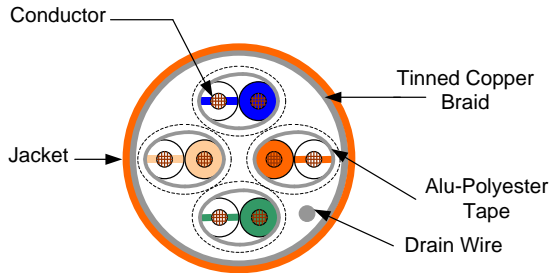


## TECHNICAL SPECIFICATION



### Applications:

- Horizontal Network and voice in structured Cabling System, including IEEE802.3an:10G Base-T Gigabit Ethernet,
- 2.4/1.2Gb/s ATM
- Digital Video
- Broadband & baseband analogue video

Part Number	Item Number
V731132	Ultra Seven, Category 7 SFTP

Conductor	
Composition (No./M)	1/0.565 ± 0.008 mm
Material	Annealed Copper Wire
Outside Diameter (mm)	0.56 ± 0.01
AWG (Solid)	23
Center Cross Filler	
Material	-
Wrapping and overall Screen	
ALU/Polyester Tape	Thickness(mm) 0.025
Type	Each Pair Shielded
Jacket/Sheath	
Material	LSZH
Thickness diameter (mm)	-
Overall Diameter (mm)	7.8 ± 0.3 mm
Color	Orange

Insulation	
Material	Foam PE
Thickness(Min)	0.33
Nominal Diameter (mm)	1.26 ± 0.05
Drain wire	
Material	Tinned Copper
Diameter (mm)	0.495
Braiding	
Material	Tinned copper
Percentage	40%
Color Code	
Pair 1	Blue/White –blue
Pair 2	Orange/White-orange
Pair 3	Green/White-green
Pair 4	Brown/White-brown

Technical Data - Electrical		
Max. Conductor resistance ( $\Omega/100m$ @ 20°C)	9.50	
Max. DC resistance unbalance (Individual Pair , %)	4	
Max. Mutual capacitance (pF/m)	58	
Max. Pair to ground capacitance unbalanced (pF/100m)	16	
Max. Delay skew (ns/100m)	25	$4 \leq f \leq 600MHz$
Max. Insertion Loss (dB/100m)	$1.8*\sqrt{f} + 0.01* f + 0.2/ \sqrt{f}$	
Min. Pair to Pair NEXT (dB/100m)	$102.4 - 15 * \log (f)$	
	Values greater than 75dB shall be converted to 75dB	
Min. Power Sum pr-pr NEXT(dB/100m)	$99.4 - 15 * \log(f)$	
	Values greater than 75dB shall be converted to 75dB	
Min. ELFEXT(Db/100m)	$95.3 - 20 * \log (f)$	
	Values greater than 75dB shall be converted to 75dB	
Min. Power Sum ELFEXT (dB/100m)	$92.3 - 20 * \log (f)$	
	Values greater than 75dB shall be converted to 75dB	
Min. Return Loss(dB)	$20 + 5 * \log(f)$	$1 \leq f \leq 10MHz$
	25	$10 \leq f < 20MHz$
	$25 - 7 * \log (f/20)$	$20 \leq f < 250MHz$
	17.3	$250 < f \leq 600MHz$
Max. Propagation Delay (ns/100m)	$534 + 36 / \sqrt{f}$	
Min. Power Sum Alien NEXT ( dB/100m)	$80 - 10 * \log (f)$	$f < 100 MHz$
	$90 - 15 * \log (f)$	$f \geq 100 MHz$
	Values greater than 76dB shall be converted to 76dB	
Min. Power Sum Alien ELFEXT ( dB/100m)	$77 - 20 * \log (f)$	
	Values greater than 76dB shall be converted to 76dB	
Input Impedance	Frequency (f)	( $\Omega$ )
	$1 \leq f \leq 100 MHz$	$100 \pm 10\%$
	$100 < f \leq 250MHz$	$100 \pm 15\%$
	$f > 250 MHz$	$100 \pm 22\%$

Electrical Performance									
Frequency	Ins. Loss (dB/100m)	Pair to Pair		Power sum				RL (dB)	Po. Delay (ns/100)
(MHz)	Max.	NEXT (dB/100m)	ELFEXT (dB/100m)	NEXT	ELFEXT	ANEXT	AACR-F	Min.	Max.
		(dB/100m)							
		Min.	Min.	Min.	Min.	Min.	Min.		
1	2.10	75.00	75.00	75.00	80.00	80.00	77.00	20.00	570.00
4	3.70	75.00	75.00	75.00	74.00	74.00	65.00	23.00	552.00
10	5.80	75.00	74.00	75.00	70.00	70.00	57.00	25.00	545.40
16	7.30	75.00	69.90	75.00	68.00	68.00	52.90	25.00	543.00
20	8.20	75.00	68.00	75.00	67.00	67.00	51.00	25.00	542.00
31.25	9.20	75.00	66.00	75.00	66.00	66.00	49.00	24.30	541.20
62.5	10.30	75.00	64.10	75.00	65.10	65.10	47.10	23.60	540.40
100	14.60	75.00	58.10	72.50	62.00	62.00	41.10	21.50	538.60
155	18.50	72.40	54.00	69.40	60.00	60.00	37.00	20.10	537.60
200	26.50	67.90	48.00	64.90	45.00	55.50	31.00	18.00	536.50
250	29.70	66.40	46.00	63.40	43.00	54.00	29.00	17.30	536.30
350	32.70	65.20	44.50	62.20	41.50	52.80	27.50	17.30	536.10
400	38.00	63.40	42.00	60.40	39.00	51.00	25.00	17.30	535.80
500	42.80	61.90	40.00	58.90	37.00	49.50	23.00	17.30	535.60
600	47.10	60.70	38.40	57.70	35.40	48.30	21.40	17.30	535.50

Note : All tests include 401 points swept frequency measurements.

All electrical characteristics are given at 20° C

Reference Standard
International : 25N1318 1 <sup>st</sup> PDAM 1.2 to ISO/IEC 11801 Oct. 2006, Category 7
North American : Draft ANSI/TIA/EIA-568-B.2 Augmented Cat.7

Certification
Delta EC

<b>Technical Data - Physical</b>		
Flame retardant test	IEC 332-1	
Insulation shrink back	150mm, 121 ± 1°C X 1 hr ≤ 9.5 mm	
Cold bend test	- 20 ± 2°C X 4hrs, no crack	
Dielectric strength	AC 1.2 KV/min.	
Insulation	<b>Before Aging</b>	<b>After Aging</b>
Min. tension strength (psi)	1300	75% before aging (100°CX48hr)
Min. elongation(%)	300	75% before aging (100°CX48hr)
Jacket	<b>Before Aging</b>	<b>After Aging</b>
Min. tension strength (psi)	1300	70% before aging (100°CX168hrs)
Min. elongation(%)	100	70% before aging (100°CX168hrs)
Min. bending radius (mm)	240	
Max. pulling tension (N)	40	
Installation temperature	0°C to +50°C	
Operating temperature	-10°C to +50°C	

<b>Packing</b>
500/ 1000 meter on a wooden drum with standard Velocity export protector PE