MULTI LOOSE TUBE RIBBON FIBER CABLE

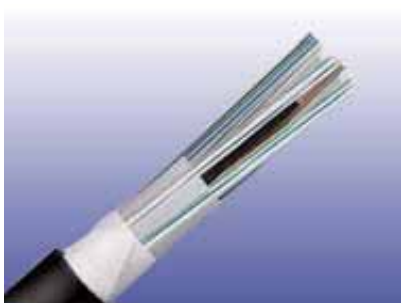
▶ Application

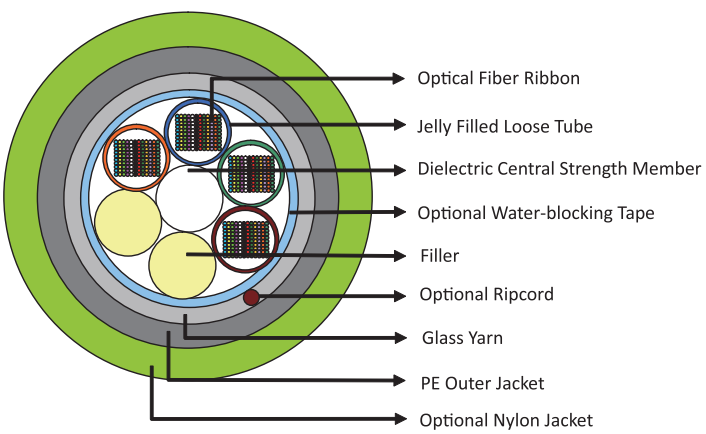
This cable can provide excellent transmission performance and protection of fibers in a variety of field environments. It is usually used in long haul communication system, subscriber network system, distribution, feeder network system and local area network system.

▶ Description

The cable consists of 12 to 648 fibers containing tubes or fillers stranded in up to 3 layers around a central strength member and bound under a PE jacket. Each tube contains 4 -12 ribbon fibers. Solid or stranded steel wire coated with polyethylene is usually used as central strength member. Fiber glass reinforced plastics (FRP) will be used as central strength member if non metallic construction is required. Either aramid yarn or fiber glass is wound around the tube to provide physical protection and tensile strength. The cable can be jacketed with either PE, PVC or LSZH though PE is the preferred option for water protection purpose. For direct burial, steel wire armour or corrugated steel tape armour is applied with an optional inner jacket of either PVC or PE. An optional Aluminium moisture tape can be incorporated under the jacket for water blocking and shielding purpose. An optional ripcord is located under the jacket to facilitate jacket removal.

▶ Construction





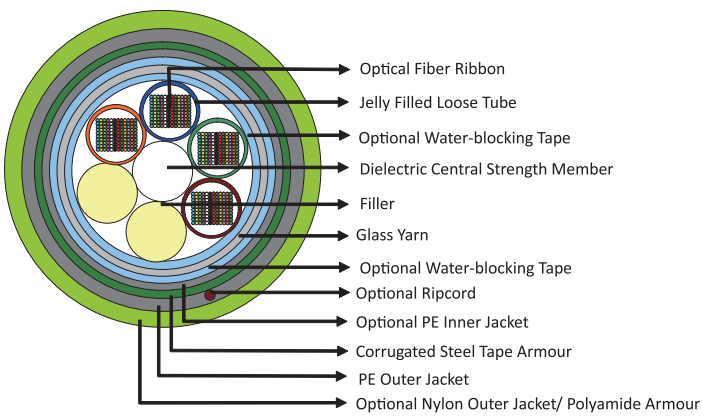
Unarmoured Type

MULTI LOOSE TUBE RIBBON FIBER CABLE

Physical Properties

Fiber Count	Nominal Weight (kg/km)	Nominal Weight (lb/kft)	Nominal Outer Diameter (mm)	Nominal Outer Diameter (in)	Maximum Pulling/Tensile Load	
					Installation (N/lb)	Operating (N/lb)
12-96	195.0	130.87	18.5	0.727	2670/600	890/200
108-288	320.0	214.77	22.0	0.865	2670/600	890/200
288-648	400.0	268.46	24.5	0.963	2670/600	890/200

Construction



Armoured Type

Physical Properties

Fiber Count	Nominal Weight (kg/km)	Nominal Weight (lb/kft)	Nominal Outer Diameter (mm)	Nominal Outer Diameter (in)	Maximum Pulling/Tensile Load	
					Installation (N/lb)	Operating (N/lb)
12-96	280.0	187.92	22.5	0.885	2670/600	890/200
108-288	400.0	268.46	25.0	0.983	2670/600	890/200
288-648	500.0	335.57	29.0	1.141	2670/600	890/200

MULTI LOOSE TUBE RIBBON FIBER CABLE

Mechanical Properties

Minimum Bending Radius:

Under installation:	20×OD
During operation:	10×OD for unarmoured cables;
	20×OD for armoured cables

Temperature Range:

Operating Temperature Range:	-40℃(-40℉) to +70℃(+158℉)
Storage Temperature Range:	-50℃(-58℉) to +70℃(+158℉)

Maximum Compressive Load: 4000N for unarmoured cables;
6000N for armoured cables

Repeated Impact: 4.4 N.m (J)

Twist (Torsion): 180×10 times, 125×OD

Cyclic Flexing: 25 cycles for armoured cables.;
100 cycles for unarmoured cables.

Crush Resistance: 220N/cm(125lb/in)

Fiber Compliance

Temperature Cycling	IEC60794-1-2-F2
Tensile Strength	IEC60794-1-2-E1A
Crush	IEC60794-1-2-E3
Impact	IEC60794-1-2-E4
Repeated Bending	IEC60794-1-2-E6
Torsion	IEC60794-1-2-E7
Kink	IEC60794-1-2-E10
Cable Bend	IEC60794-1-2-E11
Cool Bend	IEC60794-1-2-E11

Safety Compliance

General Purpose Grade	Flammability Test: OFN(UL1581)
Riser Grade	Flammability Test: OFNR/FT4 (UL1666)
Plenum Grade	Flammability Test: OFNP/FT6(UL 910)
FRPVC Grade	Flammability Test: IEC60332-1
LSZH Grade	Halogen Content Test: IEC 60754-1 Acidity Test: IEC 60754; Smoke Emission Test: IEC61034-1/2
LSFROH Grade	Halogen Content Test: IEC 60754-1 Acidity Test: IEC 60754; Smoke Emission Test: IEC61034-1/2 Flammability Test: IEC60332-1 & IEC 60332-3C/A
FR Grade	Fire Resistance Test: IEC 60331 / BS 6387 CWZ

Standard Compliance

Telcordia GR-20 RUS 7 CFR 1755.900 (REA PE-90) CEA S 87-640

Features

- Large fiber counts with small cable diameter
- Highly adaptable to mass splicing
- Suitable for installation in pipeline
- High quality jelly filled loose tube provides the ribbon fiber satisfactory mechanical and environmental protection.
- Ripcord allows easy jacket removal
- UV or moisture resistant for outdoor application
- Dry water blocking core design for ease of handling