

## GIBT

### Breakout Cables

#### Indoor

#### I-V(ZN)HH

### Ordering Information

#### Belden European Part Numbers

Fibre type / count	2	4	6	8	12	24
62.5/125-OM1	GIBT102	GIBT104	GIBT106	GIBT108	GIBT112	GIBT124
50/125-OM2 BW 600/1200	GIBT202	GIBT204	GIBT206	GIBT208	GIBT212	GIBT224
50/125-OM3	GIBT302	GIBT304	GIBT306	GIBT308	GIBT312	GIBT324
50/125-OM2e	GIBT402	GIBT404	GIBT406	GIBT408	GIBT412	GIBT424
50/125-OM2 BW 500/500	GIBT502	GIBT504	GIBT506	GIBT508	GIBT512	GIBT524
50/125-OM4	GIBT602	GIBT604	GIBT606	GIBT608	GIBT612	GIBT624
9/125 ITU G.655	GIBT702	GIBT704	GIBT706	GIBT708	GIBT712	GIBT724
9/125 ITU G.652D	GIBT802	GIBT804	GIBT806	GIBT808	GIBT812	GIBT824
9.125 ITU G.657A	GIBTA02	GIBTA04	GIBTA06	GIBTA08	GIBTA12	GIBTA24
Std. reel (non-returnable)	Ø 800 * 475 mm weight 7.65 kg		Ø 1000 * 530 mm weight 18 kg		Ø 1250 * 688 mm weight 81 kg	
Std. delivery length	2100 ± 100m					

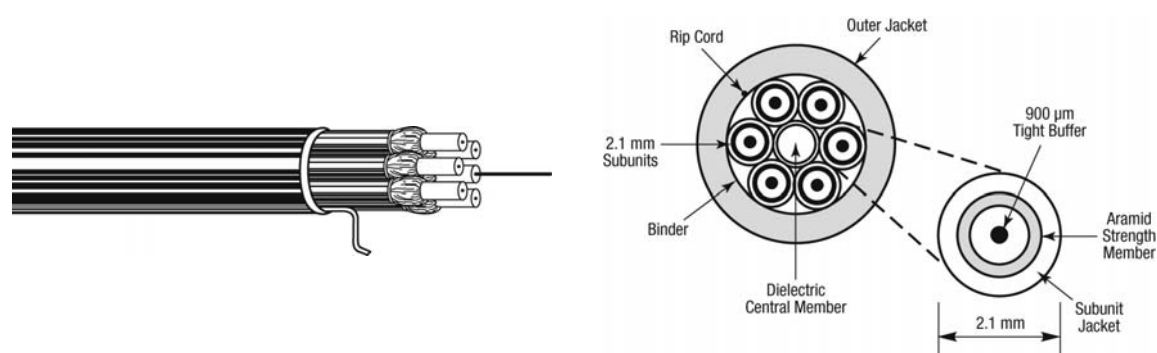
### Applications

- 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.

### Features & Benefits

- 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:  $\varnothing 280 \pm 10 \mu\text{m}$ .
2. Tight buffered fibres:  $\varnothing 0.90 \pm 0.1 \text{ mm}$ .
3. Aramid yarns as strength members.
4. **Yellow** (SM fibre) or **Orange** (MM fibre) halogen-free (FRNC/LSNH) numbered jacket ( $\varnothing 2.1 \pm 0.2\text{mm}$ )
5. Tape.
6. **Yellow** (SM fibre) or **Orange** (MM fibre) 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	24
Cable core	2+2BE	CE+4	CE+6	CE+8	3+9	2+8+14
$\varnothing$ nom. (mm)	5.3	6.2	8.0	9.4	10.5	14.3
Max. pulling tension (N)						
Long term	400	400	600	800	1200	2400
Short term	800	800	1200	1600	2400	4800
Weight (kg/km)	25	31	59	77	87	175
Energy of Flame (kJ/m)	379	507	928	1235	1424	2677

## 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 Patch cord quality	9.2 ± 0.4 125 ± 0.3	1310 1550	0.34 / 0.50 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 <sup>A</sup>	≤ 1260
A	9/125 G.657A	8.9 ± 0.4 125 ± 0.3	1310 1550 1625	0.35 / 0.5 0.21 / 0.3 0.24 / 0.4	≤ 3.5 ≤ 18	≤ 0.2	≤ 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	Core/Cladding Diameter (um)	Wave-length (nm)	Attenuation average/ max. (dB/km)	Bandwidth (MHz•km)	Ethernet Performance (m)		Num. Apert. (µm)
						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
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
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
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
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
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

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

## Mechanical, Physical and/or Environmental Characteristics

Requirements		
<b>Temperature range</b> according to IEC 60794-1-2-F1	Transport/storage	-30 to + 70 °C
	Installation	-5 to + 50 °C
	Operation	-5 to + 55 °C
<b>Pulling tension</b> according to IEC 60794-1-2-E1	Single Fibre Unit	
	Long term	≤ 110 N
	Short term	≤ 220 N
Cable	See table	
<b>Bending radii for fibres and tight buffers</b>		
Installation/operation		>25 mm
<b>Bending radii cable</b>		
Static according to IEC 60794-1-2-E11		10 x Ø
Dynamic according to IEC 60794-1-2-E6		15 x Ø
<b>Strippability</b>		
Secondary coating only		≤ 10 cm
Secondary + primary coating		≤ 10 mm
<b>Crush resistance</b> according to IEC 60794-1-2-E3		
Tight Buffer		≤ 4000 N/ m
Single Fibre Unit		≤ 4000 N/m
Cable		≤ 7500 N/m
<b>Halogen-free</b> according to IEC 60754-2 (EN 50267-2-2)		
Corrosivity		pH ≥ 3.5 - µS/cm ≤ 100
<b>Flame retardancy</b> according to IEC 60332-1 (EN 60332-1)		Pass

## 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 standard colours.
- 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

## Options

- Breakout cables with Semi-Tight Buffered fibres.
- Mixed Fibre types.
- Non-standard cable constructions and colours.

**Revision**

Rev.	Description	Date	Init.
02	Bending radii cable added	16/07/09	SN
03	OM3+ changed to )M4	12/10/09	JW
Date: 16/07/09		Page 1 of 1	
Orig.: SN		Review:	
		Part Number: <b>GIBT</b>	