

# LONG SPAN AERIAL FIBRE OPTIC CABLE (Anti-track)

## APPLICATION

- ◆ Self-Supporting All Dielectric
- ◆ Spans up to 500m (No Ice loading)
- ◆ Power Utilities Distribution

LSA 500 CABLES

## CONSTRUCTION

GRP/FRP	Glass reinforced plastic central strength, over sheathed in certain cases
LOOSE TUBE	PBT (Polybutylene Terephthalate) filled with thixotropic gel
FIBRES	*6 to 8 colour coated fibres per tube
PERIPHERAL STRENGTH MEMBER	Aramid (Optimized load transfer between aramid and sheath)
SHEATHING	Polyethylene (Anti-track UV resistant sheath)

## MECHANICAL PROPERTIES

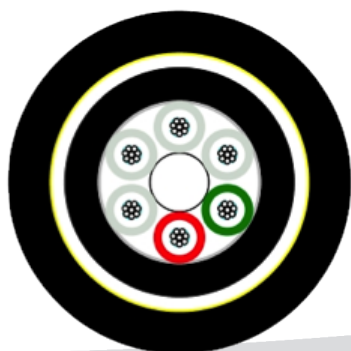
FIBRE COUNT	NUMBER OF ELEMENTS	CABLE DIAMETER NOMINAL (mm)	CABLE WEIGHT (kg/km)	MAXIMUM INSTALLATION LOAD (N)	OPERATION TEMPERATURE RANGE	BENDING RADIUS	
						LONG TERM	SHORT TERM
Up to 30	5 (*6 fibres/tube)	13.2	145	4000	-10°C to 70°C	20 x OD	12 x OD
48	6 (*8 fibres/tube)	14.5	175	4000	-10°C to 70°C	20 x OD	12 x OD

## SAG AND TENSION CALCULATIONS (Max installation load)

SPAN	200m	300m	400m	500m
Up to 24F Normal Sag (m)	1.8	4.0	7.0	11.0
48F Normal Sag (m)	2.1	4.8	8.5	13.2

## FIBRE AS PER TIA/EIA

1	Blue	2	Orange	3	Green	4	Brown	5	Grey	6	White
7	Red	8	Black								



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### TUBE USES REFERENCE COLOUR MARKING

First Tube	Red	Inbetween tubes	Natural	Last Tube	Green
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### ORDERING INFORMATION

FIBRE COUNT	CABLE TYPE	FIBRE TYPE ITU-T	DRUM QUANTITY (m)
24	Long Span Aerial (LSA 500)	G657.A1	4000

### OPTICAL PROPERTIES

Modefield Diameter (µm)	1310nm	$9.2 \pm 0.4$	$9.2 \pm 0.4$
	1550nm	$10.4 \pm 0.5$	$10.4 \pm 0.5$
Cabled Attenuation (dB/km)	1310nm	$\leq 0.34$	$\pm 0.34$
	1550nm	$\leq 0.20$	$\pm 0.20$
Polarization Mode Dispersion (ps/√km)	Link (PMDQ)	$\leq 0.04$	$\leq 0.04$
	Individual (PMDmax)	$\leq 0.1$	$\leq 0.1$
Chromatic Dispersion (ps/nm.km)	1285-1330nm	3	3
	1550nm	$\leq 18$	$\leq 18$
	1625nm	$\leq 22$	$\leq 22$
Macro-Bend Loss	1550nm	$\varnothing 32\text{mm}$ , 1turn, $\leq 0.03\text{dB}$	$\varnothing 10\text{mm}$ , 1turn, $\leq 0.5\text{dB}$
		$\varnothing 50\text{mm}$ , 100turns, $\leq 0.03\text{dB}$	$\varnothing 15\text{mm}$ , 10turns, $\leq 0.05\text{dB}$
		$\varnothing 25\text{mm}$ , 100turns, $\leq 0.01\text{dB}$	$\varnothing 10\text{mm}$ , 1turn, $\leq 1.5\text{dB}$
	1625nm	$\varnothing 10\text{mm}$ , 1turn, $\leq 1.5\text{dB}$	$\varnothing 15\text{mm}$ , 10turns, $\leq 0.3\text{dB}$
		$\varnothing 50\text{mm}$ , 100turns, $\leq 0.03\text{dB}$	$\varnothing 25\text{mm}$ , 100turns, $\leq 0.01\text{dB}$
		$\varnothing 25\text{mm}$ , 100turns, $\leq 0.01\text{dB}$	$\varnothing 25\text{mm}$ , 100turns, $\leq 0.01\text{dB}$
Cladding Diameter (µm)		$125 \pm 0.7$	$125 \pm 0.7$
Cladding Non Circulatory (%)		$\leq 0.7$	$\leq 1$
Core-Clad Concentricity (µm)		$\leq 0.5$	$\leq 0.6$
Cable Cut-Off Wavelength (nm)		$\leq 1260$	$\leq 1260$
Local Variations : Cabled (dB)		$\leq 0.1@1550\text{nm}$	$\leq 0.1@1550\text{nm}$