

GIOT_G1

Interconnect Cables

Indoor

I-V

2015-09-30 v7.0

Ordering Information

Belden European Part Numbers

Fibre Description / count	1
62.5/125-OM1	GIOT1G1
50/125-OM2 BI	GIOT2G1
50/125-OM3 BI	GIOTDG1
50/125-OM4 BI	GIOTEG1
9/125 ITU G.657A1 BI	GIOTAG1
9/125 ITU G.657A2 BI	GIOTFG1
9/125 ITU G.657B3 BI	GIOTIG1
Std. plastic reel (non-returnable)	∅ 238 * 107 mm weight 0.4 kg
Std. delivery length	2100 ± 105m

Applications

- Structured (premises) wiring systems.
- Support all computer network applications such as **FDDI, Gigabit Ethernet and ATM.**

Features & Benefits

- **FRNC / LSNH** buffered fibres.
- Colored fiber and colored buffer.
- **Predicted lifetime > 30 years.**

Construction & Dimensions



Cable Specifications (construction in accordance with IEC 60794)

1. Primary coated optical fibres: $\varnothing 280 \pm 15 \mu\text{m}$.
2. FRNC / LSNH Tight buffer: $\varnothing 0.90 \pm 0.05 \text{ mm}$.
3. Individually colour coded optical fibres:
Red – grey – yellow – blue – green – violet – brown – black – orange – turquoise – pink and white.

Mechanical Data

No. of fibres	1
\varnothing nom. (mm)	0.9
Weight (kg/km)	0.67
Energy of Flame (kJ/m)	19

Jacket Colours

Color	Dark		Light	
	Color Code	Color sample	Color Code	Color sample
Yellow	Like RAL 1021		Like Pantone 100C	
Blue	Like RAL 5015		Like Pantone 2905C	
Green	Like RAL 6018		Like RAL 6019	
Red	Like RAL 3000		Like RAL 3015	
White	Like RAL 9010			
Brown	Like RAL 8003			
Orange	Like RAL 2003			
Black	Like RAL 9005			
Pink	Like RAL 3015			
Grey	Like RAL 7000			
Turquoise	Like RAL 6027			
Purple	Like RAL 4005			

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 0.15 dB/km (1310 nm), max. 0.09 dB/km (1550 nm) and max. 0.27 dB/km (1625 nm)

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:
Storage Temperature Range	IEC 60794-1-22-F1	-40 to +70 °C
Installation Temperature Range		-15 to +50 °C
Operating Temperature Range		-40 to +70 °C
Strippability		
Secondary coating only		≤ 10 cm
Secondary + primary coating		≤ 10 mm
Cable Max. Tensile Strength Operation (Long Term)	IEC 60794-1-21-E1	3 N
Cable Max. Tensile Strength Installation (Short Term)		3 N
Cable Max. Crush Resistance Installation (Short Term)	IEC 60794-1-21-E3	0.5 kN/m

Safety

	Testing standard	Description / Value
Halogen acid gas content	IEC 60754-1	Zero
Degree of acidity of gases	IEC 60754-2	Min. 4.3 pH
	IEC 60754-2	Max. 10 µS/mm

Guide to installation and handling

- It is vitally important to not exceed the specified values.
- Tight buffered optical fibres have been designed for short distance (≤ 10 m) applications.

Options

- Semi-Tight Buffered fibres with excellent strippability.
- Non standard colours.