

## Application

- For **outdoor and indoor** use in structured (data) wiring systems (**backbone**) and/or in networks for telecom, cable TV and/or broadcast.
- Support all computer network applications such as **FDDI, Gigabit Ethernet and ATM**.
- **Easy to install** in ducts, tunnels, trenches and/or tubes. Suitable for **direct burial** (crush  $\leq 15$  kN/m).

## Key features

- 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.
- **Predicted lifetime > 30 years**.

## Construction & dimensions

**Cable specifications** (construction in accordance with IEC 60794)

1. Central element (CE) with waterblocking tape
2. Primary coated optical fibres:  $\varnothing 245 \pm 10 \mu\text{m}$ .
3. Semi-Tight buffered fibres:  $\varnothing 0.9 \pm 0.1$  mm.
4. Reinforced swellable yarns as strength members.
5. Halogen-free (FRNC/LSNH) numbered jacket ( $\varnothing 2.5 \pm 0.2$  mm).
6. Waterblocking tape.
7. Black halogen-free (FRNC/LSNH) outer jacket with ripcord.  
 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
Cable core	CE + 2 + 4BE	CE + 4 + 2BE	CE+6	CE+8
$\varnothing$ nom. (mm)	11.0	11.0	11.0	13.2
Max. pulling tension (N)	1400	1400	1400	2000
Weight (kg/km)	83	83	85	110

BE = Blind Element = filler

## Ordering information

### Belden Europe code

Fibre-type/-count	2	4	6	8
62.5/125-OM1	YE00047			
50/125-OM2				
50/125-OM2e				
50/125-OM3				
9/125-OS1				
Std. reel (non-returnable)	wooden reel $\varnothing 1000 * 585$ mm, weight 47 kg			
Std. del. length	2100 $\pm$ 100 m			

## Optical characteristics

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

Fibre-type	Size ( $\mu\text{m}$ )	Wavelength (nm)	Attenuation average/max. (dB/km)	Bandwidth (MHz $\cdot$ km)	Ethernet Performance (m)		Refractive Index
					1GbE	10Gbe	
<b>62.5/125</b> <b>OM1</b>	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
<b>50/125</b> <b>OM2</b>	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
<b>50/125</b> <b>OM2e</b>	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
<b>50/125</b> <b>OM3</b>	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 ( $\mu\text{m}$ )	Wavelength (nm)	Attenuation average/max. (dB/km)	Dispersion (ps/(nm $\cdot$ km))	PMD (ps/ $\sqrt{\text{km}}$ )	Refractive Index
<b>9/125-OS1</b> 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 °C
Installation	- 5 to + 50 °C
Operation	- 30 to + 70 °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	$\leq$ 230 N
Cables: see table	

### Crush resistance according to EC 60794-1-2-E3

Semi-Tight buffer	$\leq$ 4000 N/m
Single fibre unit	$\leq$ 4000 N/m
Cable	$\leq$ 15000 N/m

### Bending radii for fibres and tight buffers

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

### Bending radii cable

Static according to IEC 60794-1-2-E11	- 10 x $\emptyset$
Dynamic according to IEC 60794-1-2-E6	- 20 x $\emptyset$

### 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.
- The primary and secondary coating are separated by means of a very thin layer of jelly. If necessary this jelly can be removed using a tissue soaked in turpentine, for example.
- 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.
- It is advisable to cap the cable-ends during storage.

## Options

- **Non-standard cable constructions**, colours, details and/or additional information regarding specifications are available on request.