

# Category 7 S/FTP EuroClass Eca Cables

Datasheet: GD103088v5



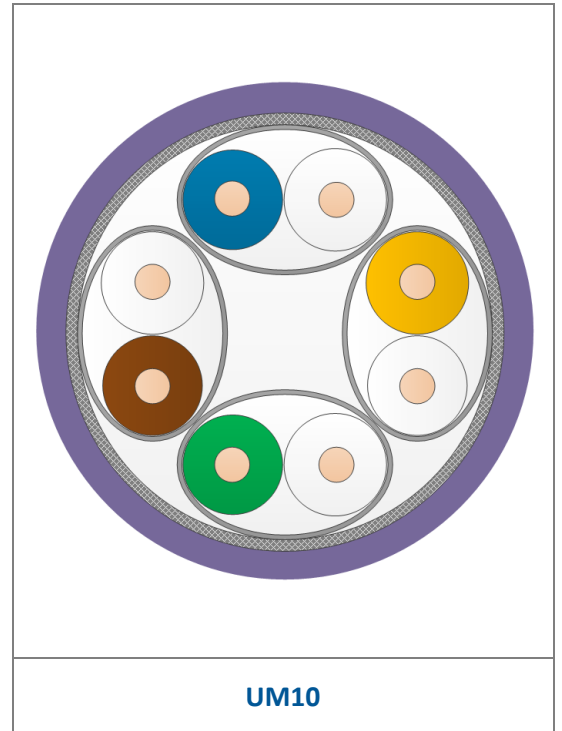
## APPLICATION

Leviton Category 7 S/FTP cables exceed the Category 7 performance standards. They are specified to 600MHz and rated to 1000MHz and are suitable for use in all Class F structured wiring cable systems. The applications supported include 10 Gigabit Ethernet, Gigabit Ethernet, Power over Ethernet and broadband video transmissions at frequencies as high as 600MHz.

## FEATURES AND BENEFITS

- 23 AWG solid annealed copper wire
- Gas injection foamed polyolefin core insulation – offering superior signal speed
- 4 twisted pairs individually screened and cabled together – providing EMI immunity
- Overall braided screen – for improved shielding efficiency, increased mechanical robustness and heat dissipation
- Available in a range of sheath materials – to suit a variety of installation environments and color coded for identification
- Designed to support all Class F protocols including 10GBASE-T
- HFFR-LS\* versions meet the requirements of the Construction Products Regulation (CPR) EuroClass Eca
- Included in the Leviton Limited 25-Year System Warranty when used in conjunction with Leviton copper connectivity. System warranties are available for qualified projects installed by certified contractors

\* Halogen Free Flame Retardant – Low Smoke



## STANDARDS

- Designed and constructed to give optimal electrical performance to the following standards:
  - ISO/IEC 11801 Class F, IEC 61156-5
  - EN 50173-1 and EN 50288-4-1
  - ANSI/TIA 568C.2
- Recommended for PoE standards: IEEE 802.3af, 802.3at, 802.3bt, Cisco UPoE, and Power over HDBaseT™ (PoH) up to 100 watts

## MATERIAL IDENTIFICATION

Material Identifier	HF1	HF3
Material Description	Standard HFFR-LS	Enhanced HFFR-LS
Flammability Rating	IEC 60332-1-2	IEC 60332-3-24
Fire EuroClass EN13501-6	Eca	Eca
Smoke Emission	IEC 61034-1 & 2	IEC 61034-1 & 2
Acid Gas Emission	IEC 60754-2	IEC 60754-2
Color	Violet	Blue

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## PRIMARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Conductor Loop Resistance	Max 19 Ω/100m	14Ω/100m
Conductor Resistance Unbalance	Max 2%	0.1%
Insulation Resistance	>5GΩ.km	>50GΩ.km
Dielectric Strength	2500 Vdc/2secs	Pass

## SECONDARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Velocity of Propagation	<534nsec/100m @ 100MHz	413nsec/100m @ 100MHz
Delay Skew	Max 45nsec/100m @ 100MHz	4nsec/100m @ 100MHz
Mean Characteristic Impedance	100Ω +/- 5Ω @ 100MHz	100Ω ± 3Ω @ 100MHz
Coupling Attenuation	Type 1	90dB
Transfer Impedance	Grade 1	8mΩ/m @ 10MHz

