

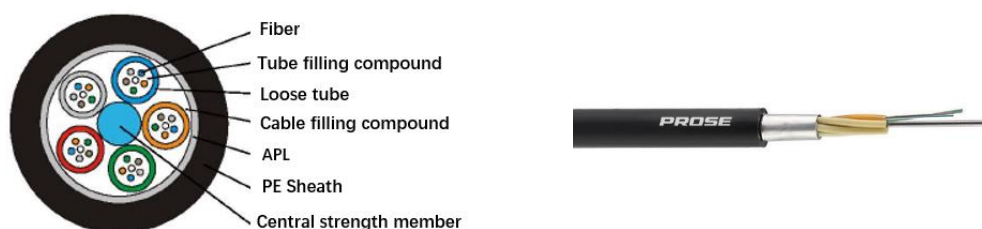
Applications

Prose outdoor optical fiber FC05 series cables are designed for fiber solutions mainly used for fiber optic connections in outdoor areas, backbone conduit or overhead connections between buildings. The structure of this cable consists of a 250 μ m (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 metal reinforcement, which for some core numbers is extruded with a layer of polyethylene (PE). The loose tube (and filler rope) is twisted around the center reinforcement to form a compact round core, with gaps in the core filled with a water-resistant filler. Aluminum plastic coated tape (APL) longitudinally wrapped and extruded polyethylene sheathed cable.

Feature/Characteristic

- With laminated stranded structure, it has good mechanical and temperature properties;
- Available in single mode, multimode 62.5/125, multimode 50/125, and 2 to 144 cores;
- The loose casing material itself has good hydrolysis resistance and high strength;
- The use of color differentiated loose tubing for fiber optic cables ensures fast and correct construction;
- The specially designed tight fiber structure effectively prevents retraction of the casing;
- Single wire center reinforcement core;
- Fiber optic cable sheath with steel-polyethylene bonded jacket;
- It has excellent resistance to pressure and bending, and is better protected from the external environment;

Profile/Outline



Optical Parameters

Properties	Unit	Single Mode	Multi Mode			
		G652D	OM2	OM3	OM4	OM5
Core Diameter	μ m	9.2 $\pm$ 0.4	50 $\pm$ 3.0	50 $\pm$ 2.5	50 $\pm$ 2.5	50 $\pm$ 2.5
Cladding Diameter	μ m	125 $\pm$ 0.7	125 $\pm$ 2.0	125 $\pm$ 2.0	125 $\pm$ 1.0	125 $\pm$ 1.0
Diameter Primary Coating	μ m	245 $\pm$ 5	245 $\pm$ 10	245 $\pm$ 10	245 $\pm$ 10	245 $\pm$ 10
Numerical Aperture	mm	0.2 $\pm$ 0.015	0.2 $\pm$ 0.015	0.2 $\pm$ 0.015	0.2 $\pm$ 0.015	0.2 $\pm$ 0.015
Core-cladding Concentricity	μ m	$\leq$ 0.5	$\leq$ 1.5	$\leq$ 1.5	$\leq$ 1.5	$\leq$ 1.5
Attenuation (typical value)	1310 nm [dB/km]	$\leq$ 0.36	-	-	-	-
	1550 nm [dB/km]	$\leq$ 0.22	-	-	-	-
	850 nm [dB/km]	-	$\leq$ 3.0	$\leq$ 3.0	$\leq$ 3.0	$\leq$ 3.0
	1300 nm [dB/km]	-	$\leq$ 1.0	$\leq$ 1.0	$\leq$ 1.0	$\leq$ 1.0
Bandwidth	850 nm [MHz/km]	-	$\geq$ 500	$\geq$ 500	$\geq$ 500	$\geq$ 500
	1300nm [MHz/km]	-	$\geq$ 500	$\geq$ 500	$\geq$ 500	$\geq$ 500
Cladding Non-circularity	%	$\leq$ 1.0	$\leq$ 1.0	$\leq$ 1.0	$\leq$ 1.0	$\leq$ 1.0
Fatigue Resistance Parameter (Typical)	%	$\geq$ 20	$\geq$ 20	$\geq$ 20	$\geq$ 20	$\geq$ 20

