

Application

- Structured (premises) wiring systems: **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.

Key features

- Excellent strippable dry semi-tight buffered fibres
- The individual single fibre units (of which these metal-free breakout cables are composed) permit direct **(detensioned) terminations with separate single-way connectors**, which eliminate splicing of pigtails and/or breakout kits.
- These cables are **halogen-free** (= FRNC and LSNH) and **metal-free** (all dielectric).
- **Predicted lifetime > 30 years**.

Construction & dimensions



Cable specifications (construction in accordance with IEC 60794)

1. Primary coated optical fibres: $\varnothing 250 \pm 15 \mu\text{m}$.
2. Dry semi-tight buffered fibres: $\varnothing 0.9 \pm 0.1 \text{ mm}$.
3. Reinforced yarns as strength members.
4. **Orange** halogen-free (FRNC/LSNH), numbered jacket ($\varnothing 2.5 \pm 0.2 \text{ mm}$).
5. Tape.
6. **Orange** halogen-free (FRNC/LSNH) outer jacket with rip cord.
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
Cable core	Flat	CE+4	CE+6	CE+8	3+9
\varnothing nom. (mm)	6.3 x 3.8	7.2	9.4	10.9	11.8
Max. pulling tension (N)	300	600	900	1200	1800
Energy of flame (kJ/m)	382	607	1124	1450	1675
Weight (kg/km)	26	40	73	93	111

CE = Central Element

Options

- Mixed fibre types.
- **Non-standard cable constructions**, 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·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·km))	PMD (ps/vkm)	Refractive Index
	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 + 45 °C
Installation	- 5 to + 45 °C
Operation	- 5 to + 45 °C

Strippability

Secondary coating only	\leq 100 cm
Secondary coating + primary coating	\leq 25 mm

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

Single fibre unit	\leq 150 N
Cables: see table with dimensions	

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

Tight buffer	\leq 4000 N/m
Single fibre unit	\leq 5000 N/m
Cable	\leq 7500 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	- 10 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 - $\mu\text{S/cm}$ \leq 100
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Flame retardancy according to IEC 60332-1

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.
- If a cable needs to be fastened, constrictions must be avoided.
- To ease insertion certified lubricants (e.g. paraffin) may be used. The use of soap or similar substances as lubricants is strictly prohibited.
- Indoor optical fibre cables have been designed for use inside buildings. Consequently they are not longitudinal watertight.
- It is advisable to cap the cable-ends during storage.

Ordering information

Belden European Part numbers

Fibre-type/-count	2	4
62.5/125-OM1	GIBK102	GIBK104
50/125-OM2	GIBK202	GIBK204
50/125-OM2e	GIBK402	GIBK404
50/125-OM3	GIBK302	GIBK304
9/125-OS1	GIBK902	GIBK904
Std. reel (non-returnable)	plywood reel Ø 560 * 336 mm, weight 4.25 kg	plywood reel Ø 800 * 475 mm, weight 14 kg
Std. del. length	2100 ± 100 m	

Fibre-type/-count	6	8
62.5/125-OM1	GIBK106	GIBK108
50/125-OM2	GIBK206	GIBK208
50/125-OM2e	GIBK406	GIBK408
50/125-OM3	GIBK306	GIBK308
9/125-OS1	GIBK906	GIBK908
Std. reel (non-returnable)	plywood reel Ø 1000 * 530 mm, weight 18 kg	
Std. del. length	2100 ± 100 m	

Fibre-type/-count	12
62.5/125-OM1	GIBK112
50/125-OM2	GIBK212
50/125-OM2e	GIBK412
50/125-OM3	GIBK312
9/125-OS1	GIBK912
Std. reel (non-returnable)	wooden reel Ø 1250 * 688 mm, weight 93 kg
Std. del. length	2100 ± 100 m