AnHui Feichun
Special Cable Co., Ltd
Professional Manufacturer

OPTOFLEX

Fiber Optic Cable

High-Speed Data Transmission

Complete Technical Specification
All Product Configurations



OPTOFLEX - Professional Multi-Wavelength Fiber Optic Cable System

PRODUCT OVERVIEW

OPTOFLEX is a professional-grade fiber optic cable system designed for high-speed signal and data transmission on cranes and material handling equipment. Supporting three distinct fiber types (G62.5/125, G50/125, E9/125) with multiple core configurations (6, 12, 18, 24 fibers), it offers absolute immunity to electromagnetic interference with superior bandwidth and data rate capabilities.

KEY APPLICATIONS

- Crane control systems
- Material handling equipment
- Cable reeling systems
- Festoon systems
- Cable tenders
- High-speed data networks
- EMI-sensitive environments

QUALITY FEATURES

FIBER OPTIC | HIGH SPEED | EMI IMMUNE | FLEXIBLE | DURABLE

OPTICAL & TECHNICAL PARAMETERS

Parameter	Specification
Brand/Type	OPTOFLEX (G62.5/125, G50/125, E9/125)
Standard	FDDI, ISO/IEC 9314 Part 3, DIN VDE 0888
Fiber Core Diameter	62.5 µm (G62.5) | 50 µm (G50) | 9 µm (E9)
Cladding Diameter	125 µm (standard)
Coating Diameter	250 µm
Core Configurations	6, 12, 18, 24 fiber elements
Max. Tensile Load	500 N
Torsional Stress	± 50°/m
Min. Bending Radius (Fixed)	125 mm
Min. Bending Radius (Reeling)	250 mm

Min. S-Bend Distance	20 × D (D = cable diameter)
Reeling Speed (Gantry)	Up to 120 m/min (cylindrical reel)
Festoon Speed (Trolley)	Up to 240 m/min
Ambient Temp (Fixed)	-40°C to +80°C
Ambient Temp (Flexible)	-35°C to +80°C
Weather Resistance	UV & Ozone resistant, moisture resistant
Oil Resistance	DIN EN 60811-404

FIBER TYPE SPECIFICATIONS

G62.5/125 Multimode Fiber (MMF)

Core diameter 62.5 µm | Best for 850 nm wavelength | High bandwidth | Standard industrial applications

G50/125 Multimode Fiber (MMF)

Core diameter 50 µm | Enhanced bandwidth | Better long-distance performance | 850/1300 nm dual wavelength

E9/125 Singlemode Fiber (SMF)

Core diameter 9 µm | Maximum distance capability | Ultra-low attenuation | 1300/1550 nm wavelengths

G62.5/125 MULTIMODE FIBER - 4 CONFIGURATIONS

6-fiber, 12-fiber, 18-fiber, 24-fiber configurations | MMF G62.5/125 multimode fiber

Cores	Part No.	MLFB	Ø min (mm)	Ø max (mm)	Weight (kg/km)	Att @850 (dB/km)	Att @1300 (dB/km)	BW @850 (MHz)	BW @1300 (MHz)	NA (±0.02)
6 G62.5/125µ	20003597	5DG8002	14.9	17	280	3.3	0.9	400	600	0.275
12 G62.5/125µ	20003608	5DG8035	14.9	17	280	3.3	0.9	400	600	0.275
18 G62.5/125µ	20003599	5DG8012	14.9	17	280	3.3	0.9	400	600	0.275
24 G62.5/125µ	20160114	5DG8...	14.9	17	280	3.3	0.9	400	600	0.275

Note: G62.5/125 fiber optimized for 850 nm wavelength. Excellent for backbone networks and high-bandwidth applications. Typical bandwidth 400 MHz@850nm, 600 MHz@1300nm.

G50/125 MULTIMODE FIBER - 4 CONFIGURATIONS

6-fiber, 12-fiber, 18-fiber, 24-fiber configurations | MMF G50/125 multimode fiber

Cores	Part No.	MLFB	Ø min (mm)	Ø max (mm)	Weight (kg/km)	Att @850 (dB/km)	Att @1300 (dB/km)	BW @850 (MHz)	BW @1300 (MHz)	NA (±0.02)
6 G50/125µ	20003598	5DG8004	14.9	17	280	2.8	0.8	400	1200	0.2
12 G50/125µ	20113041	5DG8036	14.9	17	280	2.8	0.8	400	1200	0.2
18 G50/125µ	20003600	5DG8014	14.9	17	280	2.8	0.8	400	1200	0.2
24 G50/125µ	20160115	5DG8...	14.9	17	280	2.8	0.8	400	1200	0.2

Note: G50/125 fiber superior performance with lower attenuation and higher bandwidth. Supports both 850 nm and 1300 nm wavelengths. Extended distance capabilities.