Structural parameters

Core Count	Casing count	Reinforcement elements	Casing O.D.	Casing thickness	composite belt thickness (mm)	Sheath thickness (mm)	Fiber Optic Cable Outer Diameter (mm)
2~30	1-5	1.30*1±0.1	≥1.60	≥0.28	0.20±0.01	≥1.50	11.0±0.3
32~36	6	1.60*1±0.1	≥1.60	≥0.28	0.20±0.01	≥1.50	11.2±0.3
38~60	4-5	1.50*1±0.1	≥1.60	≥0.28	0.20±0.01	≥1.50	11.6±0.3
72	6	1.80*1±0.1	≥1.60	≥0.28	0.20±0.01	≥1.50	13.7±0.3
96	8	2.0/3.3*1±0.2	≥1.60	≥0.28	0.20±0.01	≥1.50	15.0±0.3
120	10	2.0/4.4*1±0.2	≥1.60	≥0.28	0.22±0.01	≥1.50	16.4±0.3
144	12	2.0/5.8*1±0.2	≥1.60	≥0.28	0.22±0.01	≥1.50	13.5±0.3

Mechanical Parameters

Items		Request
Allowable tensile force, N	Short-term	1500
	Long-term	600
Allowable flattening force, N/100mm	Short-term	1000
	Long-term	300
Bending Radius, mm	Static	10D
Bending Radius, mm	Dynamic	20D
Operation temperature		-40℃ to +70℃
Storage temperature		-40℃ to +70℃
Installation temperature		-40℃ to +70℃

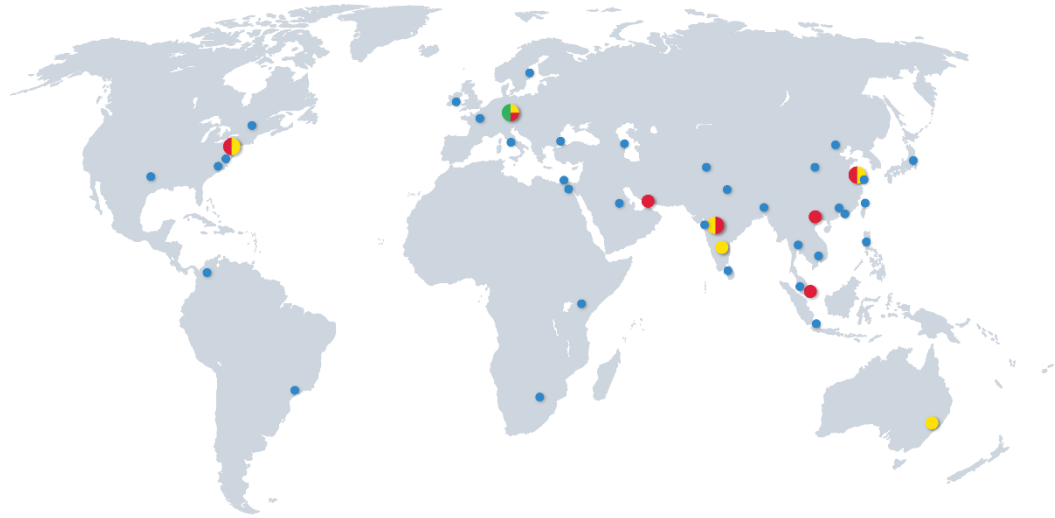
Ordering Information

Category	Cable Structure	Fiber Type	Outer Sheath Material	Fiber Count
FC: Fiber Cable	05: Outdoor, Light Armored, stranded, Al-PE	GD: G652D M2: OM2 M3: OM3 M4: OM4	1: OFNR 2: LSZH 60332-1 3: PE	002:2F 012:12F 024:24F 036:36F 144:144F

For Example:

Order Number	Fiber count	Description
FC05-GD3012	12	Cable, Outdoor, Light Armored, Stranded, Al-PE ,12F, SM G652D, PE
FC05-GD3024	24	Cable, Outdoor, Light Armored, Stranded, Al-PE ,24F, SM G652D, PE
FC05-M33048	48	Cable, Outdoor, Light Armored, Stranded, Al-PE ,48F, MM OM3, PE
FC05-M33072	72	Cable, Outdoor, Light Armored, Stranded, Al-PE ,72F, MM OM3, PE

GLOBAL FOOTPRINT



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