

# BiTLAN<sup>®</sup> U/UTP cat.6 350 MHz



LAN cables

Data transmission cable



## Technical data:

### Thermal parameters:

#### Temperature range:

operating temperature: -30 °C to 70 °C  
min. installation temp: -10 °C

### Electrical parameters:

**Conductor diameter:** 0,54 ± 0,015 mm

**Insulated core diameter:** 0,99 ± 0,03 mm

**DC loop resistance at 20 °C (max):**

165 Ω/km

**Insulation resistance (min):** 5 GΩ x km

**Resistance unbalance within a pair:** ≤ 2 %

**Mutual capacitance at 1 kHz:** 50 ± 5 nF/km

**Capacitance unbalance pair to ground**

**at 1 kHz (max):** 1600 pF/km

**Nominal voltage:** 150 V

**Test voltage at 1 min.:**

AC: 50 Hz: 700 V

DC: 1000 V

**Characteristic impedance at 100 MHz:**

100 ± 5 Ω

**NVP value:** 67 %

**Return loss dB (min):**

f = 4 + 10 MHz: 20 + 5 x log<sub>10</sub>(f)

f = 10 + 20 MHz: 25

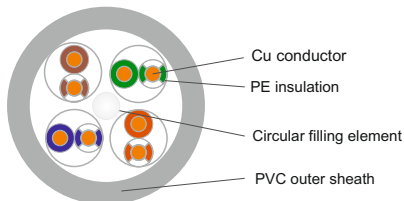
f = 20 + 350 MHz: 25 - 7 x log<sub>10</sub>(f/20)

### Mechanical parameters:

#### Bending radius:

during operation: ≥ 4 x Ø

during installation: ≥ 6 x Ø



## Design:

#### Conductors:

solid round copper conductors

#### Insulation:

special polyolefin compound

#### Core identification:

wh/bu-bu, wh/or-or,wh/gn-gn, wh/bn-bn

#### Core arrangement:

cores twisted in pairs, pairs twisted together with a circular filling element

#### Outer sheath:

PVC compound

#### Outer sheath colour:

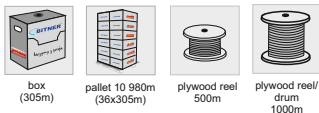
grey RAL 7035, other colours available on customer's request

**Marking:** BITNER BiTLAN U/UTP 4x2x23AWG(0,54) cat.6 350MHz EN 50173-1 ISO/IEC 11801 ANSI/TIA 568-C.2 ID no. CE RoHS www.bitner.com.pl meters

## Application:

BiTLAN U/UTP cat.6 350MHz cables are applicable to computer networks with operating frequency band up to 350MHz. Suitable for transmission of data, audio and video signals with bitrate up to 1 Gb/s. Dedicated for fixed installations within indoor structured cabling systems as per EN 50173-1, ISO/IEC 11801, ANSI/TIA 568-C.2 standards, as well as within industrial networks not exposed to external electromagnetic interferences. Cables classified according to **EN 50575 (CPR)**.

## Packaging:



Cat. no.	Construction	Cu wire	Outer diameter* [mm]	CPR classification EN 50575	Cable weight [kg]	Bandwidth [MHz]
T10044	U/UTP cat.6	23AWG(0,54)	5,8	Eca	38	350

\*Outer diameter tolerance: +/-5%

Cable Factory BITNER reserves the right to modify the specifications without prior notice

# BiTLAN<sup>®</sup> U/UTP cat.6 350 MHz

Data transmission cable

## Requirements of teletransmission data:

Frequency MHz	1	4	10	16	20	30	45	60	80	100	120	150	180	200	220	250	280	300	320	350
Attenuation ≤ dB/100m	2,1	3,8	6,0	7,6	8,5	10,5	13,0	15,1	17,7	19,9	22,0	24,8	27,5	29,1	30,7	33,0	35,2	36,6	38,0	40,0
NEXT ≥ dB	66,0	65,3	59,3	56,2	54,8	52,1	49,5	47,6	45,8	44,3	43,1	41,7	40,5	39,8	39,2	38,3	37,6	37,1	36,7	36,1
PS NEXT ≥ dB	64,0	63,3	57,3	54,2	52,8	50,1	47,5	45,6	43,8	42,3	41,1	39,7	38,5	37,8	37,2	36,3	35,6	35,1	34,7	34,1
ELFEXT ≥ dB/100m	66,0	58,0	50,0	45,9	44,0	40,5	36,9	34,5	32,0	30,0	28,4	26,5	24,9	24,0	23,1	22,0	21,0	20,5	19,9	19,1
PS ELFEXT ≥ dB/100m	64,0	55,0	47,0	42,9	41,0	37,5	33,9	31,4	28,9	27,0	25,4	23,5	21,9	21,0	20,1	19,0	18,0	17,5	16,9	16,1
RL ≥ dB	20,0	23,0	25,0	25,0	25,0	23,8	22,5	21,7	20,8	20,1	19,5	18,9	18,3	18,0	17,7	17,3	17,0	16,8	16,6	16,3

## Transmission parameters graphs - examples of measurement results

