

ExTell TerraCore Metallic Series | G.652D SM | Multi-Tube | OD Direct Buried | CST Armoured | Dual HDPE Jacket | Black | FO Cable

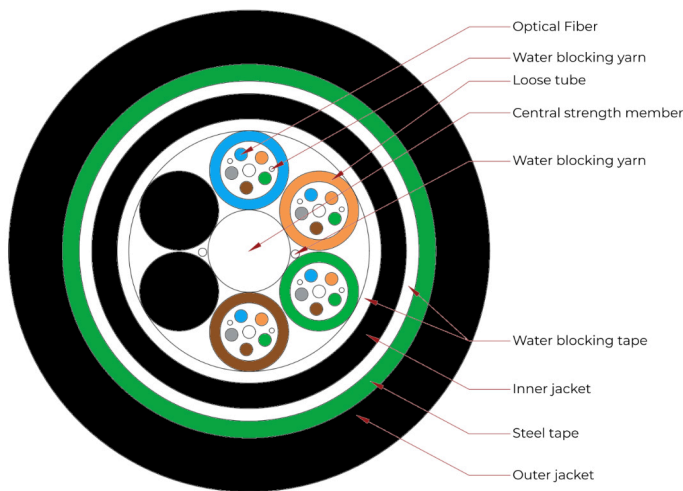
Reference Standard- ITU-T G.652.D | IEC 60794-1-1 | IEC 60794-1-2 | ANSI/TIA -598-D | IEC 60793-2-50 | RoHS

Product Overview

The ExTell TerraCore Metallic Multi-tube Series is the high-capacity backbone solution for ruggedized direct-burial applications. Featuring a stranded multi-tube architecture, this cable is designed to house up to 144 fibers within a robust, multi-layered protective system.

The cable utilizes a central dielectric strength member and Corrugated Steel Tape (CST) Armouring to provide exceptional mechanical protection against high soil pressure and rodent activity. With a Dual HDPE Jacket and advanced water-blocking technology, the TerraCore Metallic Multi-tube ensures maximum longevity and signal reliability in the most challenging environmental conditions.

Cable Construction Schematic



Design Highlights

- **High-Capacity Multi-tube Architecture:** Optimized for core counts from 24 to 144, ensuring scalable bandwidth for metro and long-haul networks.
- **Corrugated Steel Tape (CST) Armouring:** Provides a high-strength metallic barrier against physical impact, crush forces (3000N), and rodent penetration.
- **Redundant Moisture Defense:** Features a dual HDPE (Inner and Outer) jacket system combined with longitudinal water U+002D blocking tape and yarns for total moisture immunity.
- **Dielectric Central Strength:** Utilizes a Central FRP strength member to maintain cable integrity while preventing buckling during installation.
- **Rugged HDPE Sheathing:** UV-stabilized and chemical-resistant outer jacket designed for a 25-year service life in direct-buried environments.

Technical Specifications (Fiber & Materials)

Parameters	Specification
Fiber Type	SM G.652D
Mode Field Diameter (1310nm)	9.2 ± 0.4 μm
Cladding Diameter	125 ± 0.7 μm
Cladding Non-Circularity	≤ 0.8 %
Coating Diameter	245 ± 10 μm
Coating / Cladding Concentricity Error	≤ 12.5 μm
Cable Cut-Off Wavelength	≤ 1260 nm
Attenuation Coefficient (1310nm)	≤ 0.35 dB/km
Attenuation Coefficient (1550nm)	≤ 0.21 dB/km
Proof Stress Level	≥ 100 kpsi



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Parameters	Specification
Fiber Color	Full Color Spectrum
Loose Tube Material	Polypropylene (PP)
Loose Tube Color	Full Color Spectrum
Filler Material	Polyethylene (PE)
Filler Color	Black
Inner Jacket Material	High-Density Polyethylene (HDPE)
Inner Jacket Color	Black
Outer Armouring	Plastic Coated Corrugated Steel Tape
Outer Jacket Material	High-Density Polyethylene (HDPE)
Outer Jacket Color	Black
Water Blocking	Dry-Blocking Tape & Yarn System
Central Strength Member	Dielectric Fiber Reinforced Plastic (FRP)

Cable Construction Design

Fiber Count	Structure	Fibers/Tube	Loose Tube Diameter	CSM /Pad Diameter	Inner Jacket Thickness	Outer Jacket Thickness	Cable Diameter	Nominal Weight
24 Core	1+6	6	2.5 ± 0.1 mm	2.6 / 2.6 mm	0.8mm	1.7mm	15.2 ± 0.5 mm	165 kg/km
48 Core	1+6	12	2.5 ± 0.1 mm	3.0 / 3.0 mm	0.8mm	1.7mm	15.6 ± 0.5 mm	173 kg/km
96 Core	1+8	12	2.5 ± 0.1 mm	3.4 / 4.3 mm	0.8mm	1.7mm	16.9 ± 0.5 mm	197 kg/km
144 Core	1+12	12	2.5 ± 0.1 mm	3.5 / 7.5 mm	0.8mm	1.7mm	20.1 ± 0.5 mm	271 kg/km

Mechanical & Environmental Performance

Test Description	Standard Reference	Performance Requirement
Tensile Strength (Short-Term)	IEC 60794-1-2-E1	3000N (Additional Attenuation ≤ 0.1dB)
Crush Resistance (Short-Term)	IEC 60794-1-2-E3	3000N/100mm
Min. Bending Radius(Static)	IEC 60794-1-2-E11	12.5 times cable diameter
Min. Bending Radius (Dynamic)	IEC 60794-1-2-E11	25 times cable diameter
Water Penetration	IEC 60794-1-2-F5	Satisfied (Longitudinal blocking)
Temperature Range	IEC 60794-1-2-F1	-40°C to +70°C



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Standards & Compliance

Category	International Standards	Description
Optical Fiber Standard	ITU-T G.652D	Defines characteristics of single-mode optical fiber.
Cable Design	IEC 60794-1-1	General requirements for optical fiber cable construction and marking.
Cable Test Procedures	IEC 60794-1-2	Mechanical and environmental test methods for fiber cables.
Color Identification	ANSI/TIA-598-D	Primary standard for optical fiber color identification.
Fiber Glass	IEC 60793-2-50	Product specifications for Class B single-mode fibers.
Environmental	RoHS	Global sustainability and chemical safety compliance.

Ordering Information

Part Number	Product Description
ES2DITMH2CM1-F024-BK	ExTell TerraCore Metallic Series 24C G.652D SM Multi-Tube Outdoor Direct Buried Corrugated Steel Tape Armoured Dual HDPE Jacket Water-blocking Tape & Yarn Black.
ES2DITMH2CM1-F048-BK	ExTell TerraCore Metallic Series 48C G.652D SM Multi-Tube Outdoor Direct Buried Corrugated Steel Tape Armoured Dual HDPE Jacket Water-blocking Tape & Yarn Black.
ES2DITMH2CM1-F096-BK	ExTell TerraCore Metallic Series 96C G.652D SM Multi-Tube Outdoor Direct Buried Corrugated Steel Tape Armoured Dual HDPE Jacket Water-blocking Tape & Yarn Black.
ES2DITMH2CM1-F144-BK	ExTell TerraCore Metallic Series 144C G.652D SM Multi-Tube Outdoor Direct Buried Corrugated Steel Tape Armoured Dual HDPE Jacket Water-blocking Tape & Yarn Black.

