

# Category 5e U/UTP EuroClass Eca Cables

Datasheet: GD102446v10



## APPLICATION

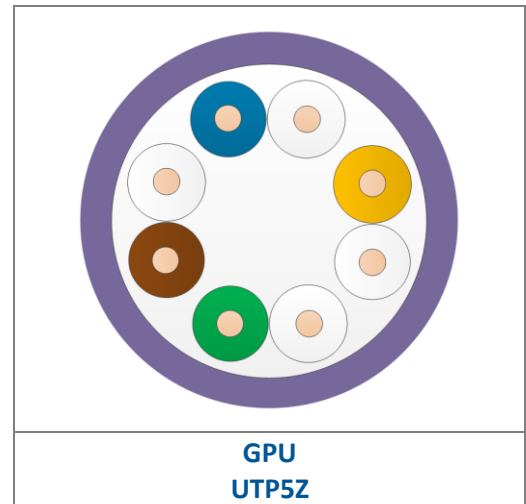
Leviton Category 5e U/UTP cables exceed Category 5e performance standards. They are rated to 100MHz and are suitable for use in all Class D structured wiring cable systems. Category 5e U/UTP cables support Gigabit Ethernet, Power over Ethernet and voice transmissions at frequencies up to 100MHz.

## FEATURES AND BENEFITS

- 24 AWG solid annealed copper wire
- Polyolefin core insulation
- 4 unshielded twisted pairs cabled together
- HFFR-LS\* jacket meets 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

† Also available in a range of non-standard colors



## STANDARDS

- Designed and constructed to give optimum electrical performance to the following standards:
  - ISO/IEC 11801 Class D, IEC 61156-5
  - EN50173-1, EN 50288-3-1
  - ANSI/TIA 568.2-D
- Supports Gigabit Ethernet
- Supports Power over Ethernet (PoE) and Power over Ethernet Plus (PoE+) applications

## MATERIAL IDENTIFICATION

Material Identifier	HF1	HF1-X
Material Description	Standard HFFR-LS	Inner - HFFR-LS Outer - Polyethylene
Flammability Rating	IEC 60332-1-2	N/A – External Only
Fire EuroClass EN13501-6	Eca	N/A – External Only
Smoke Emission	IEC 61034-1 & 2	N/A – External Only
Acid Gas Emission	IEC 60754-2	N/A – External Only
Color	Violet†	Inner - Violet Outer - Black

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## PRIMARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Conductor Loop Resistance	Max 19 Ω/100m	18 Ω/100m
Conductor Resistance Unbalance	Max 2%	0.1%
Insulation Resistance	>5GΩ.km	>45GΩ.km
Dielectric Strength	2500 Vdc/2secs	Pass

## SECONDARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Propagation Delay	<534nsec/100m @ 100MHz	487nsec/100m @ 100MHz
Delay Skew	Max 45nsec/100m @100MHz	38nsec/100m @100MHz
Mean Characteristic Impedance	100Ω ± 5Ω @ 100MHz	100Ω ± 3Ω @ 100MHz
Transverse Conversion Loss (TCL)	≥50-10log(f)dB	65dB @ 10MHz

