

Technical specifications of dielectric optical cable
A-D(T)2Y 1x20 E9/125
singlemode optical fibres according to ITU-T G652

General characteristics

- All dielectric optical cable containing 20 optical fibres.
- Central support: Fiberglass reinforced plastic
- Loose protection of tubes. Tubes are filled with waterblocking compound.
- Optical core protected against longitudinal water penetration by means of waterblocking tapes and threads
- Inner sheath of linear low density polyethylene
- Strain reinforcement of aramid yarns
- Outer sheath of linear low density polyethylene

Protections

- Nominal thickness of inner sheath: 0,8 mm
- Aramid yarns double layer
- Nominal thickness of outer sheath: 1,5 mm

Mechanical and environmental performances

- Maximum installation load (no fibres break) 3000 N
- Operating temperature -30°C to +70°C
- Crush resistance (5 min) (no attenuation increase) 2000 N / 10 cm
- Minimum bending radius 20 times the cable nominal diameter

General Characteristics

- Material silica/doped silica
- Index profile step index

Dimensions

- Cladding diameter $125 \pm 2 \mu\text{m}$
- Non-circularity error 2%
- Concentricity error (core to cladding) 1 μm

Coating

- Material double layer of UV cured acrylate
- External diameter of coloured fibres $250 \pm 15 \mu\text{m}$

Transmission

- Mode field diameter at 1310 nm (Petermann II definition) $9,3 \pm 0,5 \mu\text{m}$
- Attenuation at 1310 nm
 - Average 0,36 dB/Km
 - Maximum 0,38 dB/Km
- Attenuation at 1550 nm
 - Average 0,22 dB/Km
 - Maximum 0,25 dB/Km
- Chromatic dispersion
 - at 1310 nm 2,8 ps/(nm.Km)
 - from 1285 nm to 1330 nm 3,5 ps/(nm.Km)
 - at 1550 nm 18 ps/(nm.Km)
 - from 1525 nm to 1575 nm 20 ps/(nm.Km)
- Zero dispersion wavelength from 1300 nm to 1325 nm
- Zero dispersion slope 0,092 ps/(nm².Km)
- Cut-off wavelength of cabled fibres 1280 nm

Mechanical

- Screen test 1 second (or equivalent conditions) 1%
- Minimum bending radius 40 mm