

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

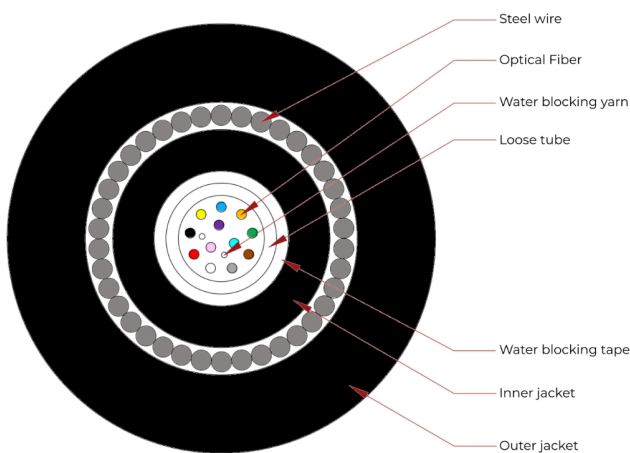
Reference Standard- ITU-T G.652.D | IEC 60794-1-1 | IEC 60794-1-2 | ANSI/TIA -598-D | IEC 60793-2-50 | RoHS

Product Overview

The ExTell TerraCore Metallic Series is engineered for the most demanding direct-burial environments. This cable features a rugged Unitube architecture protected by a dual-layered moisture barrier and high-tensile Phosphated Steel Wire Armoring (SWA).

Designed for long-haul and metro backbones, the TerraCore Metallic provides an impenetrable defense against soil pressure, rock impact, and rodent damage. The Dual HDPE Jacket system ensures long-term chemical and moisture resistance, while the internal water-blocking technology guarantees signal stability in saturated soil conditions.

Cable Construction Schematic



Design Highlights

- **Optimized Uni-tube Design:** High-strength PBT loose tube protects up to 12 fibers in a compact, easy-to-handle diameter.
- **Heavy-Duty SWA Defense:** Integrated phosphated steel wire armoring provides a massive 3000N crush resistance, ensuring survivability under heavy soil loads.
- **Dual-Jacket Moisture Barrier:** Dual HDPE (Inner and Outer) jackets provide redundant protection against groundwater ingress and soil chemicals.
- **Total Water-Block System:** Employs both water-blocking tape and yarns to prevent longitudinal water migration.
- **Rodent-Proof Engineering:** The metallic armoring acts as a physical deterrent against termite and rodent attacks, critical for direct-buried rural installations.

Technical Specifications (Fiber & Materials)

Parameters	Specification
Fiber Type	SM G.652D
Mode Field Diameter (1310nm)	$9.2 \pm 0.4 \mu\text{m}$
Cladding Diameter	$125 \pm 0.7 \mu\text{m}$
Cladding Non-Circularity	$\leq 0.8 \%$
Coating Diameter	$245 \pm 10 \mu\text{m}$
Coating / Cladding Concentricity Error	$\leq 12.5 \mu\text{m}$
Cable Cut-Off Wavelength	$\leq 1260 \text{ nm}$
Attenuation Coefficient (1310nm)	$\leq 0.35 \text{ dB/km}$
Attenuation Coefficient (1550nm)	$\leq 0.21 \text{ dB/km}$
Proof Stress Level	$\geq 100 \text{ kpsi}$



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Parameters	Specification
Fiber Color	Full Color Spectrum
Loose Tube Material	Polypropylene (PP)
Loose Tube Color	Natural
Inner Jacket Material	High-Density Polyethylene (HDPE)
Inner Jacket Color	Black
Armouring	Phosphating Steel Wire Armored (SWA)
Outer Jacket Material	High-Density Polyethylene (HDPE)
Outer Jacket Color	Black
Water Blocking	Dry-Blocking Tape & Yarn System

Cable Construction Design

Fiber Count	Structure	Fibers/Tube	Loose Tube Diameter	Inner Jacket Thickness	Outer Jacket Thickness	Cable Diameter	Nominal Weight
2 Core	Unitube	2	2.4 ± 0.1 mm	0.9 mm	1.7mm	9.3 ± 0.5 mm	117 kg/km
4 Core	Unitube	4	2.4 ± 0.1 mm	0.9 mm	1.7mm	9.3 ± 0.5 mm	117 kg/km
6 Core	Unitube	6	2.4 ± 0.1 mm	0.9 mm	1.7mm	9.3 ± 0.5 mm	118 kg/km
8 Core	Unitube	8	2.4 ± 0.1 mm	0.9 mm	1.7mm	9.3 ± 0.5 mm	118 kg/km
12 Core	Unitube	12	2.4 ± 0.1 mm	0.9 mm	1.7mm	9.3 ± 0.5 mm	118 kg/km

Mechanical & Environmental Performance

Test Description	Standard Reference	Performance Requirement
Tensile Strength (Short-Term)	IEC 60794-1-2-E1	3000N (Additional Attenuation ≤ 0.1 dB)
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
ES2DITMH2CU1-F002-BK	ExTell TerraCore Metallic Series 2C G.652D SM Uni-tube Outdoor Direct Buried Heavy Duty Steel Wire Armoured Dual HDPE Jacket Water-blocking Tape & Yarn Black .
ES2DITMH2CU1-F004-BK	ExTell TerraCore Metallic Series 4C G.652D SM Uni-tube Outdoor Direct Buried Heavy Duty Steel Wire Armoured Dual HDPE Jacket Water-blocking Tape & Yarn Black .
ES2DITMH2CU1-F006-BK	ExTell TerraCore Metallic Series 6C G.652D SM Uni-tube Outdoor Direct Buried Heavy Duty Steel Wire Armoured Dual HDPE Jacket Water-blocking Tape & Yarn Black .
ES2DITMH2CU1-F008-BK	ExTell TerraCore Metallic Series 8C G.652D SM Uni-tube Outdoor Direct Buried Heavy Duty Steel Wire Armoured Dual HDPE Jacket Water-blocking Tape & Yarn Black .
ES2DITMH2CU1-F012-BK	ExTell TerraCore Metallic Series 12C G.652D SM Uni-tube Outdoor Direct Buried Heavy Duty Steel Wire Armoured Dual HDPE Jacket Water-blocking Tape & Yarn Black .

