

# OPTICAL FIBER CABLES

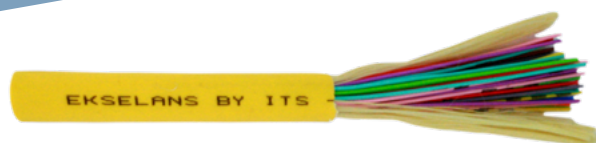
CFO 2 900D · CFO 12 900D ·  
CFO 24 900D · CFO 48 900D ·  
CFO 24 250D · CFO 48 250D



**CPR  
Dca**



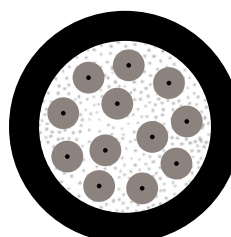
**EKSELANS BY ITS**



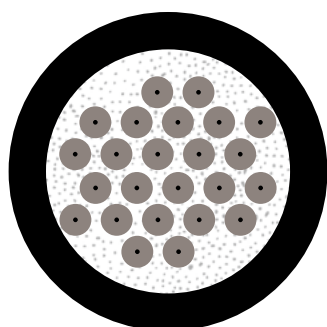
CFO 48 900D  
DETAIL



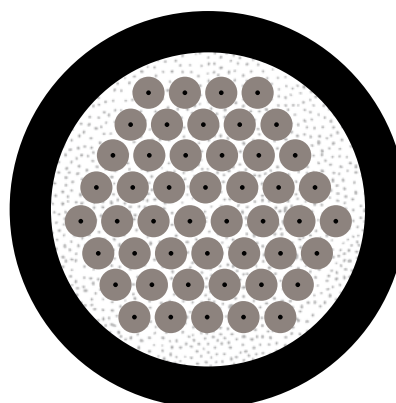
CFO 2 900D



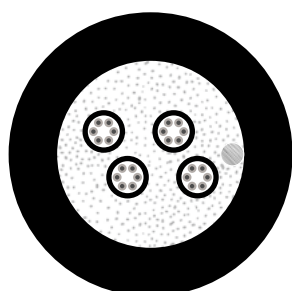
CFO 12 900D



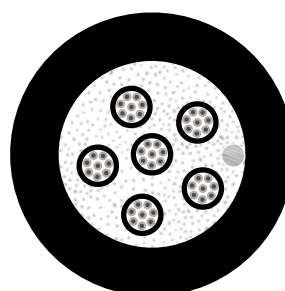
CFO 24 900D



CFO 48 900D



CFO 24 250D



CFO 48 250D

## TECHNICAL INFORMATION

| REFERENCE           |                                                    |        | CFO 2 900D                                                                          | CFO 12 900D                                                                          | CFO 24 900D                                                                           | CFO 48 900D                                                                                   | CFO 24 250D                                                                           | CFO 48 250D                                                                           |
|---------------------|----------------------------------------------------|--------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Code                |                                                    |        | 360009                                                                              | 360010                                                                               | 360011                                                                                | 360012                                                                                        | 360013                                                                                | 360014                                                                                |
| Fiber               | Number of fibers                                   |        | 2                                                                                   | 12                                                                                   | 24                                                                                    | 48                                                                                            | 24                                                                                    | 48                                                                                    |
|                     | Type of fiber                                      |        | G.657A2                                                                             | G.657A2                                                                              | G.657A2                                                                               | G.657A2                                                                                       | G.657A2                                                                               | G.657A2                                                                               |
|                     | Field mode diameter @ 1310nm                       | µm     | 8,8±0,4                                                                             | 8,8±0,4                                                                              | 8,8±0,4                                                                               | 8,8±0,4                                                                                       | 8,6±0,4                                                                               | 8,6±0,4                                                                               |
|                     | Field mode diameter @ 1550nm                       | µm     | 9,8±0,5                                                                             | 9,8±0,5                                                                              | 9,8±0,5                                                                               | 9,8±0,5                                                                                       | 9,6±0,5                                                                               | 9,6±0,5                                                                               |
|                     | Cladding diameter                                  | µm     | 124,8±0,7                                                                           | 124,8±0,7                                                                            | 124,8±0,7                                                                             | 124,8±0,7                                                                                     | 124,8±0,7                                                                             | 124,8±0,7                                                                             |
|                     | Cladding non-circularity                           | %      | ≤0,7                                                                                | ≤0,7                                                                                 | ≤0,7                                                                                  | ≤0,7                                                                                          | ≤0,7                                                                                  | ≤0,7                                                                                  |
|                     | Core-Cladding concentricity error                  | µm     | ≤0,5                                                                                | ≤0,5                                                                                 | ≤0,5                                                                                  | ≤0,5                                                                                          | ≤0,5                                                                                  | ≤0,5                                                                                  |
|                     | Cutoff wavelength                                  | nm     | ≤1260                                                                               | ≤1260                                                                                | ≤1260                                                                                 | ≤1260                                                                                         | ≤1260                                                                                 | ≤1260                                                                                 |
|                     | Attenuation @ 1310 nm                              | dB/Km  | ≤0,4                                                                                | ≤0,4                                                                                 | ≤0,4                                                                                  | ≤0,4                                                                                          | ≤0,4                                                                                  | ≤0,4                                                                                  |
|                     | Attenuation @ 1550 nm                              | dB/Km  | ≤0,3                                                                                | ≤0,3                                                                                 | ≤0,3                                                                                  | ≤0,3                                                                                          | ≤0,3                                                                                  | ≤0,3                                                                                  |
|                     | Macrobending loss @ 1 turn x 7,5mm radius @ 1550nm | dB     | ≤0,5                                                                                | ≤0,5                                                                                 | ≤0,5                                                                                  | ≤0,5                                                                                          | ≤0,4                                                                                  | ≤0,4                                                                                  |
|                     | Macrobending loss @ 1 turn x 7,5mm radius @ 1625nm | dB     | ≤1                                                                                  | ≤1                                                                                   | ≤1                                                                                    | ≤1                                                                                            | ≤0,8                                                                                  | ≤0,8                                                                                  |
