

GUPP

Interconnect Cables
Indoor/Outdoor
2017-07-03 v7.0

Ordering Information

Belden European Part Numbers

Fibre Description / count	1	2
62.5/125-OM1	GUPP101	GUPP102
50/125-OM2 BI	GUPP201	GUPP202
50/125-OM3 BI	GUPPD01	GUPPD02
50/125-OM4 BI	GUPPE01	GUPPE02
9/125 ITU G.657A1 BI	GUPPA01	GUPPA02
9/125 ITU G.657A2 BI	GUPPF01	GUPPF02
9/125 ITU G.657B3 BI	GUPPI01	GUPPI02
Std. reel (non-returnable)	plywood reel Ø 400 * 282 mm weight 3.25kg	
Std. delivery length	2100 ± 105m	

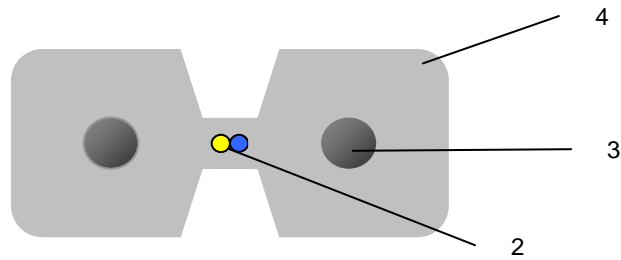
Applications

- **Small, lightweight** Flat Drop Cable offers an ideal solution for the smaller fiber counts that are needed in the final sections of an optical network, particularly in a **fiber-to-the-premise (FTTx)** installation.

Features & Benefits

- **Compact and strong** flat cable design for optimum protection of the fibers. Two steel wires are placed diametrically opposite on either side of the fiber core providing excellent crush resistance and tensile strength.
- Steel wires allow **easy separation** of the webbed cable and quick access to the fiber core.
- With **Bend Insensitive** ITU-G.657A fiber, which is based on a proven design that is fully compliant with International Telecommunications Union (ITU) standards G.652B and G.652D for single-mode fiber.
- This ensures that the fiber will work with existing transmission equipment.
- These cables are **halogen-free** = LSZH (Low Smoke, Zero Halogen).
- **Predicted lifetime > 30 years**

Construction & Dimensions



Cable specifications (construction in accordance with IEC 60794)

1. Primary coated optical fibers: $\text{Ø } 250 \pm 15 \text{ }\mu\text{m}$.
2. Color coding optical fibers: **yellow – blue**.
3. Steel wires 0.4 mm as strength members and for easy split ability.
4. **Colored** halogenfree (LSZH) outer jacket.

Identification: " BELDEN OFC – "cable type" – "number x type of fiber" +date-, meter- and P/N-marking.

Mechanical Data

No. Of fibers	1	2
Ø nom. (mm)	2.0 x 3.5 ± 0.2	2.0 x 3.5 ± 0.2
Weight (kg/km)	9.5	9.7
Energy of Flame (kJ/m)	141	141

Optical Characteristics

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

European P/N Coding, Position 5	Fibre-Type	Mode-Field /Cladding Diameter (um)	Wave-length (nm)	Attenuation ^B typical/ max. (dB/km))	Dispersion (ps/(nm-km)	PMD ^A (ps/km)	Cable Cut-off Wave-length (nm)
A	9/125 G.657A1 BI	8.9 ± 0.4 124.8 ± 0.3	1310 1550 1625	0.34 / 0.35 0.19 / 0.21 0.20 / 0.24	≤ 3.5 ≤ 18	≤ 0.06	≤ 1260
F	9/125 G.657A2 BI	8.9 ± 0.4 124.8 ± 0.3	1310 1550 1625	0.34 / 0.35 0.19 / 0.21 0.20 / 0.24	≤ 3.5 ≤ 18	≤ 0.06	≤ 1260
I	9/125 G.657B3 BI	8.8 ± 0.4 125 ± 0.4	1310 1550 1625	0.34 / 0.35 0.19 / 0.21 0.20 / 0.23	≤ 3.5 ≤ 18	≤ 0.06	≤ 1260

Note A- Link design value

Note B- Due to cabling the optical attenuation values can increase with max. 0.05 dB/km

