ kW ] |
|----------------------|---|--------|-----------------|
| 0.5                  | 0.0871                                  | 0.0266 | 85.0            |
| 1.0                  | 0.123                                   | 0.0376 | 85.0            |
| 1.5                  | 0.151                                   | 0.0461 | 70.2            |
| 2.0                  | 0.175                                   | 0.0532 | 60.6            |
| 10                   | 0.392                                   | 0.119  | 27.0            |
| 20                   | 0.556                                   | 0.170  | 19.1            |
| 30                   | 0.683                                   | 0.208  | 15.5            |
| 50                   | 0.885                                   | 0.270  | 12.0            |
| 88                   | 1.18                                    | 0.360  | 8.98            |
| 100                  | 1.26                                    | 0.384  | 8.41            |
| 108                  | 1.31                                    | 0.400  | 8.09            |
| 150                  | 1.55                                    | 0.473  | 6.84            |
| 174                  | 1.67                                    | 0.510  | 6.35            |
| 200                  | 1.80                                    | 0.549  | 5.89            |
| 300                  | 2.22                                    | 0.677  | 4.77            |
| 400                  | 2.58                                    | 0.786  | 4.11            |
| 450                  | 2.74                                    | 0.837  | 3.87            |
| 500                  | 2.90                                    | 0.884  | 3.66            |
| 512                  | 2.94                                    | 0.895  | 3.61            |
| 600                  | 3.19                                    | 0.973  | 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            |
| 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                 | 10.1                                    | 3.07   | 1.05            |
| 5000                 | 10.2                                    | 3.11   | 1.04            |

Attenuation at 20°C (68°F) cable temperature  
Mean power rating at 40°C (104°F) ambient temperature