

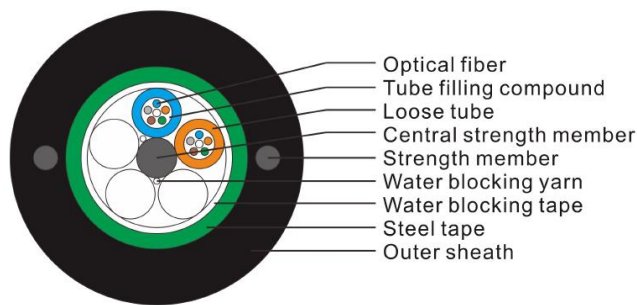
Applications

Prose outdoor optical fiber FC09 series cables are designed for fiber solutions mainly used for fiber optic connections in outdoor areas. The structure of this cable consists of a 250um (singlemode or multimode) optical fiber sleeved in a loose casing made of high modulus polyester material filled with a waterproof compound. In the center of the cable core is a central strength member, which is fiber reinforced plastics (FRP). The tube is longitudinally wrapped with a double-sided chromium-coated plastic steel strip, and water blocking material is added between the steel strip and the tube to ensure the compact and longitudinal water blocking of the cable. Two parallel steel wires are placed on both sides of the tube and the extruded PE sheath is formed.

Feature/Characteristic

- The double-sided coated plastic steel strip can improve the anti-moisture ability of optical cable.
- Two parallel steel wires can ensure the tensile strength of the fiber cable;
- single mode, multi-mode can be selected;

Profile/Outline



Cable Identification

1. Fiber color code

No.	1	2	3	4	5	6
Color	Blue	Orange	Green	Brown	Gray	White
No.	7	8	9	10	11	12
Color	Red	Black	Yellow	Violet	Pink	Aqua

2. Loose tube (LT) & filler rod (FR) color code

Fiber count	Element no.											
	1	2	3	4	5	6	7	8	9	10	11	12
12	LT	LT	FR	FR	FR							

* "LT" means "Loose Tube";

** "FR" means "Filler Rod".

Cable Assembly & Dimensions

Item	Contents	Value
		12
Loose tube	Number	2
	Outer diameter (mm)	1.8±0.1
	Thickness(mm)	0.3±0.05
	Material	PBT
	Water blocking	Tube filling compound
Filler	Material	PP
	Number	3
Max. Fiber counts per tube	G.652D	6
Central strength member	Material	FRP
	Diameter (mm)	1.4±0.1
	PE layer diameter (mm)	-
Water blocking	Material	Water blocking yarn & tape
Strength member	Material	2*Steel wire
	Diameter (mm)	0.8±0.1
Armored	Material	Steel tape
Sheath	Material	LSZH
	Color	Black
	Thickness(mm)	Nominal 2.0, Minimum 1.8
Cable diameter(mm) Approx.		10.0±0.5
Cable weight(kg/km) Approx.		148±15%

Performance of Cabled Optical Fiber

The performance of cabled optical fiber (ITU-T Rec. G.652D)

Item		Specification
Fiber type		Single mode
Fiber material		Doped silica
Attenuation coefficient	@ 1310 nm	≤ 0.36 dB/km
	@ 1550 nm	≤ 0.22 dB/km
Cable cut-off wavelength		≤ 1260 nm
Zero-dispersion wavelength		1300 ~ 1324 nm
Zero-dispersion slope		≤ 0.092 ps/(nm ² .km)
Chromatic dispersion	@ 1288 ~ 1339 nm	≤ 3.5 ps/(nm. km)
	@ 1550 nm	≤ 18 ps/(nm. km)
	@ 1625 nm	≤ 22 ps/(nm. km)
PMD		≤ 0.2 ps/km ^{1/2}
Mode field diameter	@ 1310 nm	9.2 ± 0.4 μm
Core / Clad concentricity error		≤ 0.6 μm
Cladding diameter		125.0 ± 1.0 μm
Cladding non-circularity		≤ 1.0 %
Primary coating diameter		245 ± 10 μm

