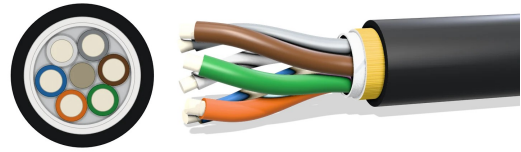


Application

This outdoor loose-tube cable is a single-mode optical fibre cable to ITU-T G.652.D (fibre category OS2) for duct and tray installation in the outside plant; for direct burial choose the armoured loose-tube OS2. The 9/125 um single-mode fibres are held loosely, with excess length, inside gel-filled buffer tubes (up to 12 fibres per tube); the tubes are SZ-stranded around a central non-metallic strength member (glass-reinforced plastic, FRP/GRP) that carries the tensile load and keeps the fibres strain-free. Longitudinal water blocking (water-swellable tapes / yarns) stops moisture running along the core, and a black, UV-stabilised polyethylene (PE) outer sheath protects the cable against sunlight, abrasion and weathering. The construction is fully dielectric (no metallic elements), which simplifies earthing and handling. It is supplied in fibre counts from 4 up to 144 fibres. For duct and cable-tray routing the non-armoured version shown here is used; where the cable is buried directly in the ground or rodent attack is a risk, choose the steel-tape armoured (CST) variant of this family.



CONSTRUCTION

Optical fibre	Single-mode 9/125 um to ITU-T G.652.D, fibre category OS2 (bend-tolerant G.657.A1 optionally); 250 um coloured coating.
Loose tube	Gel-filled loose buffer tubes, up to 12 fibres per tube, colour-coded; fibres laid with excess length so they stay strain-free.
Core assembly	Buffer tubes SZ-stranded around the central strength member; filler rods make up unused tube positions.
Central strength member	Non-metallic glass-reinforced plastic (FRP/GRP) central element - carries the tensile load; fully dielectric core.
Water blocking	Longitudinal water blocking by water-swellable tapes / yarns (dry or gel); prevents moisture ingress along the cable.
Outer sheath	Black polyethylene (PE), UV-stabilised, for outdoor duct and tray use; no metallic armour (non-armoured).
Armour	None on this variant - see the corrugated-steel-tape (CST) armoured version for direct burial and rodent protection.

OPTICAL & MECHANICAL PROPERTIES

Fibre type / standard	Single-mode OS2, ITU-T G.652.D (IEC 60793-2-50 type B1.3 / B-652.D).
Attenuation	≤ 0.40 dB/km @ 1310 nm; ≤ 0.30 dB/km @ 1550 nm (OS2 category; cabled maxima to G.652.D).
Fibre count	4 to 144 fibres (up to 12 fibres per tube; higher counts on request).
Tensile strength	approx. 2700 N during installation; approx. 890 N in operation (leading-source, count-dependent).
Crush resistance	≥ 1000 N/10 cm (IEC 60794-1-21 E3).
Min. bending radius	20 × outer diameter during installation; 10 × outer diameter in operation.
Temperature range	Operation -40 to +70 °C; installation -30 to +70 °C; storage -40 to +70 °C.
Reaction to fire (CPR)	PE outdoor sheath is not a CPR-classed indoor product (EN 50575 applies to cables for buildings).
Rodent / UV	UV-stabilised black PE for outdoor exposure; for buried routes with rodent risk use the CST-armoured variant.

KEY FIGURES

Nominal outer diameter	approx. 8.5 mm (24F); other fibre counts on request
Nominal weight	approx. 80 kg/km (24F); other fibre counts on request
Maximum fibre count	144 fibres (12 fibres per tube)

Optical values (attenuation) are the ITU-T G.652.D single-mode (OS2) category maxima, not vendor-specific guarantees; mechanical values, outer diameter and weight are nominal leading-source references and vary with fibre count. All values are indicative and non-binding.