

Single Jacket Dielectric Optical Fiber Cable - Span 120

OPTICAL FIBER CABLE

Optronics All Dielectric Self-Supporting Multi Loose Tube (MLT) cables are constructed of fibres inside gel filled central loose tubes, wrapped around an FRP central strength member. This is encased in aramid yarns and a PE outer jacket.



Application

- It can be installed without shutting off the power.
- Light weight and small diameter reducing the load caused by ice and wind and the load.
- Good performance of tensile strength and temperature on towers and backprops.

Characteristics

- FRP central strength member
- Tube filling gel
- Loose tube stranded
- PE /AT sheath outdoor cable
- Kevlar make cable more tensile

Cable construction details

Number of fiber	12 single mode fibers G652D	
Moisture Barrier	Water blocking system	
Strength member	Aramid yarns	
Fiber Quantity	6 pcs Fibers× 2 loose tubes	
Rip Cord	1 pcs	
Central strength member	Material	FRP
	Diameter	2.1mm±0.1mm
Loose tube and Filler elements	Material	PBT
	Diameter	2.0mm±0.1mm
Outer sheath	Material	PE
	Diameter	10.3±0.5mm

Cable mechanical characteristic

Item		Unit	Parameter
Cable Standard Weight		kg/km	80 (+/-5%)
Span		m	120
Rated Tensile Strength(RTS)		N	3900
Maximum Allowable Tension(MAT)		N	1500
Every Day Strength(EDS)		N	1000
Min Bending Radius	Short term	mm	20D
	Long term	mm	10D
Crush performance	Short term	N/100mm	1000
	Long term	N/100mm	300
Suiting Line Voltage Class		Not more than 35 kV	
Suitable meteorological condition		Max wind speed: 60km/h, No icing	
Operating temperature	When working or in store	°C	-40 +70
	When laying	°C	-10 +50
Fiber Attenuation coefficient in Cable		dB/km(1310nm) ≤	≤0.34dB/km
		dB/km(1550nm) ≤	≤0.22dB/km

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Fiber Color	1	2	3	4	5	6
	Blue	Orange	Green	Brown	Grey	White
	7	8	8	10	11	12
	Red	Black	Yellow	Violet	Pink	Aqua
Loose tube color	1	2	3	4	5	6
	Blue	Orange	Green	Brown	Grey	White
	7	8				
	Red	Black				

Fiber characteristic

Fiber style		Unit	SM G652	SM G652D	MM 50/125	MM 62.5/125	MM OM3-300
condition		nm	1310/1550	1310/1550	850/1300	850/1300	850/1300
Attenuation		dB/km	≤	≤	≤	≤3.0/1.0	≤3.0/1.0
			0.36/0.23	0.34/0.22	3.0/1.0	----	----
Dispersion	1550nm	Ps/(nm*km)	----	≤18	----	----	Dispersion
	1625nm	Ps/(nm*km)	----	≤22	----	----	
Bandwidth	850mm	MHZ.KM	----	----	≥ 400	≥ 160	Bandwidth
	1300mm	MHZ.KM	----	----	≥800	≥ 500	
Zero dispersion wavelength		nm	1300-1324	≥ 302, ≤1322	----	----	≥ 1295, ≤1320
Zero dispersion slope		nm	≤0.092	≤0.091	----	----	----
PMD Maximum Individual Fibr			≤0.2	≤0.2	----	----	≤0.11
PMD Design Link Value		Ps(nm ² *k m)	≤0.12	≤0.08	----	----	----
Fibre cutoff wavelength λc		nm	≥ 1180, ≤1330	≥ 1180, ≤1330	----	----	----
Cable sutoff wavelength λcc		nm	≤1260	≤1260	----	----	----
MFD	1310mm	um	9.2+/-0.4	9.2+/-0.4	----	----	----
	1550mm	um	10.4+/-0.8	10.4+/-0.8	----	----	----
Numerical Aperture(NA)		----	----	----	0.200 +/- 0.015	0.275 +/- 0.015	0.200 +/- 0.015
Step(mean of bidirectional measurement)		dB	≤0.05	≤0.05	≤0.10	≤0.10	≤0.10
Irregularities over fiber length and point		dB	≤0.05	≤0.05	≤0.10	≤0.10	≤0.10