

**LCF78-50JA-ECO****7/8" CELLFLEX® ECO Low-Loss Foam-Dielectric Coaxial Cable**

The CELLFLEX® LCF78-50J-ECO cable family is a high-performance, low-loss coaxial solution designed for modern broadcast and telecom applications. It features a robust, corrugated copper outer conductor and a foam PE dielectric for excellent electrical performance. The ECO version uses a jacket made with partially recycled PE, supporting sustainability initiatives without compromising quality. Its outstanding attenuation characteristics and mechanical flexibility make it ideal for feeder and jumper cable installations. The cable is engineered for long service life, maintaining stable performance even under harsh environmental conditions. Designed for use with ECO connectors, but also fully compatible with E01 and C03 connectors when using the appropriate preparation tool.

Feature / Benefits**• Ultra Low Attenuation**

The reduced attenuation of CELLFLEX® 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

• Sustainable Performance:

Environmentally conscious jacket with recycled PE

Technical features**APPLICATIONS**

Applications	Main feed line, intended for outdoor usage
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STRUCTURE

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



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TESTING AND ENVIRONMENTAL

Installation Temperature	-40°C to 60°C (-40°F to 140°F)
Storage Temperature	-70°C to 85°C (-94°F to 185°F)
Operation Temperature	-50°C to 85°C (-58°F to 185°F)
Compliance	DIN EN ISO 9001:2015
	ISO 14001:2015
	RoHS 2011/65/EU - China RoHS SJ/T 11364-2006
	REACH (EC 1907/2006)

ELECTRICAL SPECIFICATIONS

Impedance	50 +/- 1 Ω
Maximum Frequency	5 GHz
Velocity	88 %
Capacitance	74pF/m (22.5pF/ft)
Inductance	0.185μH/m (0.056μH/ft)
Peak Power Rating	85 kW
RF Peak Voltage	2920 Volts
Jacket Spark	8000 Volt RMS
Inner Conductor dc Resistance	2.04ohm/1000 m (0.62ohm/1000 ft)
Outer Conductor dc Resistance	1.55ohm/1000 m (0.472ohm/1000 ft)
Return Loss (VSWR) Performance	Standard 20dB (1.222) / Premium 23/24dB (1.152/1.135) on specified frequencies

MECHANICAL SPECIFICATIONS

Cable Weight	0.39kg/m (0.262lb/ft)
Minimum Bending Radius	120mm (5in)
Minimum Bending Radius	250mm (10in)
Bending Moment	13 (10)
Tensile Strength	1440N (324lb)
Recommended / Maximum Clamp Spacing	0.8 / 1 (2.75 / 3.25)



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

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
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100	1.16	0.35	7.22
200	1.66	0.51	5.05
450	2.55	0.78	3.29
700	3.23	0.99	2.59
800	3.48	1.06	2.41
900	3.71	1.13	2.26
1800	5.44	1.66	1.54
2000	5.77	1.76	1.45
2200	6.09	1.86	1.38
2400	6.40	1.95	1.31
2700	6.84	2.09	1.23
3000	7.27	2.22	1.15
3500	7.95	2.42	1.05
4000	8.60	2.62	0.97
5000	9.81	2.99	0.85

External Document Links
[CELLFLEX Drum Selection Guide](#)

Notes