| Coating             | Coating diameter                                   | µm     | 245±5                                                                               | 245±5                                                                                | 245±5                                                                                 | 245±5                                                                                         | 245±5                                                                                 | 245±5                                                                                 |
|                     | Coating non-circularity                            | %      | ≤6                                                                                  | ≤6                                                                                   | ≤6                                                                                    | ≤6                                                                                            | ≤6                                                                                    | ≤6                                                                                    |
|                     | Cladding-coating concentricity error               | µm     | ≤12                                                                                 | ≤12                                                                                  | ≤12                                                                                   | ≤12                                                                                           | ≤12                                                                                   | ≤12                                                                                   |
|                     | Coating color                                      |        | -                                                                                   | -                                                                                    | -                                                                                     | -                                                                                             |  |  |
| Buffer              | Buffer diameter                                    | µm     | 850±50                                                                              | 850±50                                                                               | 850±50                                                                                | 850±50                                                                                        | -                                                                                     | -                                                                                     |
|                     | Buffer material                                    |        | LSZH                                                                                | LSZH                                                                                 | LSZH                                                                                  | LSZH                                                                                          | -                                                                                     | -                                                                                     |
|                     | Buffer color(s)                                    |        |  |  | -                                                                                     | -                                                                                             | -                                                                                     | -                                                                                     |
| Construction        | Subelements                                        |        | -                                                                                   | -                                                                                    | -                                                                                     | -                                                                                             | 4 subconducts, 6 fibers                                                               | 6 subconducts, 8 fibers                                                               |
|                     | Subelements material                               |        | -                                                                                   | -                                                                                    | -                                                                                     | -                                                                                             | LSZH                                                                                  | LSZH                                                                                  |
|                     | Subelement diameter                                | cm     | -                                                                                   | -                                                                                    | -                                                                                     | -                                                                                             | 1,2                                                                                   | 1,2                                                                                   |
|                     | Subelement thickness                               | mm     | -                                                                                   | -                                                                                    | -                                                                                     | -                                                                                             | 0,15                                                                                  | 0,15                                                                                  |
|                     | Subelement colors                                  |        | -                                                                                   | -                                                                                    | The other set of optical fibers has 1 black color ring printed                        | The other three sets of optical fibers has 1, 2, and 3 black color rings printed respectively |  |  |
| Reinforcement yarns |                                                    |        | Aramid                                                                              | Aramid                                                                               | Kevlar                                                                                | Kevlar                                                                                        | Kevlar                                                                                | Kevlar                                                                                |
| Outer Jacket        | Jacket diameter                                    | mm     | 4,0±0,2                                                                             | 6,2±0,2                                                                              | 8,5±0,3                                                                               | 10,5±0,5                                                                                      | 8,0±0,2                                                                               | 8,0±0,2                                                                               |
|                     | Jacket thickness                                   | mm     | 0,8                                                                                 | 0,8                                                                                  | 1                                                                                     | 1,1                                                                                           | 1,35                                                                                  | 1,35                                                                                  |
|                     | Jacket type                                        |        | FR-LSZH                                                                             | FR-LSZH                                                                              | FR-LSZH                                                                               | FR-LSZH                                                                                       | FR-LSZH                                                                               | FR-LSZH                                                                               |
|                     | CPR Level                                          |        | Dca s2 d2 a2                                                                        |                                                                                      |                                                                                       |                                                                                               |                                                                                       |                                                                                       |