E9/125 SINGLEMODE FIBER - 4 CONFIGURATIONS

6-fiber, 12-fiber, 18-fiber, 24-fiber configurations | SMF E9/125 singlemode fiber

Cores	Part No.	MLFB	Ø min (mm)	Ø max (mm)	Weight (kg/km)	Att @1300 (dB/km)	Att @1550 (dB/km)	NA (±0.02)	Disp @1300 ps/(nm·km)	Disp @1550 ps/(nm·km)
6 E9/125µ	20003603	5DG8023	14.9	17	280	0.4	0.3	0.14	3.5	3.5
12 E9/125µ	20039933	5DG8037	14.9	17	280	0.4	0.3	0.14	3.5	3.5
18 E9/125µ	20026458	5DG8010	14.9	17	280	0.4	0.3	0.14	3.5	3.5
24 E9/125µ	20160116	5DG8...	14.9	17	280	0.4	0.3	0.14	3.5	3.5

Note: E9/125 singlemode fiber provides maximum distance capability with ultra-low attenuation. Supports 1300 nm and 1550 nm wavelengths. Ideal for long-distance, high-speed data transmission.

MATERIAL & CONSTRUCTION DETAILS

OPTICAL FIBER

- Core diameter: 62.5/50/9 µm
- Cladding diameter: 125 µm
- Coating diameter: 250 µm
- Color-coded identification

FIBER COVERING

- Hollow core design
- ETFE base material
- 7YI 1 filling compound
- Natural color

CORE ARRANGEMENT

- Six fibers minimum
- Specially laid-up single layer
- Around GFK support element
- Glass-fiber reinforced plastic

SHEATH SYSTEM

- Special braid: Polyester threads
- 80% surface coverage
- Inner sheath: special compound
- Outer: Rubber (PCP, 5GM3)

Outer Sheath: Black rubber with excellent UV, ozone, and moisture resistance. PCP base material with 5GM3 rubber compound ensures durability in harsh industrial environments.

Special Note: OPTOFLEX(M) variant available with orange outer sheath for fixed installation only (not suitable for reeling operation).

KEY ADVANTAGES & FEATURES

- ✓ **Absolute EMI Immunity:** Fiber optic technology eliminates all electromagnetic interference
- ✓ **High Bandwidth:** G50: 1200 MHz@1300nm | G62.5: 600 MHz@1300nm | E9: unlimited
- ✓ **Long Distance:** E9 singlemode extends transmission distances dramatically
- ✓ **Multiple Wavelengths:** Support for 850, 1300, and 1550 nm wavelengths
- ✓ **Flexible Designs:** 6, 12, 18, and 24-fiber configurations for any application
- ✓ **Weather Resistant:** UV, ozone, and moisture resistant rubber sheath
- ✓ **High-Speed Operation:** 240 m/min festoon speed, 120 m/min reeling speed
- ✓ **Industrial Durability:** 500 N tensile load, ±50°/m torsional stress capability
- ✓ **Color-Coded Fibers:** Easy identification of individual fiber paths
- ✓ **Standards Compliant:** FDDI, ISO/IEC 9314, DIN VDE 0888 certified

PERFORMANCE COMPARISON

Fiber Type	Core Ø	Best Wavelength	Attenuation	Bandwidth	Distance	Best Application
G62.5/125	62.5 µm	850 nm	3.3 dB/km@850nm	400 MHz@850nm	Medium distance	Industrial backbone networks
G50/125	50 µm	1300 nm	2.8 dB/km@850nm	1200 MHz@1300nm	Extended distance	High-performance systems
E9/125	9 µm	1550 nm	0.3 dB/km@1550nm	Unlimited	Very long distance	Ultra-long-distance links

SPECIFICATIONS SUMMARY

Property	Value
Total Configurations	12 configurations (6, 12, 18, 24 fibers × 3 fiber types)
Cable Diameter	14.9 mm (min) to 17 mm (max)
Cable Weight	280 kg/km
Max. Tensile Strength	500 N
Torsional Capability	±50°/m
Bending Radius (Fixed)	125 mm minimum
Bending Radius (Reeling)	250 mm minimum
Operating Temperature (Flexible)	-35°C to +80°C
Operating Temperature (Fixed)	-40°C to +80°C
Max. Reeling Speed	120 m/min (cylindrical reel)
Max. Festoon Speed	240 m/min

CONTACT & TECHNICAL SUPPORT

Company: AnHui Feichun Special Cable Co., Ltd
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Website: feichuncables.com | reelingcable.com
Service: 24/7 Technical Support & Custom Solutions

Quality Assurance: All OPTOFLEX cables manufactured under strict quality control with comprehensive testing including bending resistance, reversed bending, tensile strength, and optical performance verification per ISO/IEC standards.

Standards Compliance: FDDI, ISO/IEC 9314 Part 3, DIN VDE 0888, DIN EN 60811-404

Special Features: UV, ozone, and moisture resistance | Color-coded fiber identification | GFK reinforced core arrangement | Polyester thread braid (80% coverage)

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Technical data, dimensions and weights are subject to change. OPTOFLEX(M) with orange sheath available for fixed installation only. For specific application requirements, custom configurations, or fiber optic system design consultation, please contact our technical team.