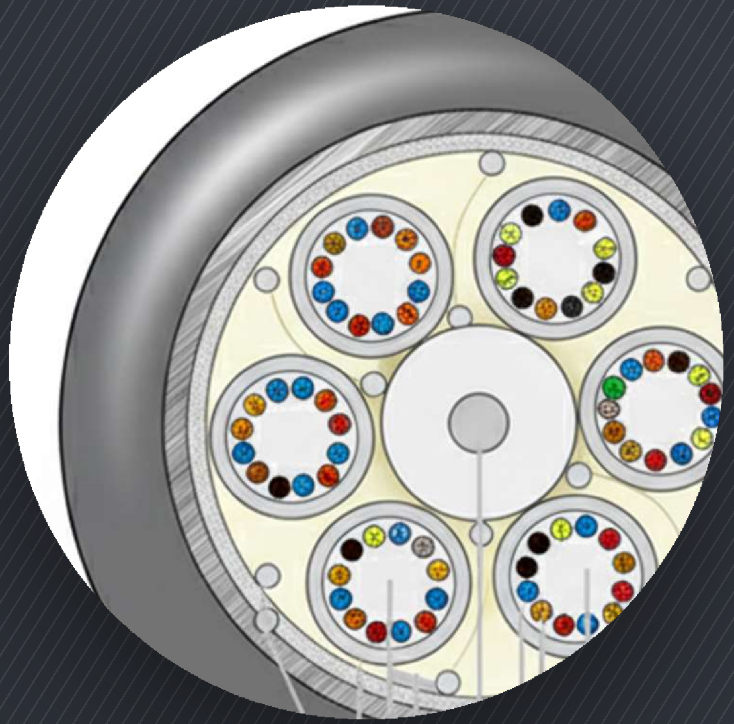




PRODUCT CATALOGUE

Fiber Optic Cable

Armored Duct Type · Single-Mode ITU-T G.652.D · IBEX Series

12

24

48

72

96

144 CORE

OVERVIEW

Armored Duct Optical Fiber Cable

The IBEX armored duct optical fiber cable is a single-mode (ITU-T G.652.D) cable engineered for long-haul, backbone and high-reliability networks. A corrugated steel tape armor and UV-resistant HDPE sheath protect gel-filled loose tubes, delivering rugged mechanical protection with full water-blocking. Available in 12 to 144 core configurations to suit metro, access and trunk routes.

KEY FEATURES



Corrugated Steel Armor

Copolymer-coated CST for crush, rodent and impact protection.



HDPE UV Sheath

High-density polyethylene outer jacket rated for outdoor duct use.



G.652.D Single Mode

Low-loss standard SM fiber, fully backward compatible.



Gel-Filled Loose Tubes

PBT tubes with thixotropic jelly, 12 fibers per tube.



Full Water Blocking

Swellable yarn & tape — no ingress for 24 hours.



Wide Temperature Range

Reliable operation from -10 °C to +70 °C.

TYPICAL APPLICATIONS

• Long-haul routes

• Backbone / trunk

• Metro networks

• FTTx duct feeder

• Utility & rail corridors

• Data-centre interconnect

• High-reliability links

CORE CONFIGURATIONS AVAILABLE

12

CORE

24

CORE

48

CORE

72

CORE

96

CORE

144

CORE

CONSTRUCTION

Cable Structure



ARMORED DUCT OFC — LAYER DETAILS

- **Optical Fibers** — Single-mode ITU-T G.652.D, colour-coded.
- **Loose Tubes** — PBT, filled with thixotropic gel.
- **Central Strength Member** — FRP rod for tensile support.
- **Water Blocking** — Swellable yarn + water-swellable tape.
- **Armoring** — Corrugated Steel Tape (CST), copolymer coated.
- **Outer Sheath** — HDPE, UV-resistant.

DIMENSIONS

Core Configuration & Weights

CORE	TUBE LAYOUT	FIBRES / TUBE	CABLE OD (MM)	WEIGHT (KG/KM)	DRUM (KM)
48 Core	4 tubes	12	12.0 – 12.5	150 – 170	2 – 4
72 Core	6 tubes	12	13.0 – 13.8	170 – 200	2 – 4
96 Core	8 tubes	12	14.0 – 15.0	200 – 230	2 – 4
144 Core	12 tubes	12	15.0 – 16.0	230 – 270	2 – 4

12 & 24 core variants available on request. Dimensions and weights are nominal; drum lengths are typical (2–4 km).

SPECIFICATIONS

Technical Performance



OPTICAL PERFORMANCE

Attenuation @ 1310 nm	≤ 0.35 dB/km
Attenuation @ 1550 nm	≤ 0.21 dB/km
Chromatic Disp. @ 1310 nm	≤ 3.5 ps/(nm·km)
Chromatic Disp. @ 1550 nm	≤ 18 ps/(nm·km)
PMD (uncabled fibre)	≤ 0.2 ps/√km
Cable cut-off wavelength	≤ 1260 nm



MECHANICAL & ENVIRONMENTAL

Tensile strength	2,500 – 3,000 N
Crush resistance	≥ 2,200 N / 10 cm
Min. bend radius (no load)	10 × OD
Min. bend radius (loaded)	20 × OD
Impact resistance	2 kg from 1 m
Temperature range	–10 °C to +70 °C
Water penetration	No ingress / 24 h

✓ ITU-T G.652.D compliant

✓ Single-mode

✓ Duct / armored

✓ 12–144 core



CABLE PRINTING / ORDERING FORMAT

MUFADDAL ENGINEERING / IBEX – SM ARMORED DUCT OFC – CORE COUNT – YoM – LM

CORE COUNT = number of fibres (e.g. 48 / 72 / 96 / 144) · YoM = Year of Manufacture · LM = sequential length marking (metres).

Mufaddal Engineering & Trading

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SALES & TECHNICAL ENQUIRIES