

SPECIFICATION

F O R

OPTICAL FIBER FLEXIBLE CABLE

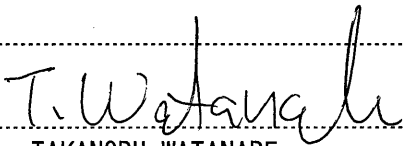
Code: FRC- -V

Quantity

Your Ref. No.

Our Ref. No.

Signed by



TAKANOBU WATANABE

Manager

Engineering Dept. I
Electric Wire & Cable Business Unit

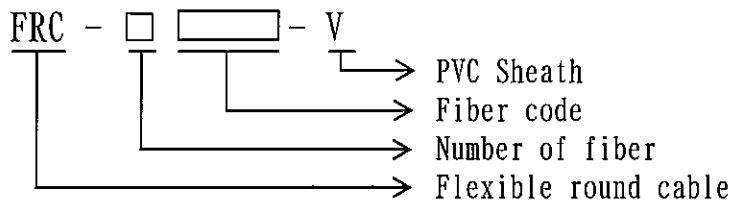
Proterial, Ltd.

1. Scope

This specification covers Optical Fiber Flexible Cable which is based on Hitachi Cable Standard. This cable is designed for festoon installation for various cranes.

2. Code

The code used in our product type has the following definition.



3. Construction

3.1 Optical Fiber Cord

- (1) Optical fiber shall be Graded Index Multimode Type (GI Type) made of fused silica, and jacketed with suitable materials.
- (2) Fibrous strength member shall be applied longitudinally over the optical fiber and cover with black PVC sheath.
- (3) Numeral printing shall be made on the PVC sheath for identification of cords.

3.2 Strength Member

Strength member shall consist of stranded steel wires and covered with black PVC.

3.3 Assembly

Optical fiber cords and strength member shall be cabled together with suitable fillers, and covered with suitable binder tape.

3.4 Sheath

Black PVC sheath shall be applied over the assembly.

3.5 Dimension

The dimension of the cable shall be in accordance with the attached table.

4. Inspection

Inspection shall be made on the following items prior to shipment.

- (1) Check of constructions and dimensions.
- (2) Measurement of transmission loss optical fiber.

5. Guide to use

This cable is designed for curtain style method as shown below.

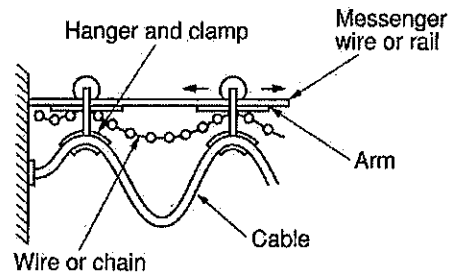
**Curtain style method
(Festoon method)**

Table 1 : Construction and properties of optical fiber

Item		Construction/Properties	
Type		GI (Graded Index)	
Code		G5032	G6242
Core		$50 \pm 3 \mu\text{m}$	$62.5 \pm 3 \mu\text{m}$
Cladding		$125 \pm 2 \mu\text{m}$	
Jacket	Material	Plastic	
	Diameter	$0.9 \pm 0.1\text{mm}$	
Transmission loss dB/km (at $\lambda = 0.85 \mu\text{m}$)		3	3.5
Band width MHz·km (at $\lambda = 0.85 \mu\text{m}$)		200	160

* Excepting terminations and connectors

Table 2 : Construction and properties of optical fiber flexible cable

Item			Unit	Construction/Properties						
Number of fiber			—	2	4	6	8	9	10	12
Optical fiber cord	Optical fiber		—	See Table 1						
	Strength member		—	Aramid filament						
	Inner sheath	Covering	—	PVC (Black) with Numeral printing						
		Approx. diameter	mm	2.8±0.2						
Strength memeber	Material		—	Stranded steel wires						
	Approx. diameter		mm	2.4						
	Covering		—	PVC (Black)						
	Approx. diameter		mm	3.2	3.2	3.2	4.6	4.6	5.4	7.3
Sheath	Material		—	PVC (Black)						
	Nominal thickness		mm	2.1					2.2	
Approx. diameter of completed cable			mm	15	15	15	16.5	16.5	18	19
Approx. weight of completed cable			kg/km	220	220	230	270	280	310	360
Permissible maximum pulling tension			N	490						
Permissible minimum bending radius			mm	150	150	150	170	170	180	190

