Indoor Interconnection Cables

Simplex & Duplex cables

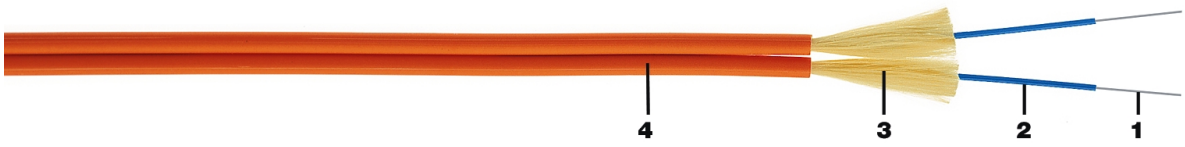
Application

- **Flexible terminating leads** such as pigtails, patchcords and test leads.
- Support all current and future Categories (5, 6, 7 and …) and all computer network applications such as FDDI, Gigabit Ethernet and ATM.
- Short distance applications for indoor use.

Key features

- These cables are based on **excellent strippable** semi-tight buffered optical fibres.
- **All dielectric** (metal-free) optical fibre leads permitting **direct (detensioned) termination with connectors**.
- These cables are **halogen-free** = FRNC (Flame Retardant, Non Corrosive) and LSNH (Low Smoke, Non Halogen).
- **Predicted life time > 30 years**.

Construction & dimensions



Cable specifications (construction in accordance with IEC 60794)

1. Primary coated optical fibres: Ø 250 ± 15 µm.
2. Semi-tight buffer: Ø 0.9 ± 0.1 mm.
   Colour coding of the buffered fibres: blue with MM 62.5/125
   green with MM 50/125
   yellow with SM 9/125
3. Aramid yarns as strength members.
4. Halogen-free (FRNC/LSNH) outer jacket.
   The outer jacket of the duplex version is extruded in a good splittable shape.
   Identification: BELDEN OFC – "cable type"– "number x type of fibre" + date-, meter-and P/N-marking.

Mechanical data

No. of fibres	**1**	**2**
Type	Simplex	Duplex Fig. 8
Ø nominal (mm)	2.8 ± 0.2	(2.8 x 5.7) ± 0.2
Energy of flame (kJ/m)	128	256
Weight (kg/km)	7.1	14.1

Ordering information

Belden Europe code

Fibre-type / -count	9/125	50/125	62.5/125	colour code	colour	reel code	std. del. length
1	46653			3233	yellow	240	2100 ± 100 m
1		46654	46655	3232	orange	240	2100 ± 100 m
2	46656			3238	yellow	241	2100 ± 100 m
2		46657	46658	3237	orange	241	2100 ± 100 m

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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 ± 2.5 125 ± 2	850 1300	2.6 / 2.8 0.6 / 0.9	≥ 600 ≥ 1200	550 550	1.481 1.476
62.5/125	62.5 ± 2.5 125 ± 2	850 1300	3.0 / 3.2 0.7 / 0.9	≥ 200 ≥ 600	220 550	1.495 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/√km)	Refractive Index
9/125 patchcord quality	9.3 ± 0.5 125 ± 1	1310 1550	0.35 / 0.5 0.21 / 0.3	≤ 3.5 ≤ 18	 ≤ 0.5	1.467 1.467

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

Mechanical, physical and/or environmental

Temperature range for lengths ≤ 100 m

Transport/storage	- 30 to + 70 ºC
Installation	- 5 to + 50 ºC
Operation	- 5 to + 55 ºC

Strippability

Secondary coating only	≤ 100 cm
Secondary + primary coating	≤ 25 mm

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

Semi-tight buffer	≤ 3 N
Simplex cable	≤ 200 N
Duplex cable	≤ 400 N

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

Semi-tight buffer	≤ 10000 N/m
Duplex cable	≤ 10000 N/m
Duplex cable	≤ 20000 N/m

Bending radii for fibres and tight buffers
Installation/operation > 25 mm

Bending radii cable
Static according to IEC 60794-1-2-E11 – 15 x Ø
Dynamic according to IEC 60794-1-2-E6 – 20 x Ø

Halogen-free according to HD 602 (IEC 60754-2)
Corrosivity pH ≥ 3.5 - µS/cm ≤ 100

Flame retardancy according to IEC 60332-1

Guide to installation and handling

- When using Interconnection optical fibre cables **it is vitally important not to exceed the specified values** set for pulling tension, bending radii and temperature.
  The installation and termination 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. Consequently the strippability is very good. If necessary the jelly can be removed using a tissue soaked in turpentine, for example.
- Interconnection optical fibre cables have been designed for short distance applications (tens of meters) inside buildings.

Options

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

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