

Application

- Structured (premises) wiring systems: **campus and/or building backbone (riser) and/or horizontal cabling**.
- Support all computer network applications such as **FDDI, Gigabit Ethernet and ATM**.
- **Easy to install** in ducts, tunnels and trenches. Not recommended for direct burial.

Key features

- These cables are **halogen-free** (= FRNC and LSNH) and watertight and therefore suitable for internal and external (= intex) use. Consequently **splicing can be avoided** and the installation gets **more cost-effective**.
- These cables are **all dielectric** (metal-free).
- **Predicted lifetime > 30 years**.

Construction & dimensions



Cable specifications (construction in accordance with IEC 60794)

1. Swellable reinforced yarns as common strength members and for the longitudinal watertightness.
2. Primary coated optical fibres: $\text{Ø } 280 \pm 15 \mu\text{m}$.
3. Tight buffered fibres: $\text{Ø } 0.9 \pm 0.1 \text{ mm}$. 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.
4. Swellable tape.
5. **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	4	6	8	12	24
Ø nom. (mm)	5.4	5.9	5.9	7.6	9.6
Max. pulling tension (N)	400	450	450	500	600
Energy of flame (kJ/m)	296	347	371	622	1082
Weight (kg/km)	26	30	32	45	65

Options

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

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)	Ethernet Performance (m)		Refractive Index
					1GbE	10Gbe	
62.5/125 OM1	62.5 \pm 2.5	850	3.0 / 3.2	\geq 200	275	33	1.495
	125 \pm 1	1300	0.7 / 0.9	\geq 600	550	n.a.	1.490
50/125 OM2	50 \pm 2.5	850	2.6 / 2.8	\geq 600	550	82	1.481
	125 \pm 1	1300	0.6 / 0.9	\geq 1200	550	n.a.	1.476
50/125 OM2e	50 \pm 2.5	850	2.6 / 2.8	\geq 600	750	110	1.481
	125 \pm 1	1300	0.6 / 0.9	\geq 1200	2000	n.a.	1.476
50/125 OM3	50 \pm 2.5	850	2.6 / 2.8	\geq 1500	900	300	1.482
	125 \pm 1	1300	0.6 / 0.9	\geq 500	550	n.a.	1.477

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

Fibre-type	Size (μm)	Wavelength (nm)	Attenuation average/max. (dB/km)	Dispersion (ps/(nm \cdot km))	PMD (ps/ $\sqrt{\text{km}}$)	Refractive Index
9/125-OS1 patchcord quality	9.2 \pm 0.4	1310	0.35 / 0.5	\leq 3.5		1.467
	125 \pm 1	1550	0.21 / 0.3	\leq 18	\leq 0.2	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 $^{\circ}\text{C}$
Installation	- 5 to + 50 $^{\circ}\text{C}$
Operation	- 30 to + 70 $^{\circ}\text{C}$

Strippability

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

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

See table with dimensions

Watertightness according to IEC 60794-1-2-F5

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 tubes

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 IEC 60754-2 (HD 602)

Corrosivity	pH \geq 3.5 - $\mu\text{S}/\text{cm} \leq$ 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 into tubes 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.



Ordering information

Belden European Part Numbers

Fibre-type/-count	4
62.5/125-OM1	GUMT104
50/125-OM2	GUMT204
50/125-OM2e	GUMT404
50/125-OM3	GUMT304
9/125-OS1	GUMT904
Std. reel (non-returnable)	plywood reel Ø 560 * 336 mm, weight 4.25kg
Std. del. length	2100 ± 100 m

Fibre-type/-count	6	8
62.5/125-OM1	GUMT106	GUMT108
50/125-OM2	GUMT206	GUMT208
50/125-OM2e	GUMT406	GUMT408
50/125-OM3	GUMT306	GUMT308
9/125-OS1	GUMT906	GUMT908
Std. reel (non-returnable)	plywood reel Ø 800 * 475 mm, weight 7.65 kg	
Std. del. length	2100 ± 100 m	

Fibre-type/-count	12	24
62.5/125-OM1	GUMT112	GUMT124
50/125-OM2	GUMT212	GUMT224
50/125-OM2e	GUMT412	GUMT424
50/125-OM3	GUMT312	GUMT324
9/125-OS1	GUMT912	GUMT924
Std. reel (non-returnable)	plywood reel Ø 1000 * 530 mm, weight 18 kg	
Std. del. length	2100 ± 100 m	