Performance of Optical Fiber Cable

- Cable bending radius: 10-30mm (static)
20-60mm (dynamic)
- Application temperature range
Operating temperature range : -5°C to +55°C
Storage / Transport temperature range : -10°C to +60°C
Installation temperature range : -5°C to +50°C
- Mechanical & environmental performance test

S/N	Item	Test Method	Acceptance Condition
1	Tensile Strength IEC 794-1-E1	- Load: 600N for short term - Load: 400N for long term - Length of cable under load: 50 m - Load time: 1min	- Loss change ≤ 0.1 dB @1550 nm - No fiber break and no sheath damage.
2	Repeated Bending IEC 794-1-E6	- Bending radius: 60mm - Load: 150N - No. of cycle: 30	- Loss change ≤ 0.1 dB @1550 nm - No fiber break and no sheath damage.
3	Temperature Cycling Test IEC 794-1-F1	- Low temperature: -10°C - High temperature: +60°C - Time per each step: 12 hours - Number of cycle: 2	- Loss change ≤ 0.1 dB/km @1550 nm - No fiber break and no sheath damage.

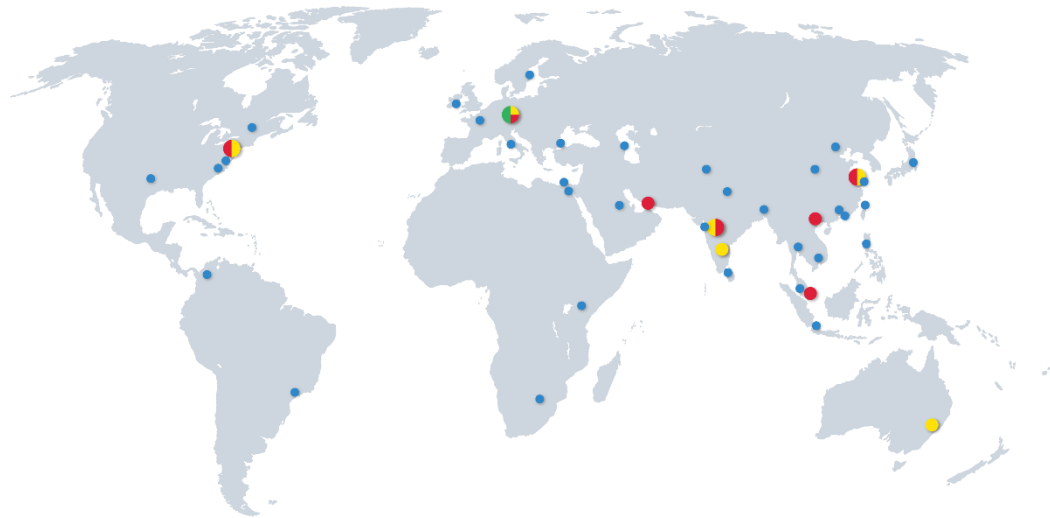
Ordering Information

Category	Cable Structure	Fiber Type	Outer Sheath Material	Fiber Count
FC: Fiber Cable	09: Outdoor, Light Armored, Stranded, Parallel steel wire with FRP	GD: G652D M2: OM2 M3: OM3 M4: OM4 M5: OM5	3: PE	004:4F 006:6F 008:8F 012:12F 016:16F 024:24F

Example:

Order Number	Fiber count	Description
FC09-GD3012	12	Cable, Outdoor, Light Armored, Stranded, Parallel steel wire and FRP, 12F, SM G652D, PE
FC03-GD3024	24	Cable, Outdoor, Light Armored, Stranded, Parallel steel wire and FRP, 24F, SM G652D, PE
FC03-M33024	24	Cable, Outdoor, Light Armored, Stranded, Parallel steel wire and FRP, 24F, MM OM3, PE

GLOBAL FOOTPRINT



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