

# Category 6 U/UTP External Cable

Datasheet: GD041784v11



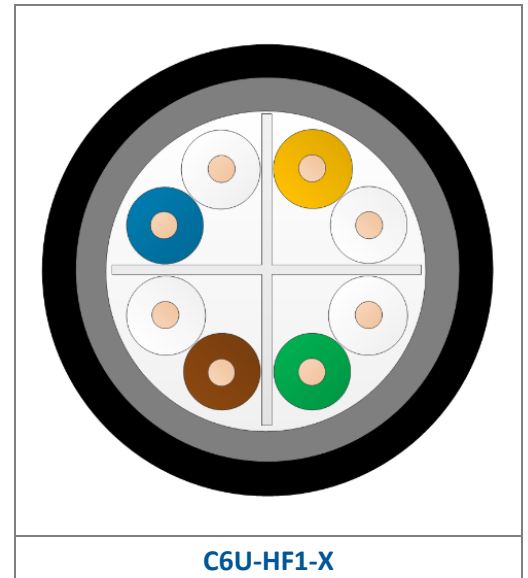
## APPLICATION

Leviton's Category 6 U/UTP External cable exceeds the Category 6 performance standards. It is rated to 250MHz and is suitable for use in all Class E structured wiring cable systems. Category 6 U/UTP External cable supports Gigabit Ethernet, Power over Ethernet, voice, and broadband video transmission at frequencies up to 250MHz.

## FEATURES AND BENEFITS

- Black Polyethylene outer jacket offers superior UV and water resistance
- HFFR-LS\* inner jacket
- 23 AWG solid annealed copper wire
- 4 unshielded twisted pairs cabled together
- Central separator for increased internal crosstalk performance
- Designed for installation in an external protected environment
- 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
- Designed and manufactured in a carbon neutral facility in the UK
- Reel and box packaging is 100% recyclable

\* Halogen Free Flame Retardant – Low Smoke



## STANDARDS

- Designed and constructed to give optimum electrical performance to the following standards:
  - ISO/IEC 11801 Class E, IEC 61156-5
  - EN50173-1 and EN 50288-6-1
  - ANSI/TIA 568D.2
- Supports Gigabit Ethernet
- Recommended for PoE standards:
  - IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af
  - IEEE 802.3bt PoE Type 2 (30 Watts) formerly 802.3at
  - IEEE 802.3bt PoE Type 3 (60 Watts)
  - IEEE 802.3bt PoE Type 4 (90 Watts)
  - Cisco UPoE (60 Watts)
  - Cisco UPoE+ (90 Watts)
  - Power over HDBaseT™ PoH (95 Watts)

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## REACTION TO FIRE

Material Identifier	<b>HF1-X</b>
Material Description	Inner - HFFR-LS Outer - Polyethylene
Flammability Rating	N/A – External Only
Classification / EuroClass	N/A – External Only

## PRIMARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Conductor Loop Resistance	Max 19 Ω/100m	16 Ω/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	490nsec/100m @ 100MHz
Delay Skew	Max 45nsec/100m @100MHz	25nsec/100m @ 100MHz
Mean Characteristic Impedance	100Ω +/- 5Ω @ 100MHz	100Ω ± 3Ω @ 100MHz
Transverse Conversion Loss (TCL)	≥50-10log(f)dB	61dB @ 10MHz

## ELECTRICAL PERFORMANCE

Frequency (MHz)		1	4	10	20	100	200	250	500	550
Insertion Loss (dB/100m)	Standard	2.0	3.8	6.0	8.5	19.8	29.0	32.8	N/A	N/A
	<b>Typical</b>	<b>1.7</b>	<b>3.5</b>	<b>5.6</b>	<b>8.0</b>	<b>18.9</b>	<b>27.6</b>	<b>31.1</b>	<b>43.0</b>	<b>45.4</b>
NEXT (dB)	Standard	75.3	66.3	60.3	55.8	45.3	40.8	39.3	N/A	N/A
	<b>Typical</b>	<b>91.0</b>	<b>91.5</b>	<b>86.0</b>	<b>80.4</b>	<b>69.2</b>	<b>64.0</b>	<b>64.1</b>	<b>46.0</b>	<b>45.4</b>
PSNEXT (dB)	Standard	72.3	63.3	57.3	52.8	42.3	37.8	36.3	N/A	N/A
	<b>Typical</b>	<b>83.7</b>	<b>84.2</b>	<b>78.0</b>	<b>71.9</b>	<b>61.9</b>	<b>57.3</b>	<b>57.0</b>	<b>44.0</b>	<b>43.4</b>
ACR-F (dB)	Standard	67.8	58.0	50.0	44.0	30.0	24.0	22.0	N/A	N/A
	<b>Typical</b>	<b>91.2</b>	<b>83.7</b>	<b>75.8</b>	<b>68.2</b>	<b>52.3</b>	<b>47.8</b>	<b>45.0</b>	<b>31.0</b>	<b>30.2</b>
PSACR-F (dB)	Standard	64.8	55.0	47.0	42.0	27.0	21.0	19.0	N/A	N/A
	<b>Typical</b>	<b>84.8</b>	<b>76.4</b>	<b>68.4</b>	<b>61.4</b>	<b>46.4</b>	<b>42.4</b>	<b>39.6</b>	<b>28.0</b>	<b>27.2</b>
Return Loss (dB)	Standard	20.0	23.0	25.0	25.0	20.1	18.0	17.3	N/A	N/A
	<b>Typical</b>	<b>34.0</b>	<b>36.5</b>	<b>39.1</b>	<b>41.6</b>	<b>37.1</b>	<b>31.3</b>	<b>30.2</b>	<b>20.2</b>	<b>19.9</b>

- The standard values shown are the most demanding taken from across the relevant IEC, TIA and EN specifications. These standards values are the maximum permissible for Insertion loss and the minimum permissible for other parameters.
- N/A = Not applicable

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## INSTALLATION

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

Min Bend Radius (Installation)	8 x Outer Diameter
Min Bend Radius (Operation)	4 x Outer Diameter
Field Test NVP Value	0.69

## STANDARD PACKAGING SPECIFICATIONS - REELS

Part Number	Packaging Length (m)	Color	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)	Reel Size Flange Diameter x Width (mm)	Gross Weight (kg/Item)	Items Per Pallet
C6U-HF1-X-500BK*	500	Black	7.0	48.7	400 x 390	26.8	12
C6U-HF1-X-1000BK*	1000	Black	7.0	48.7	600 x 405	55.2	4

## COUNTRY OF ORIGIN

COO: United Kingdom

*“Leviton is **dedicated to designing, developing and manufacturing** sustainable **high-performance** structured cabling and specialty **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.