BELDEN
SENDING ALL THE RIGHT SIGNALS

Technical Data Sheet

GUCB

Central Loose Tube Cables
Universal – Indoor / Outdoor - Corrugated Steel Tape Armor (CST)
A/I-DQ(ZN)(SR)H

Full Rodent Protection

Ordering Information

Belden European Part Numbers

Fibre type / count	4	6	8	12	16	24
62.5/125-OM1	GUCB104	GUCB106	GUCB108	GUCB112	GUCB116	GUCB124
50/125-OM2 BW 600/1200	GUCB204	GUCB206	GUCB208	GUCB212	GUCB216	GUCB224
50/125-OM3	GUCB304	GUCB306	GUCB308	GUCB312	GUCB316	GUCB324
50/125-OM2e	GUCB404	GUCB406	GUCB408	GUCB412	GUCB416	GUCB424
50/125-OM2 BW 500/500	GUCB504	GUCB506	GUCB508	GUCB512	GUCB516	GUCB524
50/125-OM4	GUCB604	GUCB606	GUCB608	GUCB612	GUCB616	GUCB624
9/125 ITU G.655	GUCB704	GUCB706	GUCB708	GUCB712	GUCB716	GUCB724
9/125 ITU G.652D-OS2	GUCB804	GUCB806	GUCB808	GUCB812	GUCB816	GUCB824
Std. plywood reel (non-returnable)	Ø 1000 * 588 mm 50 kg					
Std. delivery length	2100 ± 100m					

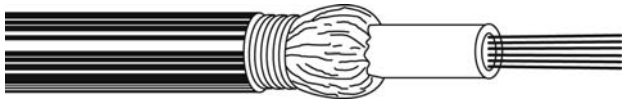
Applications

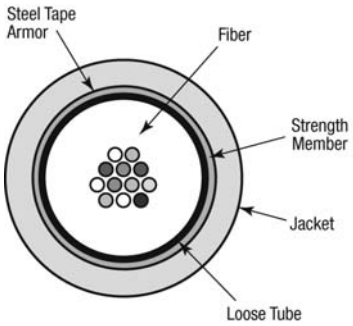
- For **outdoor and indoor** use in structured (data) wiring systems such as (**campus backbone)**.
- For **outdoor and indoor** use in networks for telecom, cable TV and/or broadcast.
- Easy to install in ducts, tunnels and trenches. Suitable for direct burial (crush ≤ 400 N/cm).

Features & Benefits

- A simple cable construction and consequently **more cost-effective up to 24 fibres** then multi-tube cables.
- **High mechanical and full rodent protection** provided by corrugated steel tape **(CST) armour.**
- **Predicted lifetime > 30 years.**

Construction & Dimensions





Cable Specifications (construction in accordance with IEC 60794)

1. Primary coated optical fibres: Ø 250 ± 15 um.
2. Central tube, jelly filled **(non-dripping and silicon-free)** with **up to 24 fibres.**
   Individually colour coded optical fibres:
   1 – 12: red – natural – yellow – blue – green – violet – brown – black – orange - turquoise – pink and white.
   13 – 24: red – natural – yellow – blue – green – violet – brown – grey – orange – turquoise – pink and white with rings.
3. Water swellable E-glass yarns as strength members and for the **longitudinal watertightness.**
4. Corrugated Steel Tape Armouring (CST): longitudinally applied steel tape (0.155 mm).
5. Black UV resistant FRNC/LSNH outer jacket.
   Identification: BELDEN OFC – “cable type” – “number x fibre type” + date-, meter- and P/N marking.

Mechanical Data

No. of fibres	Max. 24
Ø Central tube (mm)	4.0
Ø nom./max. (mm)	10.6 / 10.9
Energy of flame (kJ/m)	1308
Weight (kg/km)	148

Optical Characteristics

Characteristics (cabled) Single-Mode – Matched-Cladded optical fibres according to ITU.

