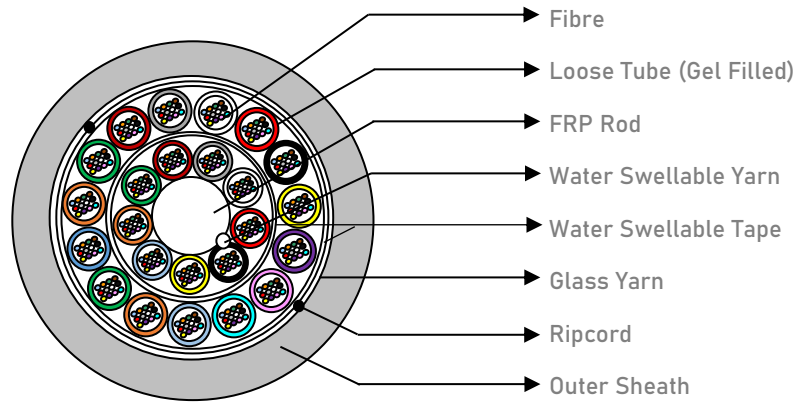


Technical Specifications

12/24/48/96/144/288F Multitube Duct OFC



Product Details

| |
|--|
| Optical Fibre containing elements laid up around central strength member |
| Water blocked loose tubes |
| Water blocked core interstices |
| Glass yarn as peripheral strength member |
| LSZH sheath as outer protection |

Cable Construction

| Parameter | Structure/Layout/Material | | | |
|--------------------------------|---|---------------------|----------------|------------------------------|
| | 12/24/48F | 96F | 144F | 288F |
| Fibre Count | 12/24/48F | 96F | 144F | 288F |
| Number of fibres per tube | 12 | | | |
| Number of loose tubes - PBT | 1/2/4 | 8 | 12 | Layer I : 9 Layer II : 15 |
| Central Strength Member | FRP Rod | FRP Rod PE Upcoated | | |
| Moisture Barrier | Water Swellable Yarn & Water Swellable Tape | | | |
| Peripheral Strength Member | Glass Yarn | | | |
| Outer Sheath | LSZH - Black - Anti Rodent | | | |
| Number of Ripcords - Polyester | 2 | | | |
| Cable Diameter | 10.0 ± 0.5 mm | 11.0 ± 0.5 mm | 13.7 ± 0.5 mm | 16.0 ± 1.0 mm |
| Cable Weight | 100 ± 10 kg/km | 125 ± 15 kg/km | 185 ± 20 kg/km | 240 ± 25 kg/km |

Colour Coding

| | | | | | | | | | | | | |
|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|
| Fibre Colour EIA/TIA - 598 | Bl | Or | Gr | Br | Sl | Wh | Rd | Bk | Yl | Vi | Pk | Aq |
|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|

| | | | | | | | | | | | | |
|--------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|
| Tube Colour EIA/TIA - 598 1-12 | Bl | Or | Gr | Br | Sl | Wh | Rd | Bk | Yl | Vi | Pk | Aq |
|--------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|

| | | | |
|---------------------------------------|-----|-----|-----|
| Tube Colour EIA/TIA - 598 13-15 | Bl# | Or# | Gr# |
|---------------------------------------|-----|-----|-----|

#Stripe mark tubes from 13-15.

Cable & Fibre Characteristics

| | | | |
|---------------------------|--------------------------------------|-------------------|--------------------|
| Tensile Performance | 2670 N | | IEC-60794-1-21-E1 |
| Crush Performance | 2000 N | | IEC-60794-1-21-E3 |
| Impact Resistance | 10 N.m | | IEC-60794-1-21-E4 |
| Torsion | ± 180 ° | | IEC-60794-1-21-E7 |
| Minimum Bend Radius | 20 x D | | IEC-60794-1-21-E11 |
| Water Penetration Test | 1 m water head, 3 m sample, 24 hours | | IEC-60794-1-22-F5 |
| Environmental Performance | Installation | -20 °C to + 70 °C | IEC-60794-1-22-F1 |
| | Operation | -30 °C to + 70 °C | |
| | Storage | -30 °C to + 70 °C | |

| | | |
|-----------|-----|----------|
| CPR Class | Eca | EN 50575 |
|-----------|-----|----------|

| | | | | |
|--|----------------|----------------|---------|-----------|
| Fibre Type | G.657A1 | | | |
| Attenuation | 1310 nm | ≤ 0.36 dB/km | | |
| | 1550 nm | ≤ 0.23 dB/km | | |
| Chromatic Dispersion | 1285-1330 nm | ≤ 3.5 ps/nm.km | | |
| | 1550 nm | ≤ 18 ps/nm.km | | |
| PMD (Max. Individual) | ≤ 0.15 ps/√km | | | |
| PMD (Link design value) | ≤ 0.06 ps /√km | | | |
| Cable cut off wavelength λ _{cc} | ≤ 1260 nm | | | |
| MFD | 1310 nm | 9.1 ± 0.3 μm | | |
| | 1550 nm | 10.3 ± 0.5 μm | | |
| Bending Induced Attenuation | 1 Turn | φ 20 | 1550 nm | ≤ 0.75 dB |
| | | | 1625 nm | ≤ 1.5 dB |
| | 10 Turn | φ 30 | 1550 nm | ≤ 0.25 dB |
| | | | 1625 nm | ≤ 1.0 dB |
| Core-Cladding Concentricity Error | ≤ 0.5 μm | | | |
| Cladding Diameter | 125 ± 0.7 μm | | | |
| Cladding Non Circularity | ≤ 0.8 % | | | |
| Primary Coating Diameter (Uncoloured) | 242 ± 5 μm | | | |

| Fibre Type | G.652D | |
|--|--------------|----------------|
| Attenuation | 1310 nm | ≤ 0.36 dB/km |
| | 1550 nm | ≤ 0.23 dB/km |
| Chromatic Dispersion | 1285-1330 nm | ≤ 3.5 ps/nm.km |
| | 1550 nm | ≤ 18 ps/nm.km |
| PMD (Max. Individual) | ≤ 0.2 ps/√km | |
| PMD (Link design value) | ≤ 0.1 ps/√km | |
| Cable cut off wavelength λ _{cc} | ≤ 1260 nm | |
| MFD | 1310 nm | 9.2 ± 0.4 μm |
| | 1550 nm | 10.4 ± 0.5 μm |
| Core-Cladding Concentricity Error | ≤ 0.5 μm | |
| Cladding Diameter | 125 ± 0.7 μm | |
| Cladding Non Circularity | ≤ 0.7 % | |
| Primary Coating Diameter (Uncoloured) | 245 ± 10 μm | |

Cable Marking

HFCL Ltd 12/24/48/96/144/288F G.652D/G.657A1 DUCT Year of manufacture, Length Code, Meter Marking
Or
As per customer requirement.

Cable Length

2.0 km ± 5 %

Packaging

Wooden drums or reels

Cable end sealed

Drum marking: Drum number, User name, HFCL Limited, Fiber count, Cable Length, Date of manufacture, Net weight, Gross weight

Cable Performance Standards

IEC 60793, ANSI/ICEA S-87-640, Telcordia GR-20, ITU-T, RoHS, REACH.