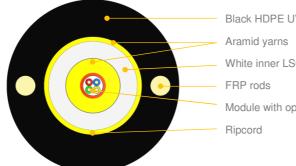


Туре:	VC-T60	REV 1.3
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# FTTH indoor/outdoor double jacket drop cable with aramid yarns and FRP rods reinforcement **VC-T60**



Black HDPE UV resistant outer sheath

White inner LSOH sheath

Module with optical fibres

\*schematic drawing, not to scale

### **APPLICATION:**

Drop cable for FTTH networks Optical access cable with aramid yarns reinforcement Direct buried construction Fully dielectric cable Last mile connection

## **DESIGN:**

Aramid yarns as strength and water absorbent elements Easy strip buffer or modules with optical fibres Embedded strength members (FRP) Highly resistant outer jacket made of HDPE material UV stabilized

## **DESIGN:**

	Quantity [pcs]			Ø	Nominal	Max	Max	
Variant	Fibres	Fibres per	Total	Active tubes	nominal (±0,2)	weight (±10%)	allowed tension	static tension
	mo	module	lubes	[mm]	[kg/km]	[N], ε <sub>f</sub> ≤0,33%	[N], ε <sub>f</sub> ≤0,05%	
1x1F	1	1	1	1	6,0	30	800	250
1x2F	2	2	1	1	6,0	30	800	250
1x4F	4	4	1	1	6,0	30	800	250

## TECHNICAL AND ENVIRONMENTAL CABLE CHARACTERISTICS

Test	Specification	Method	Requirements		
Tensile strength	IEC60794-1-21 Method E1	Sustained load: 250N	Fibre strain: $\leq 0.05\%$ (during test) $\leq 0.05\%$ (after test)Attenuation increment: $\Delta \alpha \leq 0.05 dB$ @ 1550nm (after test)		
		Extended load: 800N	No significant damage to fibre unitFibre strain: $\leq 0.33\%$ (during test) $\leq 0.05\%$ (after test)Attenuation increment: $\Delta \alpha \leq 0.05 dB$ @ 1550nm (after test)No significant damage to fibre unit		
Crush resistance	IEC60794-1-21 Method E3	2000 [N/10 cm]	Δα ≤ 0.1dB @ 1550nm (after test) Δα reversible @ 3000 N		
Impact resistance	IEC60794-1-21 Method E4	Sample length: ~20m Impact energy: 5N.m Radius: 10 mm No. of impacts: 3 at different points 200mm apart	$\Delta \alpha \le 0.1$ dB @ 1550nm (after test) $\Delta \alpha$ reversible @ 7 N.m No jacket cracking and fibre breakage		
Torsion	IEC60794-1-21 Method E7	Cable length to be twisted: 1m No. of cycles: 10 Twist angle: ±180° Load: 25N	Δα≤0.1dB @ 1550nm (throughout the test) No jacket cracking and fibre breakage		
Bending	IEC60794-1-21 Method E11	Mandrel radius: 60mm / 10 turns / 5 flexing cycles	∆α≤0.1dB @ 1550nm (after test) No jacket cracking and fibre breakage		
Water penetration	IEC 60794-1-22 Method F5B	Water head: 1m Sample length: 3m Time: 168 hrs	No water leakage		
Tube kink	IEC 60794-1-21 Method G7	Kink radius: 30mm Number of samples: 3	No tube kink		
Temperature cycling	IEC 60794-1-22 Method F1	$\begin{array}{c} +23 ^{\circ}\text{C} \rightarrow -40 ^{\circ}\text{C}(\text{T}_{\text{A2}}) \rightarrow \\ +70 ^{\circ}\text{C}(\text{T}_{\text{B2}}) \rightarrow +23 ^{\circ}\text{C} \end{array}$	For $T_{A2}$ and $T_{B2} \Delta \alpha \le 0.1$ dB/km Test wavelength: 1550nm		



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#### **APPLICATION AND CABLE SPAN CHARACTERISTIC**

Loading Conditions	Span	Sag (installed) (2%)	Tension under loading conditions	Total sag	Horizontal sag	Vertical sag
	[m]	[m]	[N]	[m]	[m]	[m]
NSC Light	75	1,5	800	2,9	2,7	0,9
NSC Medium	37	0,74	800	1,5	1,0	1,2
NSC Heavy	20	0,4	800	0,8	0,4	0,7

#### **OPTICAL FIBRE AND TIGHT TUBES COLOUR IDENTIFICATION** For colour identification see **DSH\_Colors\_CODE\_XXXX** document.

#### **FIBRE PARAMETERS**

For selected postproduction fibres parameters see **DSH\_OFP** document.

#### MARKING

Marking is white. Print is made at 1 meter intervals using jet printer.

Example:

FIBRAIN VC-T60 4F SM G652D 1M4F "YEAR OF MANUFACTURE" "LASER SYMBOL" "LENGTH MARKING" "BATCH NUMBER"

The accuracy of marking is ± 0.5%. Remarking is in accordance with Bellcore GR 20 and supersedes earlier markings. Occasional loss of marking is possible. Cables can be supplied with a range of single mode or multimode fibres and customized print.

#### PACKING

Cables will be shipped on disposable wooden or treated wooden drums. Both ends of the cable will be capped and accessible for testing. Rotation direction arrow will be marked on the drum together with identification information.

#### **DELIVERY LENGTH**

Typical single cable length is 2000 – 8000 meters ± 5%, with possibility of supplying up to 5% of total contract quantity as short length cables which should be above 1000 meters long. Tolerance of 5 % of order quantity shall be allowed.

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