

GDRG

Multi Loose Tube Cables
Outdoor
A-DF(ZN)B2Y
Improved Rodent Protection

Ordering Information

Belden European Part Numbers

Fibre type / count	4	6	8	12	18	24	30	36
62.5/125-OM1	GDRG104	GDRG106	GDRG108	GDRG112	GDRG118	GDRG124	GDRG130	GDRG136
50/125-OM2 BW 600/1200	GDRG204	GDRG206	GDRG208	GDRG212	GDRG218	GDRG224	GDRG230	GDRG236
50/125-OM3	GDRG304	GDRG306	GDRG308	GDRG312	GDRG318	GDRG324	GDRG330	GDRG336
50/125-OM2e	GDRG404	GDRG406	GDRG408	GDRG412	GDRG418	GDRG424	GDRG430	GDRG436
50/125-OM2 BW 500/500	GDRG504	GDRG506	GDRG508	GDRG512	GDRG518	GDRG524	GDRG530	GDRG536
50/125-OM4	GDRG604	GDRG606	GDRG608	GDRG612	GDRG618	GDRG624	GDRG630	GDRG636
9/125 ITU G.655	GDRG704	GDRG706	GDRG708	GDRG712	GDRG718	GDRG724	GDRG730	GDRG736
9/125 ITU G.652D-OS2	GDRG804	GDRG806	GDRG808	GDRG812	GDRG818	GDRG824	GDRG830	GDRG836
Std. plywood reel (non-returnable)	Ø 1000 * 530 mm 18 kg							
Std. delivery length	2100 ± 100m							

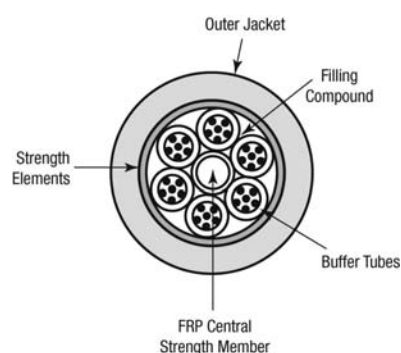
Applications

- 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

- **Improved rodent protection** provided by waterblocking glassyarns.
- **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 ($\text{Ø } 250 \pm 15 \mu\text{m}$).
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) glass 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)	11.5 / 11.8
Energy of flame (kJ/m)	3600
Weight (kg/km)	107

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	
Transport/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 **vitaly 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.
Date: 22/11/10		Page 1 of 1	Part Number: GDRG
Orig.: SN		Review:	