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TECHNICAL DATA SHEET  
CABLE CONSTRUCTION  
SECTION 1  
SM-SLT-SA-DJ-4FO  
For direct burial applications

Characteristics & Specs.		Offered by manufacturer	
No of tubes		1 (One) Unitube	
No of Fibres per tube		4 fibers	
Loose tubes			
-Material		- Polybuteneterepheteleta (PBT)	
- Diameter		- 3 mm	
-Type of filling compound		- Thyrotrophic jelly	
-Flooding Compound		-Jelly Filling	
Dielectric Strength member		- Aramid Yarn	
Inner Sheath			
-Material		-Black PE	
-Thickness		- Approx. 1.1mm	
-Flooding Compound		-Jelly Filling	
Armoring		- Co polymer coated Corrugated steel tape.	
Outer Sheath			
-Material		- MDPE, Orange	
-Thickness		- Approx. 1.8mm	
Printing Legend		BLACK, Hot Stamping "Meter, telephone symbol, Drum Core Number, TÜRSAT A.Ş., 4 FO Optical Cable , ETK Kablo, phone symbol,Meter"	
Drum Length		-2000 -4000 meters $\pm$ 5 %	
Cable Diameter (Approx.)		-12.3 mm	
Cable Weight (kg/km ) Approx.		- 145Kg/Km	
Mechanical and Environmental Characteristics			
Test	Test Standard	Specified Value	Acceptance Criteria
Max. Installation Tension	IEC 60794-1-2-E1	1200N	$\Delta\alpha$ reversible, fiber strain $\leq$ 0.33%
Max. Operation Tension	IEC 60794-1-2-E1	700 N	no fiber strain, $\Delta\alpha \leq$ 0.05 dB
Crush	IEC 60794-1-2-E3	1500 N / 100 mm, max. 15 min	$\Delta\alpha \leq$ 0.05 dB, no damage
Impact	IEC 60794-1-2-E4	4,4 Nm, 3 impacts,	$\Delta\alpha \leq$ 0.05 dB after the test
Torsion	IEC 60794-1-2-E7	100N, +/- 180°, 10 cycles	$\Delta\alpha \leq$ 0.05 dB, no damage
Repeated Bending	IEC 60794-1-2-E6	R=15x D, 50 N,10 cycles	no damage
Cable Bend	IEC 60794-1-2-E11	R=20x D, 4 turns, 3 cycles	$\Delta\alpha \leq$ 0.05 dB, no damage
Temperature Cycling	IEC 60794-1-2-F1	-40°C to +70°C	$\Delta\alpha \leq$ 0.05 dB/km
Water Penetration	IEC 60794-1-2-F5B	sample=1m, water column=1m	no water leakage in 24h

TECHNICAL DATA SHEET  
SECTION 2  
Attenuation for cable

Ref (nm)	Max. Increased (dB/km)
1310	0.36 (dB/km)
1550	0.22 (dB/km)

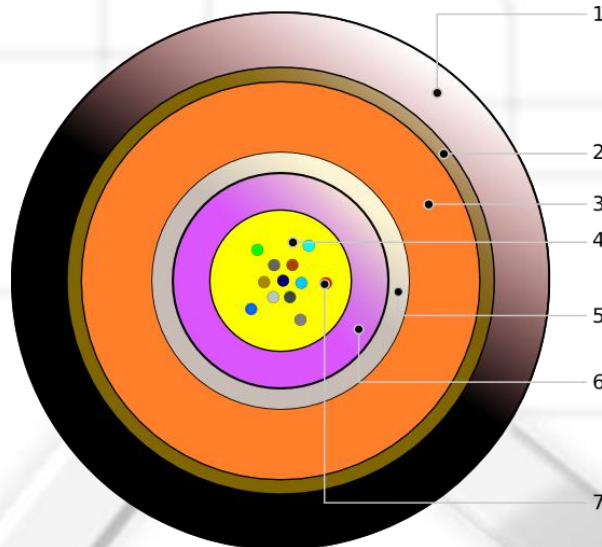
Test reports will be supplied along with the shipment





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**TECHNICAL DATA SHEET  
SECTION 3  
Drawing of Cable**



**Illustrative purpose only**

- 1. Outer Sheath (PE)
  - 2. Corrugated Steel Tape
  - 3. Aramid Yan
  - 4. Tube Filling Compound
  - 5. Inner Sheath
  - 6. PBT Tube
  - 7. Optical Fibers (4 fiber cores in per cable)
- \*Two (2) ripcords will be applied longitudinally

**TECHNICAL DATA SHEET  
SECTION 4  
SINGLE LOOSE TYPE CABLE FIBER & TUBE COLORS**

1 <sup>st</sup> Fiber	2 <sup>nd</sup> Fiber	3 <sup>rd</sup> Fiber	4 <sup>th</sup> Fiber
Red	Green	Yellow	Natural
			





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TECHNICAL DATA SHEET  
SECTION 5

**OPTICAL FIBER CORE SPECIFICATIONS**

<b>Full Length Average Attenuation:</b>		
@ 1310 nm	dB/km	≤0.34
@ 1550 nm	dB/km	≤0.21
@ 1625 nm	dB/km	≤0.22
<b>Macro Bending – additional induced bending:</b>		
32 mm dia./ 1 turn /@1550 nm	dB	≤0.05
50 mm dia. /100 turns/ @ 1310 nm and 1550nm	dB	≤0.05
60 mm dia. /100 turns/ @ 1550 nm and 1625nm	dB	≤0.05
<b>Other Optical Properties:</b>		
Zero dispersion wavelength $-(\lambda_0)$	nm	1300 to 1322
Dispersion slope ( $S_0$ ) @ $\lambda_0$	ps/(nm <sup>2</sup> *km)	≤0.089
Chromatic Dispersion @1285-1330 nm; @1550 nm; @1625 nm;	ps/nm.km	≤3.2
	ps/nm.km	≤17.0
	ps/nm.km	≤22.0
Mode field diameter @1310 nm @1550 nm	μm	9.2±0.4
	μm	10.4±0.5
Cut-off wavelength $\lambda_{cc}$ – cable	nm	≤1260
Fiber Polarization Mode Dispersion (PMD), Link Design Value PMD <sub>q</sub>	ps/vkm	≤0.08
Tension free conditions for uncabled fiber	ps/vkm	≤0.2
Change in attenuation vs. wavelength 1285 – 1330nm, ref. $\lambda$ of 1310nm 1525 – 1575nm, ref. $\lambda$ of 1550nm	dB/km	≤0.03
	dB/km	≤0.02
<b>Geometrical Properties:</b>		
Cladding diameter	μm	125.0±0.7
Cladding non-circularity	%	≤0.6
Core/Cladding Concentricity err.	μm	≤0.5
Coating diameter	μm	245±10
Coating/Cladding concentricity err.	μm	≤12
<b>Mechanical Specifications</b>		
Proof Test IEC 60793-1-30	0.7 GPa or 8.4N Load	≥ 1%