|                     | Jacket color                                       |        |  |   |  |          |  |  |
| Rip Cord            | Material                                           |        | -                                                                                   | -                                                                                    | -                                                                                     | -                                                                                             | Polyester                                                                             | Polyester                                                                             |
|                     | Thickness                                          | mm     | -                                                                                   | -                                                                                    | -                                                                                     | -                                                                                             | 0,75                                                                                  | 0,75                                                                                  |
| General             | Tension (Long term)                                | N      | 250                                                                                 | 250                                                                                  | 500                                                                                   | 600                                                                                           | 500                                                                                   | 500                                                                                   |
|                     | Tension (Short term)                               | N      | 500                                                                                 | 500                                                                                  | 1000                                                                                  | 1200                                                                                          | 1000                                                                                  | 1000                                                                                  |
|                     | Crush (Long term)                                  | N/10cm | 300                                                                                 | 300                                                                                  | 300                                                                                   | 300                                                                                           | 100                                                                                   | 100                                                                                   |
|                     | Crush (Short term)                                 | N/10cm | 1000                                                                                | 1000                                                                                 | 1000                                                                                  | 1000                                                                                          | 500                                                                                   | 500                                                                                   |
|                     | Min. Bend Radius Dynamic                           | mm     | 10D                                                                                 | 10D                                                                                  | 20D                                                                                   | 20D                                                                                           | 20D                                                                                   | 20D                                                                                   |
|                     | Min. Bend Radius Static                            | mm     | 5D                                                                                  | 5D                                                                                   | 10D                                                                                   | 10D                                                                                           | 10D                                                                                   | 10D                                                                                   |
|                     | Installation temperature                           | °C     | -20-60                                                                              | -20-60                                                                               | -10-50                                                                                | -10-50                                                                                        | -10-50                                                                                | -10-50                                                                                |
|                     | Operative temperature                              | °C     | -40-70                                                                              | -40-70                                                                               | -20-60                                                                                | -20-60                                                                                        | -20-60                                                                                | -20-60                                                                                |
| Packaging           | Storage temperature                                | °C     | -40-70                                                                              | -40-70                                                                               | -20-60                                                                                | -20-60                                                                                        | -20-60                                                                                | -20-60                                                                                |
|                     | Reel length                                        | m      | 500                                                                                 | 2000                                                                                 | 2000                                                                                  | 1500                                                                                          | 2000                                                                                  | 1500                                                                                  |
|                     | Gross weight                                       | Kg     | 13                                                                                  | 85                                                                                   | 162                                                                                   | 184                                                                                           | 150                                                                                   | 136                                                                                   |
|                     | Full drum dimensions                               | cm     | 35x35x31                                                                            | 65x65x41                                                                             | 93x93x66                                                                              | 93x93x66                                                                                      | 93x93x66                                                                              | 103x103x66                                                                            |
|                     | Supply                                             | -      | 500m coil                                                                           | Cut to size                                                                          | Cut to size                                                                           | Cut to size                                                                                   | Cut to size                                                                           | Cut to size                                                                           |