## ELECTRICAL PERFORMANCE

Frequency (MHz)		1	4	10	16	20	31.25	100	200	250
Insertion Loss (dB/100m)	Standard	2.0	4.1	6.5	8.2	9.3	11.7	22.0	N/A	N/A
	Typical	<b>1.9</b>	<b>3.8</b>	<b>6.0</b>	<b>7.7</b>	<b>8.6</b>	<b>10.9</b>	<b>20.6</b>	<b>30.4</b>	<b>34.6</b>
NEXT (dB)	Standard	65.3	56.3	50.3	47.2	45.8	42.9	35.3	N/A	38.3
	Typical	<b>76.8</b>	<b>67.8</b>	<b>61.8</b>	<b>58.7</b>	<b>57.3</b>	<b>54.4</b>	<b>46.8</b>	<b>42.3</b>	<b>40.8</b>
PSNEXT (dB)	Standard	62.3	53.3	47.3	44.2	42.8	39.9	32.3	N/A	N/A
	Typical	<b>73.8</b>	<b>64.8</b>	<b>58.8</b>	<b>55.7</b>	<b>54.3</b>	<b>51.4</b>	<b>43.8</b>	<b>39.3</b>	<b>37.8</b>
ELFEXT (dB/100m)	Standard	63.8	51.8	43.8	39.7	37.8	33.9	23.8	N/A	N/A
	Typical	<b>81.4</b>	<b>69.4</b>	<b>61.4</b>	<b>57.3</b>	<b>55.4</b>	<b>51.5</b>	<b>41.4</b>	<b>35.4</b>	<b>33.4</b>
PSELFEXT (dB/100m)	Standard	60.8	48.8	40.8	36.7	34.8	30.9	20.8	N/A	N/A
	Typical	<b>78.4</b>	<b>66.4</b>	<b>58.4</b>	<b>54.3</b>	<b>52.4</b>	<b>48.5</b>	<b>38.4</b>	<b>32.4</b>	<b>30.4</b>
Return Loss (dB)	Standard	20.0	23.0	25.0	25.0	25.0	23.6	20.1	N/A	N/A
	Typical	<b>24.8</b>	<b>27.8</b>	<b>29.8</b>	<b>29.8</b>	<b>29.8</b>	<b>28.4</b>	<b>24.9</b>	<b>22.8</b>	<b>22.1</b>
ACR (dB/100m)	Typical	<b>74.9</b>	<b>64.0</b>	<b>55.8</b>	<b>51.1</b>	<b>48.7</b>	<b>43.4</b>	<b>26.2</b>	<b>11.9</b>	<b>6.2</b>
PSACR (dB/100m)	Typical	<b>71.9</b>	<b>61.0</b>	<b>52.8</b>	<b>48.1</b>	<b>45.7</b>	<b>40.4</b>	<b>23.2</b>	<b>8.9</b>	<b>3.2</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 B

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

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## PRINT LEGEND

Example print legend UTP5Z Parts:

[Length Mark]m LEVITON UTP5Z BRAND-REX GPU-HF1-Eca Cat 5e U/UTP 4 PAIR 24 AWG HFFR IEC 60332-1-2 EuroClass Eca NVP 0.69 MADE IN UK [ID number] [Week/Year]

Example print legend GPU Parts:

[Length Mark]m BRAND-REX a LEVITON company GPU-HF1-Eca Cat 5e U/UTP IEC 60332-1-2 EuroClass Eca NVP 0.69 MADE IN UK [ID number] [Week/Year]

## STANDARD PACKAGING SPECIFICATIONS - REELS

Brand-Rex Part Number	Leviton 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
GPU-HF1-Eca-500VT	129-UTP5Z-5VS	500	Violet	5.05	32.2	400 x 400 x 210	17.6	24
GPU-HF1-Eca-500WH	128-UTP5Z-5WS	500	White	5.05	32.2	400 x 400 x 210	17.6	24
GPU-HF1-Eca-1000VT*	-	1000	Violet	5.05	32.2	400 x 400 x 390	34.7	12
GPU-HF1-Eca-D500VT*†	-	500	Violet	5.05 x 10.3	63.1	400 x 400 x 390	34.7	12
GPU-HF1-Eca-D1000VT*†	-	1000	Violet	5.05 x 10.3	63.1	600 x 600 x 405	71.9	4
GPU-HF1-X-500BK*	-	500	Black	6.3	42.6	400 x 400 x 310	23.3	18
GPU-HF1-X-1000BK*	-	1000	Black	6.3	42.6	465 x 465 x 390	45.6	6

\* Only available in Europe and Middle East regions

† 'D' denotes duplex cable

## STANDARD PACKAGING SPECIFICATIONS - BOXES

Brand-Rex Part Number	Leviton Part Number	Packaging Length (m)	Color	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)	Box Size L x W x H (mm)	Gross Weight (kg/Item)	Items Per Pallet
GPU-HF1-Eca-Rlx-305VT	125-UTP5Z-MVB	305	Violet	5.05	32.2	365 x 250 x 365	9.9	27 or 18
GPU-HF1-Eca-Rlx-305WH	122-UTP5Z-MWB	305	Violet	5.05	32.2	365 x 250 x 365	9.9	27 or 18

*"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.