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

European P/N Coding, Position 5	Fibre-Type	Core/ Cladding Diameter (um)	Wave-length (nm)	Attenuation ^C typical/ max. (dB/km))	Bandwidth (MHz•km)	Ethernet Performance (m)		Num. Apert. (um)
						1 GBE	10 GBE	
1	62.5/125 OM1	62.5 ± 2.5 125 ± 1	850 1300	2.7 / 3.0 0.7 / 0.8	≥ 200 ≥ 600	220 550	33 300	0.275 ± 0.015
2	50/125 OM2 BI	50 ± 2.5 125 ± 1	850 1300	2.3 / 2.5 0.5 / 0.6	≥ 500 ≥ 500	600 600	83 300	0.20 ± 0.015
D	50/125 OM3 BI	50 ± 2.5 125 ± 1	850 1300	2.3 / 2.5 0.5 / 0.6	≥ 1500 ≥ 500	1000 550	300 300	0.20 ± 0.015
E	50/125 OM4 BI	50 ± 2.5 125 ± 1	850 1300	2.3 / 2.5 0.5 / 0.6	≥ 3500 ≥ 500	1100 550	550 300	0.20 ± 0.015

Note C- Due to cabling the optical attenuation values can increase with max. 0.4 dB/km

Macro Bending Performance Fibers

Maximum attenuation increase for Bend Insensitive Single Mode fibers in dB depending on turns and radius.

European P/N Coding, Position 5	Fibre-Type	Wave-length (nm)	Turns 100 Radius 25 mm (dB)	Turns 10 Radius 15 mm (dB)	Turn 1 Radius 10 mm (dB)	Turn 1 Radius 7.5 mm (dB)	Turn 1 Radius 5 mm (dB)
A	9/125 G.657A1	1550 1625	0.01 0.05	0.2 0.5	0.2 0.5		
F	9/125 G.657A2	1550 1625		0.03 0.1	0.1 0.2	0.5 1.0	
I	9/125 G.657B3	1550 1625			0.03 0.10	0.08 0.25	0.15 0.45

Maximum attenuation increase for Bend Insensitive Multi Mode fibers in dB depending on turns and radius.

European P/N Coding, Position 5	Fibre-Type	Wave-length (nm)	Turns 100 Radius 37.5 mm (dB)	Turns 2 Radius 15 mm (dB)	Turns 2 Radius 7.5 mm (dB)
1	62.5/125 OM1	850 1300	0.5 0.5		
2	50/125 OM2 BI	850 1300	0.5 0.5	0.1 0.3	0.2 0.5
D	50/125 OM3 BI	850 1300	0.5 0.5	0.1 0.3	0.2 0.5
E	50/125 OM4 BI	850 1300	0.5 0.5	0.1 0.3	0.2 0.5

Mechanical, Physical and/or Environmental Characteristics

Description:	Tested according to:	Requirement:	According to Family specification:
Storage Temperature Range Installation Temperature Range Operating Temperature Range	IEC 60794-1-22-F1	- 40 to +70 °C -15 to +50 °C -40 to +70 °C	IEC 60794-2-10
Strippability Secondary coating only Secondary + primary coating		≤ 10 cm ≤ 10 mm	
Bending radii for fibres and tight buffers Installation/operation For Bend Insensitive fibres		>25 mm see Optical Characteristics	
Cable Min. Bend Radius Operation (Long Term) For Bend Insensitive fibres:	IEC 60794-1-21-E11	60mm see Optical Characteristics	IEC 60794-2-10
Cable Max. Tensile Strength Operation (Long Term) Cable Max. Tensile Strength Installation (Short Term)	IEC 60794-1-21-E1	75 N 75 N	IEC 60794-2-10
Cable Max. Crush Resistance Installation (Short Term)	IEC 60794-1-21-E3	5 kN/m	IEC 60794-2-10

Safety

	Testing standard	Description / Value
Reaction to fire	IEC 60332-1 EN 50575	Eca
Smoke density	IEC 61034-2	
Halogen acid gas content	IEC 60754-1	Zero
Degree of acidity of gases	IEC 60754-2 IEC 60754-2	Min. 4.3 pH Max. 10 µS/mm

Guide to installation and handling

- When laying and installing optical fiber 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.

Options

- Non standard colours.