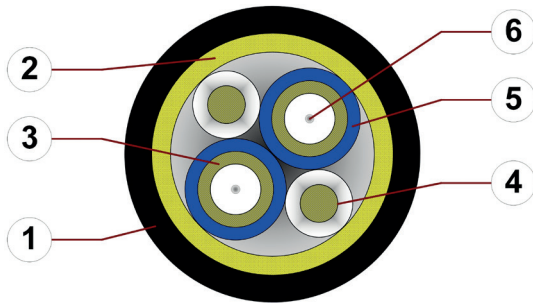


Data sheet

chainflex® CFLG.LB.PUR



Fibre Optic Cable (Class 6.5.3.1) ● Graded index glass-fibre cable for heaviest duty applications ● PUR outer jacket ● Metal-free ● Oil-resistant ● Low-temperature-flexible ● PVC and halogen-free ● UV-resistant



1. Outer jacket: Pressure extruded PUR mixture
2. Reinforcement: Extremely bending- and torsion-stable aramid braiding
3. Reinforcement: Extremely bending- and torsion-stable aramid wrapping
4. Filler: Aramid damper for high tensile stresses
5. Fibre tube: LSZH („Low smoke & zero halogen“) Material
6. Fibre: Glass optical fibre (GOF)

Example image
For detailed overview please see design table

Cable structure

	Fibre	50/125 µm, 62.5/125 µm, 9/125 µm especially bending-resistant solid glass fibre optic cores, with aramid strain relief elements.
	Core structure	FOC cores wound with a short pitch length with high-tensile aramid dampers.
	Core identification	FOC cores: Orange, blue or yellow with black numbers. Copper cores: Black with white numbers.
	Overall shield	Extremely bending-resistant aramid braid for torsion protection.
	Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Jet black (similar to RAL 9005) Printing: white

„00000 m^{***} igus chainflex CFLG_LB.PUR.---① ---②

DNV-GL 13 655 -14 HH CE RoHS-II conform

www.igus.de +++ chainflex cable works +++

* **Length printing:** Not calibrated. Only intended as an orientation aid.
① / ② Cable identification according to Part No. (see technical table).
Example: ... chainflex CFLG.2LB.PUR.50/125 2x50/125 ...



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Example image

igus® chainflex® CFLG.LB.PUR






Data sheet

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Dynamic information

	Bend radius	e-chain® linear flexible fixed	minimum 5 x d minimum 4 x d minimum 3 x d
	Temperature	e-chain® linear flexible fixed	-25 °C up to +80 °C -40 °C up to +80 °C (following DIN EN 60811-504) -50 °C up to +80 °C (following DIN EN 50305)
	v max.	unsupported gliding	10 m/s 6 m/s
	a max.		20 m/s ²
	Travel distance		Unsupported travels and up to 100 m for gliding applications, Class 5

These values are based on specific applications or tests. They do not represent the limit of what is technically feasible.

Guaranteed service life according to guarantee conditions

Double strokes	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	7.5	8.5	9.5
-15/+70	5	6	7
+70/+80	7.5	8.5	9.5

Minimum guaranteed service life of the cable under the specified conditions.
The installation of the cable is recommended within the middle temperature range.



Example image

igus® chainflex® CFLG.LB.PUR













Data sheet

chainflex® CFLG.LB.PUR



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Properties and approvals

	UV resistance	High
	Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
	Offshore	MUD-resistant following NEK 606 - status 2009
	Flame retardant	According to IEC 60332-1-2, FT1, VW-1
	Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
	Halogen-free	Following DIN EN 60754
	UL verified	Certificate No. B129699: „igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year“
	DNV-GL	Type approval certificate No. 13 655-14 HH
	REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
	Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
	Cleanroom	According to ISO Class 1. The outer jacket material of this series complies with CF77. UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
	CE	Following 2014/35/EU



