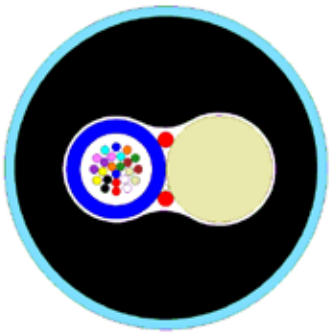
External Underground Single Loose Tube Optical Fiber Cable

molex

This loose tube dielectric optical cable is designed for external underground installations in ducts by pulling, jetting or floating techniques or by underground usage as per Australian standards. Mainly used for distribution and access network. Polyamide provides anti-termite protection.



Made up of a loose tube construction, the tube is made of a thermoplastic material, containing up to 24 optical fibers filled with a low viscosity, thixotropic, non-melting gel fully compatible with fiber coating and tube material, a glass fiber reinforced plastic material (GRP) strength member and water swellable elements (dry-core) providing longitudinal water tightness. The sheath is made up of a UV stabilized polyethylene in compliance with AS 1049. Two ripcords provided beneath the sheath for easy removal. The outer jacket is a UV stabilized polyamide (Nylon) in compliance with AS 1049 integrally bonded to PE sheath.

Features and Advantages

- Loose tube construction surrounds the fibers in a protective gel, allowing for expansion and contraction of the cable without damage to the fibers
- Outer nylon jacket provides protection from termites
- Two ripcords under the outer sheath for easy removal of jacket
- RoHS compliant

Specifications

MECHANICAL

Number of fibers: 6 to 24
Number of elements: 1
Tube/Filler diameter: 2.9mm
Cable nominal diameter: 9.4mm
Cable nominal weight: 77kg/km
Max. installation tension: 2.0kN
Max. crush resistance
- Short term: 2.0kN/100mm
- Long term: 1.0kN/100mm

Min. bending radius
- At full load: 250mm
- At no load: 125mm

Temperature range
- Installation: -0°C to +50°C
- Transport & Storage: -20°C to +70°C
- Operation: -10°C to +70 °C

ELECTRICAL/OPTICAL

General Characteristics
- Material: Silica/Germanium doped silica
- Index Profile: Step Index, Matched Cladding

Dimensions
- Cladding Diameter: 125 ± 0.7um
- Cladding Non-Circularity error: ≤1.0%
- Core / Cladding concentricity error: ≤0.5um

Primary Coating
- Material: UV Cured acrylic resin
- External Diameter (uncolored fiber): 245 ± 5um
- Coating Concentricity error: ≤12um

Transmission Characteristics
- Mode Field Diameter @ 1310 nm: 9.2 ± 0.4um
- Max. Attenuation (un-cabled fiber)
  - @ 1310nm ≤0.35dB/km
  - @ 1383nm ≤0.35dB/km
  - @ 1550nm ≤0.21dB/km
- Max. Attenuation (Tight Buffer cabled)
  - @ 1310nm ≤0.4dB/km
  - @ 1383nm ≤0.4dB/km
  - @ 1550nm ≤0.3dB/km
  - @ 1625nm ≤0.3dB/km
- Chromatic Dispersion
  - In the range 1285 to 1330nm ≤3.5ps/(nm.km)
  - @ 1550nm ≤18ps/(nm.km)
  - @ 1625nm ≤22ps/(nm.km)
  - Cabled cut-off wavelength: 1260nm
  - Zero dispersion wavelength: 1302 to 1322ps/(nm2.km)
  - Zero Dispersion Slope: ≤0.092ps/(nm2.km)
  - Polarization mode dispersion coefficient (PMD Single drum): ≤0.2ps/√km
  - PMD Link: ≤0.08ps/√km
- Effective Group Index
  - @ 1310nm 1.4675
  - @ 1550nm 1.4681
- Mechanical Characteristics of Primary Fiber Proof Test for 1 sec (or equivalent): 1%

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Ordering Information

Order No.	SAP No.	Description
AFOUY006OS2	Consult Molex	6 Core OS1/2 External Underground Single Loose Tube Optical Fiber Cable
AFOUY012OS2	Consult Molex	12 Core OS1/2 External Underground Single Loose Tube Optical Fiber Cable
AFOUY024OS2	Consult Molex	24 Core OS1/2 External Underground Single Loose Tube Optical Fiber Cable