

## OPTOFLEX G62.5/125, G50/125, E9/125

### Rubber cable with fiber optic



#### Application

Flexible fibre optic cable for signal and data transmission on cranes and material handling equipment; suitable for cable handling systems, such as reels, festoon systems, cable tenders, etc. at high data rates, large bandwidth and absolute immunity to electromagnetic interference.

#### Global data

Brand	OPTOFLEX
Type designation	G62.5/125 $\mu$ , G50/125 $\mu$ , E9/125 $\mu$
Standard	Based on FDDI, ISO/IEC 9314 Part 3, DIN VDE 0888

#### Design features

Optical Fiber	Fibre core diameter: 62.5 $\mu$ m, 50 $\mu$ m or 9 $\mu$ m; Diameter across the cladding: 125 $\mu$ m; Diameter over the coating: 250 $\mu$ m;
Fiber coding	Specially developed colour code for identification of the individual fibres
Fiber covering	Hollow core with filling compound, Basic material: ETFE, Compound: 7YI 1, Natural color
Core arrangement	Six cores, especially laid-up in one layer around a GFK supporting element (GFK=glass-fibre reinforced plastic)
Inner sheath	Special compound
Reinforcement	Special braid made of polyester threads. Surface covered: approx. 80%
Outer sheath	Basic material PCP, rubber compound 5GM3 Colour black
Marking	(Year of manufacture) OPTOFLEX e.g. 6 G 62.5/125 Micron Germany

#### Chemical parameters

Resistance to oil	Acc. to DIN EN 60811-404 and DIN VDE 0473-811-404, paragraph 10
Weather resistance	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture

#### Thermal parameters

Ambient temperature for fixed installation	min -40 °C ; max +80 °C
Ambient temperature in fully flexible operation	min -35 °C ; max +80 °C

#### Mechanical parameters

Max. tensile load	500 N
Torsional stress	$\pm$ 50 °/m
Min. bending radius	- fixed installation and on festoon system: 125 mm; - for reeling: 250mm;
Min. distance with S-type directional changes	20 x D (D=cable diameter)
Travel speed	- Gantry (reeling operation): up to 120 m/min (no random wound reel, cylindrical reel); - Trolley (festoon systems): up to 240 m/min (festoon, cable tender); - Hoist: no application;
Additional tests	Bending and reversed bending test

### Multimode fibers G62.5/125

Number of cores x cross section	Part number	MLFB Number	Outer diameter min. mm	Outer diameter max. mm	Net weight approx. kg/km	Max. attenuation at wavelength 850 nm dB/km	Max. attenuation at wavelength 1300 nm dB/km	Min. Bandwidth at 850 nm MHz	Min. Bandwidth at 1300 nm MHz	Numerical aperture ( $\pm 0.02$ )
6G62,5/125 $\mu$	20003597	5DG8002	14.9	17	280	3.3	0.9	400	600	0.275
12G62,5/125 $\mu$	20003608	5DG8035	14.9	17	280	3.3	0.9	400	600	0.275
18G62,5/125 $\mu$	20003599	5DG8012	14.9	17	280	3.3	0.9	400	600	0.275
24G62,5/125 $\mu$	20160114	5DG8...	14.9	17	280	3.3	0.9	400	600	0.275

A special design is also available, OPTOFLEX(M) with orange outer sheath (only for fixed installation, not suitable for reeling operation)

### Multimode fibers G50/125

Number of cores x cross section	Part number	MLFB Number	Outer diameter min. mm	Outer diameter max. mm	Net weight approx. kg/km	Max. attenuation at wavelength 850 nm dB/km	Max. attenuation at wavelength 1300 nm dB/km	Min. Bandwidth at 850 nm MHz	Min. Bandwidth at 1300 nm MHz	Numerical aperture ( $\pm 0.02$ )
6G50/125 $\mu$	20003598	5DG8004	14.9	17	280	2.8	0.8	400	1200	0.2
12G50/125 $\mu$	20113041	5DG8036	14.9	17	280	2.8	0.8	400	1200	0.2
18G50/125 $\mu$	20003600	5DG8014	14.9	17	280	2.8	0.8	400	1200	0.2
24G50/125 $\mu$	20160115	5DG8...	14.9	17	280	2.8	0.8	400	1200	0.2

A special design is also available, OPTOFLEX(M) with orange outer sheath (only for fixed installation, not suitable for reeling operation)

### Singlemode fibers E9/125

Number of cores x cross section	Part number	MLFB Number	Outer diameter min. mm	Outer diameter max. mm	Net weight approx. kg/km	Max. attenuation at wavelength 1300 nm dB/km	Max. attenuation at wavelength 1550 nm dB/km	Numerical aperture ( $\pm 0.02$ )	Chromatic dispersion at 1300 nm	Chromatic dispersion at 1550 nm
6E9/125 $\mu$	20003603	5DG8023	14.9	17	280	0.4	0.3	0.14	3.5	3.5
12E9/125 $\mu$	20039933	5DG8037	14.9	17	280	0.4	0.3	0.14	3.5	3.5
18E9/125 $\mu$	20026458	5DG8010	14.9	17	280	0.4	0.3	0.14	3.5	3.5
24E9/125 $\mu$	20160116	5DG8...	14.9	17	280	0.4	0.3	0.14	3.5	3.5

A special design is also available, OPTOFLEX(M) with orange outer sheath (only for fixed installation, not suitable for reeling operation)