

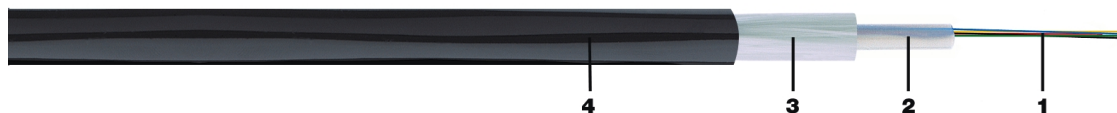
Application

- For **outdoor** use in structured (data) wiring systems (**campus backbone**).
- For **outdoor** use in networks for telecom, cable TV and/or broadcast.
- **Easy to install** in ducts, tunnels, trenches and/or tubes (by means of compressed air or pulling wire). Suitable for **direct burial** (crush ≤ 150 N/cm).

Key features

- A simple **all dielectric** cable construction (and consequently **more cost-effective up to 24 fibres** than multi-tube cables) with standard rodent protection.
- **Predicted life time > 30 years**.

Construction & dimensions



Cable specifications (construction in accordance with IEC 60794)

1. Primary coated optical fibres: $\text{Ø } 250 \pm 15 \mu\text{m}$.
2. Central tube, jelly filled (**non dripping and silicon-free**) with **up to 24 fibres**.
 Individually colour coded optical fibres:
 1 – 12: red - natural - yellow - blue - green - violet - brown - black - orange - turquoise - pink and white
 13 – 24: red - natural - yellow - blue - green - violet - brown - grey - orange - turquoise - pink and white **with black rings**.
3. Swellable (for the longitudinal watertightness) yarns as strength members and for the standard rodent protection.
4. Black UV resistant PE outer jacket.
 Identification: BELDEN OFC – "cable type" – "number x type of fibre" + date-, meter- and P/N- marking.

Mechanical data

	standard rodent protection
No. of fibres	4 - 8 - 12 - 24
Ø Central tube (mm)	4.2
Ø nom./max. (mm)	8.7 / 9.0
Weight (kg/km)	66
Energy of flame (kJ/m)	1700

Ordering information

Belden Europe code

Fibre-type/-count	4	8	12	24
9/125		49408	49411	49416
50/125	49403	49409	49412	49417
62.5/125	49404	49410	49413	49418
Colour code (black)	3003	3003	3003	3003
Reel code	042	042	042	042
Std. delivery length	2100 \pm 100 m			



Optical Characteristics

Characteristics (cabled) Multi-Mode - Graded-Index optical fibres according to IEC 60793

Fibre-type	Size (μm)	Wavelength (nm)	Attenuation average/max. (dB/km)	Bandwidth (MHz•km)	Gigabit Ethernet Performance (m)	Refractive Index
50/125	50 \pm 2.5	850	2.5 / 2.7	\geq 600	550	1.481
	125 \pm 2	1300	0.5 / 0.8	\geq 1200	550	1.476
62.5/125	62.5 \pm 2.5	850	3.0 / 3.2	\geq 200	220	1.495
	125 \pm 2	1300	0.6 / 0.9	\geq 600	550	1.490

Fibres with improved Gigabit Ethernet performance on request available.

Characteristics (cabled) Single-Mode - Matched-Cladded optical fibres according to ITU-G.652

Fibre-type	Size (μm)	Wavelength (nm)	Attenuation average/max. (dB/km)	Dispersion (ps/(nm•km))	PMD (ps/ $\sqrt{\text{km}}$)	Refractive Index
9/125	9.3 \pm 0.5	1310	0.33 / 0.38	\leq 3.5		1.467
	125 \pm 1	1550	0.20 / 0.25	\leq 18	\leq 0.5	1.467

A test report (attenuation) is supplied with each delivery.

Mechanical, physical and/or environmental

Temperature range according to IEC 60794-1-2-F1

Transport/storage	- 30 to + 70 °C
Installation	- 5 to + 50 °C
Operation	- 30 to + 70 °C

Watertightness according to IEC 60794-1-2-F5

Pulling tension according to IEC 60794-1-2-E1

Cable with standard RP	\leq 1400 N
------------------------	---------------

Crush resistance according to IEC 60794-1-2-E3

Cable	\leq 15000 N/m
-------	------------------

Bending radii for fibres and tubes

Installation/operation	> 25 mm
------------------------	---------

Bending radii cable

Static according to IEC 60794-1-2-E11	- 10 x \varnothing
Dynamic according to IEC 60794-1-2-E6	- 15 x \varnothing

Guide to installation and handling

- When laying and installing optical fibre cables **it is vitally important not to exceed the specified values** set for pulling tension, bending radii and temperature.
The installation methods have to be in accordance with the common standards.
- To ease insertion into tubes by means of compressed air or pulling wire, certified lubricants (e.g. paraffin) may be used. The use of soap or similar substances as lubricants is strictly prohibited.
- If a cable needs to be fastened, constrictions \geq 0.3 mm must be prevented.
- The jelly filling inside the tubes can be removed using a tissue soaked in turpentine.
- It is advisable to cap the cable-ends during storage.

Options

- Cables from **1 to 24 fibres**.
- Universal (halogen-free) cables for outdoor and/or indoor use.
- Non-standard cable constructions**, colours, details and/or additional information regarding specifications are available on request.