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Example image

igus® chainflex® CFLG.LB.PUR

Data sheet

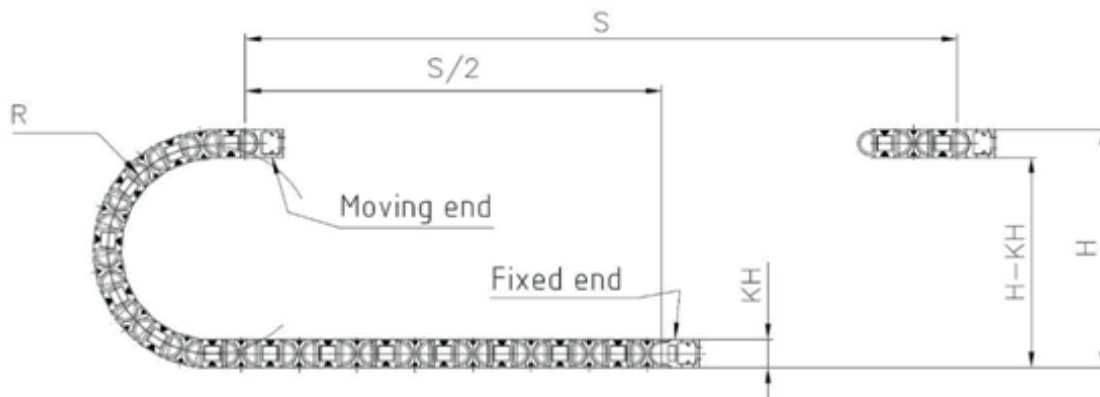
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Typical lab test setup for this cable series

Test bend radius R	approx. 38 - 75 mm
Test travel S	approx. 1 - 15 m
Test duration	minimum 2 - 4 million double strokes
Test speed	approx. 0.5 - 2 m / s
Test acceleration	approx. 0.5 - 1.5 m / s ²



Typical application areas

- For heaviest duty applications with 5-7.5 x d, Class 6
- Unsupported travel distances and up to 100 m for gliding applications (horizontal + vertical), Class 5
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Maximum EMC protection, with high transmission qualities
- Indoor and outdoor applications
- Offshore, ship, Storage and retrieval units for high-bay warehouses, machining units/packages machines, quick handling, semiconductor insertion, refrigerating sector



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Example image

Data sheet

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Technical tables:

Mechanical information

Part No.	Number of fibres/ Fibre diameter/	Outer diameter (d) max.	Weight
		[mm]	[kg/km]
Monomode			
CFLG.6LB.PUR.9/125	6x9/125	11.0	95
Multimode (Graded index)			
CFLG.2LB.PUR.50/125	2x50/125	8.5	65
CFLG.6LB.PUR.50/125	6x50/125	11.0	95
CFLG.12LB.PUR.50/125	12x50/125	14.0	160
CFLG.2LB.PUR.62.5/125	2x62,5/125	8.5	62
CFLG.4LB.PUR.62.5/125	4x62,5/125	9.0	68
CFLG.6LB.PUR.62.5/125	6x62,5/125	11.0	96
CFLG.12LB.PUR.62.5/125	12x62,5/125	14.0	150

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.

Optical features

Fibre diameter	Wave length	Bandwidth	Attenuation	Chromatic dispersion
[µm]	[nm]	[MHz x km]	[dB/km]	[ps/nm x km]
50/125	850	≥ 500	≤ 3,0	-
50/125	1300	≥ 500	≤ 1,0	-
62.5/125	850	≥ 200	≤ 3,5	-
62.5/125	1300	≥ 500	≤ 1,5	-
9/125	1310	-	≤ 0,4	3,5
9/125	1550	-	≤ 0,3	18



Data sheet

chainflex® CFLG.LB.PUR



Design table

Fibre diameter: 50/125

Part No. (No. of cores)	Core design
CFLG.2LB.PUR.50/125 (2x50/125)	
CFLG.6LB.PUR.50/125 (6x50/125)	
CFLG.12LB. PUR.50/125 (12x50/125)	

Design table

Fibre diameter: 62.5/125

Part No. (No. of cores)	Core design
CFLG.2LB. PUR.62.5/125 (2x62.5/125)	
CFLG.4LB. PUR.62.5/125 (4x62.5/125)	
CFLG.6LB. PUR.62.5/125 (6x62.5/125)	
CFLG.12LB. PUR.62.5/125 (12x62.5/125)	

Design table

Fibre diameter: 9/125

Part No. (No. of cores)	Core design
CFLG.6LB.PUR.9/125 (6x9/125)	