## ELECTRICAL PERFORMANCE

Frequency (MHz)		1	4	10	100	200	250	500	600	1000
Insertion Loss (dB/100m)	Standard	2.0	3.6	5.7	18.5	26.8	30.2	44.1	48.9	N/A
	<b>Typical</b>	<b>1.9</b>	<b>3.5</b>	<b>5.5</b>	<b>18.0</b>	<b>26.1</b>	<b>29.4</b>	<b>43.0</b>	<b>47.6</b>	<b>63.8</b>
NEXT (dB)	Standard	80.0	80.0	80.0	72.4	67.9	66.5	61.9	60.8	N/A
	<b>Typical</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>94.3</b>	<b>88.9</b>	<b>87.1</b>	<b>81.7</b>	<b>80.3</b>	<b>76.3</b>
PSNEXT (dB)	Standard	77.0	77.0	77.0	69.4	64.9	63.5	58.9	57.8	N/A
	<b>Typical</b>	<b>97.0</b>	<b>97.0</b>	<b>97.0</b>	<b>91.3</b>	<b>85.9</b>	<b>84.1</b>	<b>78.7</b>	<b>77.3</b>	<b>73.3</b>
ELFEXT (dB/100m)	Standard	80.0	80.0	74.0	54.0	48.0	46.0	40.0	38.4	N/A
	<b>Typical</b>	<b>90.0</b>	<b>90.0</b>	<b>90.0</b>	<b>70.8</b>	<b>64.8</b>	<b>62.8</b>	<b>56.8</b>	<b>55.2</b>	<b>50.8</b>
PSELFEXT (dB/100m)	Standard	77.0	77.0	71.0	51.0	45.0	43.0	37.0	35.4	N/A
	<b>Typical</b>	<b>87.0</b>	<b>87.0</b>	<b>87.0</b>	<b>67.8</b>	<b>61.8</b>	<b>59.8</b>	<b>53.8</b>	<b>52.2</b>	<b>47.8</b>
Return Loss (dB)	Standard	N/A	23.0	25.0	20.1	18.0	17.3	17.3	18.3	N/A
	<b>Typical</b>	<b>27.0</b>	<b>30.0</b>	<b>30.0</b>	<b>25.1</b>	<b>23.0</b>	<b>22.3</b>	<b>20.2</b>	<b>19.7</b>	<b>18.1</b>
ACR (dB/100m)	<b>Typical</b>	<b>98.1</b>	<b>96.5</b>	<b>94.5</b>	<b>76.3</b>	<b>62.8</b>	<b>57.7</b>	<b>38.7</b>	<b>32.6</b>	<b>12.5</b>
PSACR (dB/100m)	<b>Typical</b>	<b>95.1</b>	<b>93.5</b>	<b>91.5</b>	<b>73.3</b>	<b>59.8</b>	<b>54.7</b>	<b>35.7</b>	<b>29.6</b>	<b>9.5</b>

## INSTALLATION

Temperature (Installation)	0°C to +50°C
Temperature (Operation)	-20°C to +75°C
Max Tensile Load (Installation)	10kg per simplex cable
Segregation Class	Class D

Min Bend Radius (Installation)	8 x Outer Diameter
Min Bend Radius (Operation)	4 x Outer Diameter
Field Test NVP Value	0.80

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## PRINT LEGEND

Example print legend:

[Length Mark]m BRAND-REX a LEVITON company UM10-HF1-Eca Cat 7 S/FTP IEC 60332-1-2 Euroclass Eca NVP 0.80  
MADE IN UK [ID number] [Week/Year]

## STANDARD PACKAGING SPECIFICATIONS

Part Number	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)	Reel Size Flange x Width (mm)	Gross Weight (kg/Item)	Items Per Pallet
UM10-HF1-Eca-500VT <sup>†</sup>	7.0	48.4	400 x 390	26.7	12
UM10-HF1-Eca-1000VT <sup>‡</sup>	7.0	48.4	600 x 405	54.8	4
UM10-HF1-Eca-D500VT <sup>§</sup>	7.1 x 14.3	100.0	600 x 405	113.0	4
UM10-HF1-Eca-D1000VT	7.1 x 14.3	100.0	750 x 405	109.3	2
UM10-HF3-Eca-500BU	7.2	52.7	400 x 390	28.9	12
UM10-HF3-Eca-1000BU	7.2	52.7	600 x 405	59.2	4
UM10-HF3-Eca-D500BU	7.2 x 14.5	105.4	600 x 405	118.4	4
UM10-HF3-Eca-D1000BU	7.2 x 14.5	105.4	750 x 405	114.7	2

<sup>†</sup>500 = 500m length

<sup>‡</sup>1000 = 1000m length

<sup>§</sup>'D' denotes duplex cable

*"Leviton is **dedicated to designing, developing and manufacturing** sustainable **high performance** structured cabling and speciality **cabling solutions**"*

The information contained in this document is valid and correct at the time of issue. Leviton reserves the right to modify details without notice in light of subsequent standard/specification changes and ongoing technical developments.