BELDEN
SENDING ALL THE RIGHT SIGNALS

Technical Data Sheet

GDAG

Multi Loose Tube Cables
Outdoor
A-DF(ZN)2Y

Ordering Information

Belden European Part Numbers

Fibre type / count	4	6	8	12	18	24	30	36
62.5/125-OM1	GDAG104	GDAG106	GDAG108	GDAG112	GDAG118	GDAG124	GDAG130	GDAG136
50/125-OM2 BW 600/1200	GDAG204	GDAG206	GDAG208	GDAG212	GDAG218	GDAG224	GDAG230	GDAG236
50/125-OM3	GDAG304	GDAG306	GDAG308	GDAG312	GDAG318	GDAG324	GDAG330	GDAG336
50/125-OM2e	GDAG404	GDAG406	GDAG408	GDAG412	GDAG418	GDAG424	GDAG430	GDAG436
50/125-OM2 BW 500/500	GDAG504	GDAG506	GDAG508	GDAG512	GDAG518	GDAG524	GDAG530	GDAG536
50/125-OM4	GDAG604	GDAG606	GDAG608	GDAG612	GDAG618	GDAG624	GDAG630	GDAG636
9/125 ITU G.655	GDAG704	GDAG706	GDAG708	GDAG712	GDAG718	GDAG724	GDAG730	GDAG736
9/125 ITU G.652D-OS2	GDAG804	GDAG806	GDAG808	GDAG812	GDAG818	GDAG824	GDAG830	GDAG836
Std. plywood reel (non-returnable)	Ø 1000 * 530 mm 18 kg							
Std. delivery length	2100 ± 100m							

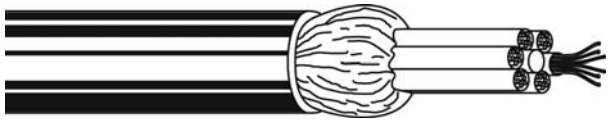
Applications

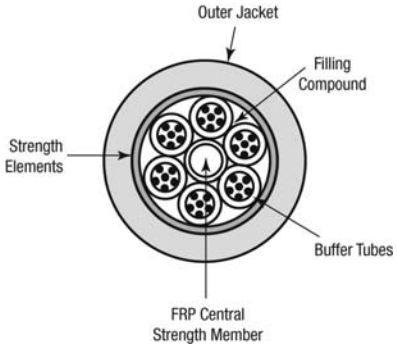
- For **outdoor** use in structured (data) wiring systems such as (**campus backbone)**.
- For **outdoor** use in networks for telecom, cable TV and/or broadcast.
- Easy to install in ducts, tunnels and trenches by means of compressed air or pulling wire.
- Suitable for direct burial.

Features & Benefits

- **Predicted lifetime > 30 years.**

Construction & Dimensions





Cable Specifications (construction in accordance with IEC 60794)

1. Dielectric central element of glass reinforced plastic (GRP), also as protection against kinks.
2. Jelly filled (non-dripping and silicon-free) loose tubes with primary coated optical fibres (Ø 250 ± 15 µm).
   Individually colour coded optical fibres: red – green – blue – yellow – violet – pink.
3. The loose tubes are stranded around the central element, if necessary with fillers (PE-natural).
   Colour coding of the loose tubes: 1. red – 2. green – rest white.
4. Jelly filling compound between interstices, and PET foil over cable core.
5. Swellable (for the longitudinal watertightness) aramid yarns as strength members.
6. Black UV resistant PE outer jacket.
   Identification: BELDEN OFC – “cable type” – “number x fibre type” + date-, meter- and P/N marking.

Mechanical Data

No. of fibres	Max. 36
Cable core	6 tubes
Ø Central element (mm)	1.9
Ø Loose tube (mm)	1.9
Ø nom./max. (mm)	10.0 / 10.3
Energy of flame (kJ/m)	3300
Weight (kg/km)	74

Optical Characteristics

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

European Partnumber Coding, Position 5	Fibre-Type	Mode-Field /CladdingDiameter (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	≤ 3000 N
Short term	≤ 6000 N
Bending radii for fibres and tubes	
Installation/operation	>25 mm
Watertightness according to IEC 60794-1-2-F5	Pass
Crush resistance according to IEC 60794-1-2-E3	
Cable	≤ 20 KN/m
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

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

Revision

Rev.	Description	Date	Init.
02	OM3+ changed to OM4	12/10/09	JW
03	OS2 added	30/11/09	JW
04	Changed energy	22/11/2010	TvR

Date: 18/07/08	Page 1 of 1	Part Number:
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