

Category 6 U/UTP Copper/Optical Hybrid Cable

Datasheet: GD068863v11

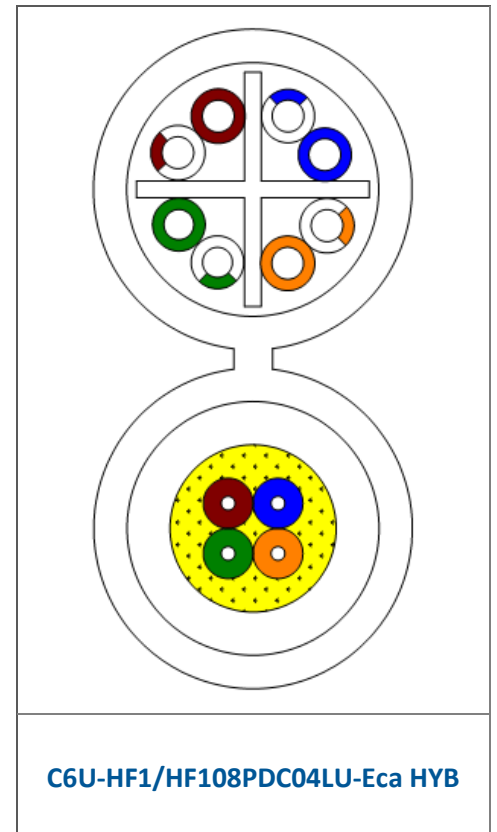


APPLICATION

Leviton Category 6 U/UTP Copper/Optical Hybrid cable has been designed primarily for the “Fiber to the Home” market. The copper partition consists of Leviton Category 6 U/UTP cable, which supports Gigabit Ethernet, Power over Ethernet, voice, and broadband video transmissions at frequencies up to 250MHz. The optical partition consists of Leviton’s Premises Distribution Cable (PDC) comprising of 4 tight buffered fibers in a compact cable construction.

FEATURES AND BENEFITS

- Designed for Fiber to the Home market
- Hybrid cable comprising of both Cat 6 U/UTP and Optical Premises Distribution Cable (PDC)
- Cat 6 U/UTP consists of:
 - 4 unshielded twisted pairs cabled together
 - 23 AWG solid annealed copper wire with polyolefin core insulation
 - Central cross filler – for increased internal crosstalk performance
 - Designed to support all Class E protocols including Gigabit Ethernet
- Optical Premises Distribution Cable (PDC) consists of:
 - 4 x Bend Insensitive G.657.A1 HFFR-LS* buffered fibers
 - High tensile yarns - flexible strength members
- 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
- 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 568.2-D
- Supports Gigabit Ethernet
- Recommended for PoE standards:
 - IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af and IEEE 802.3bt PoE Type 2 (30 Watts) formerly 802.3at
 - IEEE 802.3bt PoE Type 3 (60 Watts) and IEEE 802.3bt PoE Type 4 (90 Watts)
 - Cisco UPoE (60 Watts), Cisco UPoE+ (90 Watts) and Power over HDBaseT™ PoH (95 Watts)

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REACTION TO FIRE

	C6U	PDC
Material Identifier	HF1	LU
Material Description	Standard HFFR-LS	Standard HFFR-LS
Flammability Rating	IEC/EN 60332-1-2	IEC/EN 60332-1-2
EuroClass Level EN13501-6	Eca	Eca
Standard Color	White	White

PRIMARY ELECTRICAL PARAMETERS – C6U

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 – C6U

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 – C6U

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

- 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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FIBER IDENTIFICATION - PDC

Fiber Identifier	108
IEC 60793 Reference	2-50-B6_a
ITU-T Recommendation	G.657.A1
ISO/IEC 11801 Category	OS1/OS2

INSTALLATION

Temperature (Installation)	0°C to +50°C	Min Bend Radius (Installation)	15 x Outer Diameter
Temperature (Operation)	-20°C to +60°C	Min Bend Radius (Operation)	10 x Outer Diameter
Max Tensile Load (Installation)	10kg per simplex cable	Field Test NVP Value	0.69
Segregation Class	Class B		

STANDARD PACKAGING SPECIFICATIONS - REELS

Part Number	Color	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)	Length (m)	Reel Weight (kg)	Reels Per Pallet
C6U-HF1/HF108PDC04LU-Eca HYB	White†	11.5 x 5.75	79	500	44	6

†Available in a range of non-standard colors

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.