European Partnumber Coding, Position 5	Fibre-Type	Mode-Field /Cladding Diameter (um)	Wave-length (nm)	Attenuation average/ max. (dB/km)	Dispersion (ps/(nm-km)	PMD (ps/km)	Cable Cut-off Wave-length (nm)
8	**9/125 G.652D OS2**	9.2 ± 0.4 125 ± 0.7	1310 1550	0.32 / 0.40 0.21 / 0.30	≤ 3.5 ≤ 18	≤ 0.2	≤ 1260
7	**9/125 G.655**	8.4 ± 0.6 125 ± 1	1550	0.25 / 0.30	3.5 – 8.5	≤ 0.1[A]	≤ 1260

Note A- Link design value

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

European Partnumber Coding, Position 5	Fibre-Type	Mode-Field Diameter (um)	Wave-length (nm)	Attenuation average/ max. (db/km)	Bandwidth (MHz•km)	Ethernet Performance (m)		Num. Apert. (µm)	Refr. Index
						1GBE	10 GBE		
1	**62.5/125 OM1**	62.5 ± 2.5 125 ± 1	850 1300	2.7 / 3.2 0.6 / 1.1	≥ 200 ≥ 600	275 550	33 n.a.	0.275 ± 0.015	1.495 1.490
5	**50/125 OM2**	50 ± 2.5 125 ± 1	850 1300	2.4 / 3.0 0.7 / 1.0	≥ 500 ≥ 500	600 600	82 n.a.	0.20 ± 0.015	1.481 1.476
2	**50/125 OM2**	50 ± 2.5 125 ± 1	850 1300	2.3 / 2.8 0.6 / 0.9	≥ 600 ≥ 1200	600 600	82 n.a.	0.20 ± 0.015	1.481 1.476
4	**50/125 OM2e**	50 ± 2,5 125 ± 1	850 1300	2,3 / 2,8 0,6 / 0,9	≥ 600 ≥ 1200	750 2000	110 na	0.20 ± 0.015	1,481 1,476
3	**50/125 OM3**	50 ± 2.5 125 ± 1	850 1300	2.5 / 3.0 0.5 / 1.0	≥ 1500 ≥ 500	900 550	300 n.a.	0.20 ± 0.015	1.482 1.477
6	**50/125 OM4**	50 ± 2.5 125 ± 1	850 1300	2.5 / 3.0 0.5 / 1.0	≥ 6000 ≥ 500	900 550	550 n.a.	0.20 ± 0.015	1.482 1.477

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

Mechanical, Physical and/or Environmental Characteristics

Requirements	
Temperature range according to IEC 60794-1-2-F1	
Tansport/storage	-30 to + 70 ˚C
Installation	-5 to + 50 ˚C
Operation	-30 to + 70 ˚C
Pulling tension according to IEC 60794-1-2-E1	
Long term	≤ 2000 N
Short term	≤ 4000 N
Bending radii for fibres and tubes	
Installation/operation	>25 mm
Watertightness according to IEC 60794-1-2-F5	Yes
Crush resistance according to IEC 60794-1-2-E3	
Armoured Central Loose Tube Cable	≤ 40 KN/m
Bending radii cable	
Static according to IEC 60794-1-2-E11	10 x Ø
Dynamic according to IEC 60794-1-2-E6	20 x Ø
Flame retardancy according to	
IEC 60332-3-22 (EN 50266-2-2)	Pass
IEC 61034 (EN 50268-2)	Pass
Circuit Integrity according to	
IEC 60331-25 (E120)	Pass
EN 50200	Pass
Halogen-free according to IEC 60754-2 (EN 50267-2-2)	
Corrosivity	pH ≥ 3.5 - µS/cm ≤ 100

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 by means of compressed air or pulling wire, 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 > 0.3 mm must be prevented.
- The jelly filling inside the tubes can be removed using a tissue soaked in turpentine.
- It is advisable to cap the cable-ends during storage.

Options

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

Revision

Rev.	Description	Date	Init.
02	Correction in Flame retardancy	16/02/09	SN
03	OM3+ changed to OM4	12/10/09	JW
04	OS2 added	25/11/09	JW
05	Add Circuit Integrity	06/02/12	SN
Date: 08/07/08	Page 1 of 1	Part Number:	
Orig.: SN	Review:	**GUCB**	