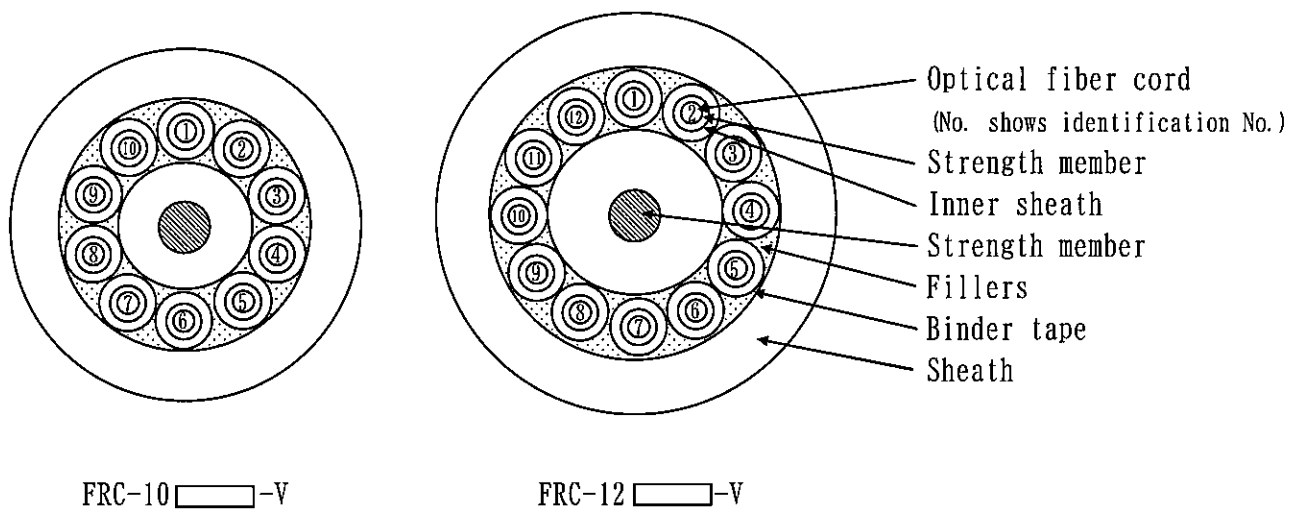
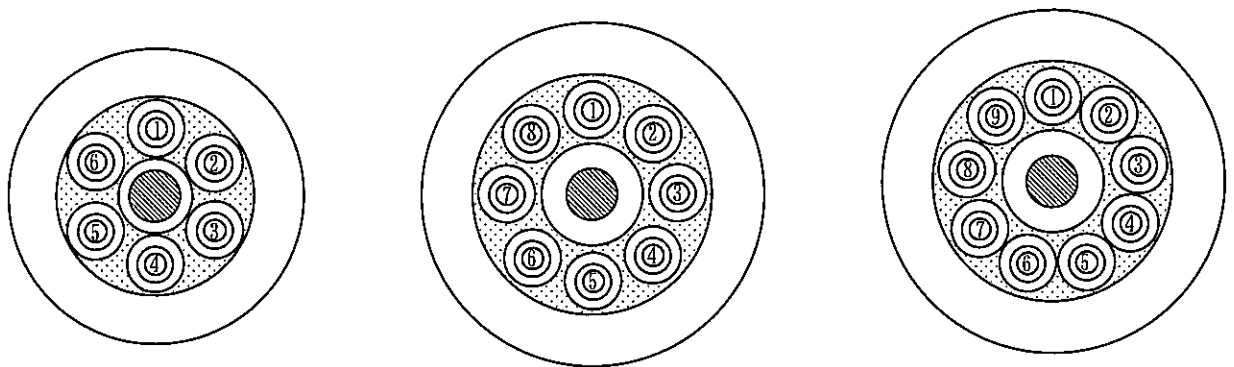
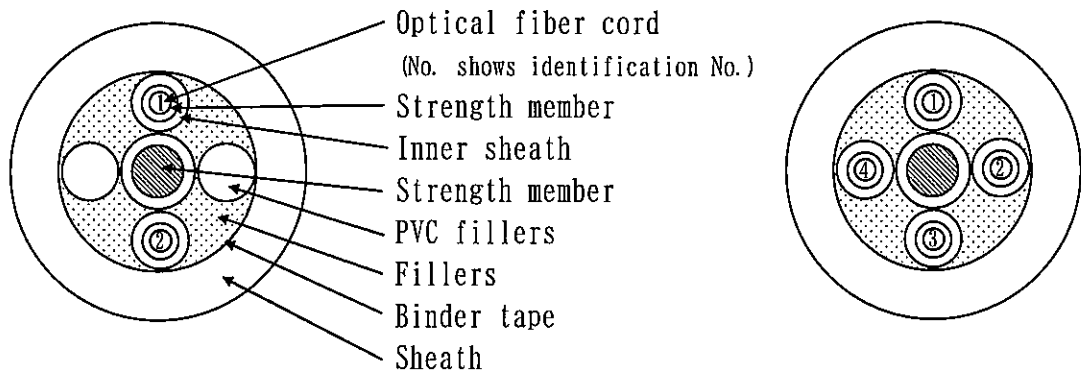


Fig 1. Cable Cross Section