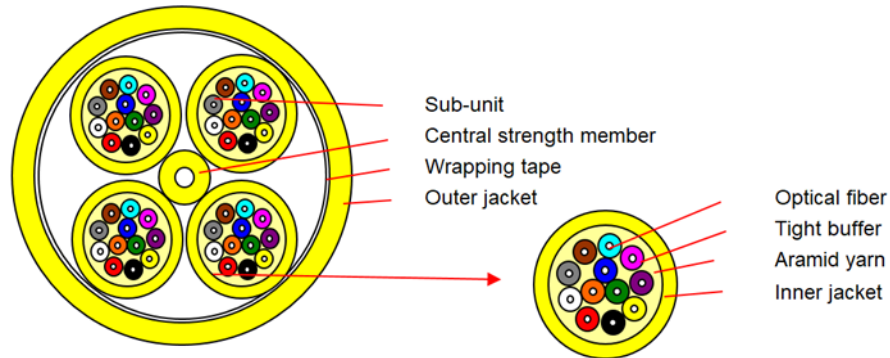


## Cable Cross-Section

### Optowire CSC-48FO-0.8kN



### Cable Specification

Tight buffer fibers, aramid yarn as strength member, LSZH inner jacket constitute a subunit, elements (subunits) laid up around non-metallic central strength member, wrapping tape, and LSZH outer jacket.

### Fiber Color Code

|       |         |
|-------|---------|
| No.   | 1       |
| Color | Natural |

### Fiber Color Code

|       |      |        |        |        |      |       |
|-------|------|--------|--------|--------|------|-------|
| No.   | 1    | 2      | 3      | 4      | 5    | 6     |
| Color | Blue | Orange | Green  | Brown  | Gray | White |
| No.   | 7    | 8      | 9      | 10     | 11   | 12    |
| Color | Red  | Black  | Yellow | Violet | Pink | Aqua  |

## Optical Fiber Type & Properties

### G652D Characteristic of Optical Fiber

| Item                                 |        | Unit  | Specification |
|--------------------------------------|--------|-------|---------------|
| Mode Field Diameter                  | 1310nm | μm    | 9.2 ± 0.4     |
|                                      | 1550nm |       |               |
| Cladding Diameter                    |        | μm    | 10.4 ± 0.5    |
| Cladding Non-Circularity             |        | %     | 125.0 ± 0.7   |
| Core Concentricity Error             |        | μm    | ≤1.0          |
| Coating Diameter                     |        | μm    | ≤0.5          |
| Coating/Cladding Concentricity Error |        | μm    | 242 ± 7       |
| Cable Cut-Off Wavelength             |        | nm    | ≤12           |
| Attenuation Coefficient              | 1310nm | dB/km | ≤0.35         |
|                                      | 1550nm | dB/km | ≤0.21         |
| Proof Stress Level                   |        | kpsi  | ≥100          |

## Cable Structure & Parameter

| Item                       | Contents   | Unit    | Value                                 |
|----------------------------|------------|---------|---------------------------------------|
| Optical Fiber              | /          | /       | 48                                    |
| Cable structure            | /          | /       | 1+4                                   |
| Tight buffer fiber         | Diameter   | mm      | 0.9 ± 0.5                             |
|                            | Material   | /       | LSZH                                  |
| Strength member            | Material   | /       | Aramid yarns                          |
| Inner jacket               | Diameter   | mm      | 5.5±0.2                               |
|                            | Material   | /       | LSZH                                  |
|                            | Color      | /       | Yellow                                |
|                            | Difference | /       | Marking "1#,2#,3#,4#" for difference. |
| Outer jacket               | Diameter   | mm      | 16.8±1.0                              |
|                            | Material   | /       | LSZH                                  |
|                            | Color      | /       | Yellow                                |
|                            | Thickness  | mm      | Nominal 1.5                           |
| Tensile performance        | Short term | N       | 800                                   |
| Crush                      | Short term | N/100mm | 1000                                  |
| Cable attenuation (Cabled) |            | dB/km   | max.: 0.4 at 1310nm, 0.3 at 1550nm    |
| Cable weight (Approx.)     |            | kg/km   | 232                                   |

**Note:** Sizes and values without tolerances are nominal values

## Characteristic Of Optical Cable

### Min. Bending Radius

Static: 10 x cable diameter

Dynamic: 20 x cable diameter

### Application Temperature Range

Operation: - 20°C ~ +70°C

Installation: -20°C ~ +60°C

Storage/transportation: - 20°C ~ +70°C

### Main Mechanical & Environmental Performance Test

## Main Mechanical & Environmental

| Item                                                   | Test Method                                                                             | Acceptance Condition                                                                                  |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Crush Test</b><br><b>IEC 60794-1-21-E3</b>          | - Load: Short term tension<br>- Length of cable: $\geq 50\text{m}$<br>- Load time: 1min | - Loss change $\leq 0.1\text{dB}@1550\text{nm}$ after test.<br>- No fiber break and no sheath damage. |
| <b>Temperature Cycling</b><br><b>IEC 60794-1-22-F1</b> | - Load: Short term crush<br>- Load time: 1min                                           | - Loss change $\leq 0.1\text{dB}@1550\text{nm}$ after test.<br>- No fiber break and no sheath damage. |
| <b>Temperature Cycling</b><br><b>IEC 60794-1-22-F1</b> | - Temperature: -20°C~+70°C<br>- Time of each step: 8h<br>- Number of cycles: 2          | - Loss change $\leq 0.4 \text{ dB/km @}1550\text{nm}$ .<br>- No fiber break and no sheath damage.     |
| <b>Flame retardant</b><br><b>IEC 60332-1</b>           | - Pass the single cable vertical flame propagation test.                                |                                                                                                       |