

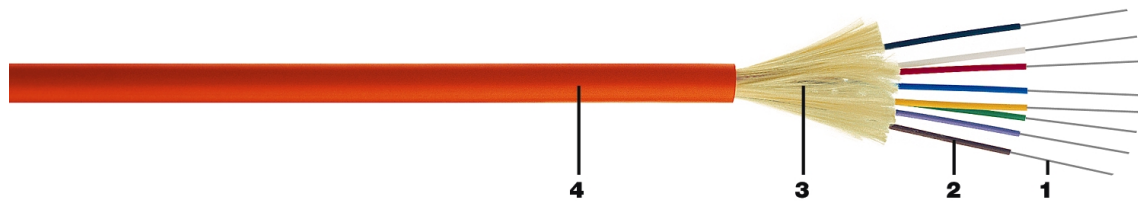
Application

- Structured (premises) wiring systems: building backbone (riser) and/or **horizontal cabling (Fibre To The Desk)**.
- Support **all current and future Categories (5, 6, 7 and ...)** and all computer network applications such as **FDDI, Gigabit Ethernet and ATM**.

Key features

- These cables are **halogen-free** = FRNC (Flame Retardant, Non Corrosive) and LSNH (Low Smoke, Non Halogen).
- These cables are **all dielectric** and therefore immune to lightning and electromagnetic interference (EMC-safe), spark-free and require no earthing.
- **Predicted life time > 30 years**.

Construction & dimensions



Cable specifications (construction in accordance with IEC 60794)

1. Primary coated optical fibres: $\varnothing 280 \pm 15 \mu\text{m}$.
2. Tight buffered fibres: $\varnothing 0.9 \pm 0.1 \text{ mm}$.
 Colour coding of the buffered fibres:
 white – red – blue – yellow – green – violet – brown – black – orange – turquoise – pink – grey
 of the fibres 1 – 12 the **secondary coating** is coloured
 of the fibres 13 – 24 the **primary coating is coloured** and the secondary coating is transparent.
3. Reinforced yarns as common strength members.
4. **Orange** halogen-free (FRNC/LSNH) outer jacket.
 Identification: BELDEN OFC – “cable type” – “number x type of fibre” + date-, meter- and P/N-marking.

Mechanical data

No. of fibres	2	4	6	8	12	16	24
\varnothing nom. (mm)	4.0	4.8	5.3	5.3	7.0	8.0	9.0
Max. pulling tension (N)	400	400	450	450	500	500	600
Energy of flame (kJ/m)	227	294	339	351	619	886	1044
Weight (kg/km)	16	19	23	25	40	49	57

Ordering information

Belden Europe code

Fibre-type/-count	2	4	6	8	12	16	24
9/125			49352		49953		
50/125	49953	49951	49954	49955	49952	49477	49942
62.5/125	49946	49947	49948	49949	49950	49944	49905
Colour code (orange)	3128	3128	3128	3128	3128	3128	3128
Reel code	241	241	025	025	025	042	042
Std. del. 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 \cdot km)	Gigabit Ethernet Performance (m)	Refractive Index
50/125	50 \pm 2.5	850	2.6 / 2.8	\geq 600	550	1.481
	125 \pm 2	1300	0.6 / 0.9	\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	0.7 / 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 \cdot km))	PMD (ps/ \sqrt km)	Refractive Index
9/125 patchcord quality	9.3 \pm 0.5	1310	0.35 / 0.5	\leq 3.5		1.467
	125 \pm 1	1550	0.21 / 0.3	\leq 18	$<$ 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	- 5 to + 55 °C

Strippability

Secondary coating only	\leq 10 cm
Secondary + primary coating	\leq 10 mm

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

See table with dimensions

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

Tight buffer	\leq 4000 N/m
Cable	\leq 4000 N/m

Bending radii for fibres and tight buffers

Installation/operation	$>$ 25 mm
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Bending radii cable

Static according to IEC 60794-1-2-E11	– 15 x \emptyset
Dynamic according to IEC 60794-1-2-E6	– 20 x \emptyset

Halogen-free according to HD 602 (IEC 60754-2)

Corrosivity	pH \geq 3.5 - $\mu\text{S/cm}$ \leq 100
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Flame retardancy according to IEC 60332-2

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 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.
- It is advisable to cap the cable-ends during storage.

Options

- Indoor Mini-Breakout cables with excellent strippable dry semi-tight buffered fibres.
- Intex Mini-Breakout cables for internal and external use.
- **Non-standard cable constructions**, colours, details and/or additional information regarding specifications are available on request.