



Cable Construction					
- Number of fibers	24	48	72	96	144
- Number of loose tubes	2	4	6	8	12
- Number of fibers per tube	12				
- Number of fillers	4	2	-	-	-
- Loose Tubes	PBT				
- Material	1,75 mm \pm 3%				
- Outer Diameter	Thixotropic jelly				
- Type of filling compound					
- Fillers	PBT				
- Material	FRP				
- Central Strength Member	1,8 \pm 0,05 mm				
- Material	-				
- Diameter	1,8 \pm 0,05 mm		1,8 \pm 0,05 mm	2,2 \pm 0,05 mm	
- PE oversheathed diameter	-		2,8 \pm 0,05 mm	5,4 \pm 0,05 mm	
- Tube Assembly	Tubes and fillers (if required) are SZ stranded around a central strength member				
- Tube layout					
- Water blocking	Water swellable elements				
- Outer Sheath	HDPE				
- Material	0,65 mm \pm 0,1				
- Thickness					0,9 mm \pm 0,1
- Cable diameter	6,6 mm \pm 0,2			7,6 mm \pm 0,2	10,6 mm \pm 0,2
- Cable weight	35 kg/km \pm 10%			45 kg/km \pm 10%	85 kg/km \pm 10%

- Mechanical characteristics		(All optical measurements at 1550 nm)	
Test	Test Standard	Specified Value	Acceptance Criteria
- Tensile Force - Installation	IEC 60794-1-2-E1A	12-96 F - Load= 1000 N, 1 min. 144 F - Load= 1500 N, 1 min.	$\Delta\alpha \leq 0,1$ dB but reversible to 0,05 dB, fiber strain $\leq 0,33\%$
- Tensile Force - Operation	IEC 60794-1-2-E1A	Load= 200 N, 15 min.	$\Delta\alpha \leq 0,05$ dB, fiber strain $\leq 0,05\%$
- Crush Resistance	IEC 60794-1-2-E3	Duration of load: 1 min, Force applied: 1500 N/100 mm.	$\Delta\alpha \leq 0,05$ dB, no damage
- Repeated bending	IEC 60794-1-2-E6	Radius $r=15*d$ (d=cable diameter) 30 N load, 50 cycles,	No damage
- Torsion	IEC 60794-1-2-E7	Number of cycles= 5, $\pm 180^\circ$ Load 30 N	$\Delta\alpha \leq 0,1$ dB, no damage There shall be no permanent change in attenuation after the test.
- Bend	IEC 60794-1-2-E11	Radius $r=20*d$ (d=cable diameter) 4 turns, 3 cycle	$\Delta\alpha \leq 0,05$ dB, no damage

- Environmental Characteristics		(All optical measurements at 1550 nm)	
Test	Test Standard	Specified Value	Acceptance Criteria
- Temperature cycling	IEC 60794-1-2-F1	Operating -20 °C to +70 °C, storage -30 °C to +70 °C, installation -10 °C to +50 °C,	Operation: $\Delta\alpha \leq 0,05$ dB/km Storage: $\Delta\alpha \leq 0,1$ dB/km but reversible to 0,05 dB/km
- Water penetration	IEC 60794-1-2-F5B	3 meter specimen, 1 m water altitude	No leaked from the opposite end of the cable in 2 days.

- Identification	
- Cable Marking	1m $\pm 1\%$ Intervals in white color with hot print or ink-jet print.
- Identification of cable	CENKABLO <year of manufacturing> <number of fibers> F <type of fiber> <8 digit purchase order number> <length marking in meter>
- Color of outer sheath and fillers (if required)	Black
- Color of loose tubes	1. Red, 2. Green, the others are non-colored or white.
- Color of fibers	1. Red, 2. Green, 3. Yellow, 4. Blue, 5. White, 6. Violet, 7. Orange, 8. Black, 9. Grey, 10. Brown, 11. Pink, 12. Turquoise

- Delivery Information	12-72 F	96 F	144 F
- Drum length/Tolerance ¹	4000 m $\pm 5\%$		
- Drum Flange diameter ¹	1000 mm	1050 mm	1250 mm
- Drum core diameter ¹	580 mm		
- Outside width ¹	780 mm		
- Central hole diameter	85 mm		

¹ Drum dimensions can change depends on cable length on a drum.

- Transmission characteristics
-Refer to fiber data