



JCS-WB TECHNOLOGIES

# Loose Tube Fibre Cable





## LOOSE TUBE FIBRE OPTIC CABLE

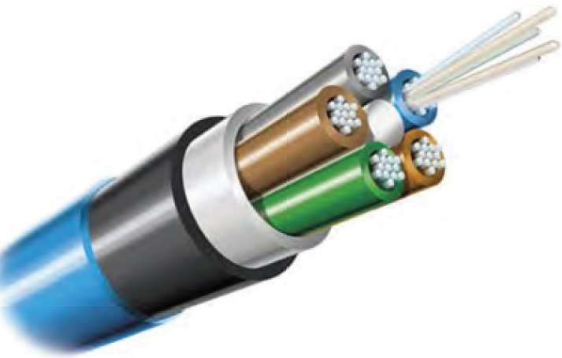
### CUSTOM SOLUTIONS

If you require other loose tube cable constructions then please don't hesitate to contact your friendly JCS-WB Sales team. We have a trusted solution for you today.

JCS-WB Technologies offers a variety of outdoor optical cables for external underground duct installation and direct burial. Cables are available in a range of fibre counts, fibre types and mechanical constructions depending on the specific application.

### OPTICAL FIBRE

JCS-WB loose tube cables can be supplied in the full range of optical fibres available to meet the demands of different applications, including multimode OM1, OM3, OM4 and singlemode OS1 and OS2 fibres.



## SM@RTCORE LOOSE TUBE FIBRE OPTIC CABLE

Multi-loose tube dielectric optical cable designed for external underground duct installation or direct burial. Advanced design with GRP central strength member for greatly reduced cable size, offering fibre counts from 2 to 144 and many benefits for both installers and network owners.



## ARM@CORE LOOSE TUBE FIBRE OPTIC CABLE

All-dielectric multi-loose tube fibre optic cable for external underground duct installation or direct burial. Advanced design with GRP central strength member for greatly reduced cable size, offering fibre counts from 2 to 144. A protective layer of lightweight, flat GRP non-metallic armour to withstand rodent attack.

NOTE: If there is a particular product not listed that you require, please don't hesitate to contact the JCS-WB Technologies Sales and Support Team today



## SM@RTCORE LOOSE TUBE FIBRE OPTIC CABLE

Loose tube dielectric optical cable designed for external underground installations in ducts by pulling, jetting or floating techniques or by direct burial in open-cut trenches. Low-viscosity gel-filled fibre tubes. Advanced cable design and manufacturing has enabled greatly reduced cable size, offering many benefits for both installers and network owners. GRP central strength member, UV stabilised polyethylene sheath.

### APPLICATION

- External underground duct installation
- Direct burial

### CABLE DESIGN



- Single layer multi-loose tube construction
- Central strength member (CSM)

- Thermoplastic Tube with up to 12 fibres filled with a low viscosity, thixotropic, non-melting gel
- Tube and filler elements SZ stranded around CSM
- Water swellable elements (dry-core) for water tightness
- UV stabilised polyethylene sheath
- Two ripcords beneath sheath for easy removal
- UV stabilised nylon outer jacket bonded to PE sheath

### FEATURES

- Reduced diameter, smaller cable cross section, high fibre density
- Multi-loose tube construction, with fibre counts from 2 to 144
- Internal dry water blocking technology
- Composite UV stabilised polyethylene / bonded outer nylon jacket
- Termite resistant
- Low duct hauling friction

### OPTICAL CHARACTERISTICS

See the relevant cabled optical fibre data sheet.

Number of Fibres	2-72	84-96	108-120	132-144
No. of elements	6	8	10	12
Tube/filler diameter (mm)	2.1			
Cable nominal diameter (mm)	10.0	10.7	12.2	13.6
Cable nominal weight (kg/km)	75	92	126	153
Max installation tension (kN)	2.0		2.5	
Max crush resistance (kN/100mm)	2.0 (short term) / 1.0 (long term)			
Min bend radius (mm)	20 x cable OD (full load) / 10 x cable OD (no load)			
Temperature range °C	installation	0 to +50 °C		
	storage	-20 to +70 °C		
	operation	-10 to +70 °C		



## LOOSE TUBE FIBRE OPTIC CABLE

### IDENTIFICATION

#### Fibre and Buffer Tube Colours

No. Colour	1	2	3	4	5	6	7	8	9	10	11	12
	blue	orange	green	brown	grey	white	red	black	yellow	violet	pink	aqua


Fillers are either natural (opaque) or black. Jelly-filled tubes (no fibres) are also used.

**Sheath Colour:** The outer sheath colour is blue.

**Sheath Marking:** The outer sheath is marked in 1 metre intervals as follows:

**Packing:** New non-returnable timber drums to AS/NZS 2857 with NOLCO-FLEX protection

**Delivery Lengths:** Standard delivery length is 4 km with a tolerance of - 1% / + 3%

JCS-WB TECHNOLOGIES SM@RTCORE CT Part Number  N0514 T/N #### MM/YY \*\*\*\*\*M

### MECHANICAL CHARACTERISTICS

Number of Fibres	Test Method	Test Conditions	Acceptance Criteria
<b>Tensile strength</b>	IEC 60794-1-2-E1	Load per cable max tensile strength	max fibre strain < 0.6%/30mins $\Delta$ attenuation < 0.1dB
<b>Crush</b>	IEC 60794-1-2-E3	10/120 min, load per max crush resistance, 3 adjacent sections	No sheath or core damage $\Delta$ attenuation < 0.1dB
<b>Impact</b>	IEC 60794-1-2-E4	Wt: 1.5 kg, Ht: 1.0 m Anvil $\varnothing$ : 25 mm, Impacts:1	No fibre, sheath or core damage $\Delta$ attenuation < 0.1dB/5 mins
<b>Torsion</b>	IEC 60794-1-2-E7	Tension: per cable spec. Rotation 10 half-turn cycles ea. clockwise and anti-clockwise / 1m / 1 min.	No fibre breaks, no sheath or core structure damage. $\Delta$ attenuation < 0.1dB
<b>Bend</b>	IEC 60794-1-2-E11	Mandrel $\varnothing$ : 20 x Cable OD, 1 turn	$\Delta$ attenuation < 0.1dB
<b>Bend under tension</b>	Concurrent to tensile test IEC 60794-1-2-E18	Mandrel $\varnothing$ : 40 x Cable OD, 1 turn	No fibre, sheath or core damage $\Delta$ attenuation < 0.1dB/5 mins
<b>Temperature cycling</b>	IEC 60794-1-2-F1	Min. sample length: 1000m - 10°C to +70°C	no avg. attenuation increase $\Delta$ T. No fibre attenuation > 0.15dB/km
<b>Water penetration</b>	IEC 60794-1-2-F5B	Length = 3m, Water ht. = 1m	No water leakage after 24 hrs.

## ORDERING INFORMATION

# LT012NDCSM-BU

#### CABLE TYPE

LT - LOOSE TUBE  
LTS - LOOSE TUBE WITH SACRIFICIAL SHEATH

#### FIBRE CORES

002 TO 144

#### FIBRE TYPE

SM - 9 $\mu$ M OS2 SINGLEMODE  
OM1 - 62.5 $\mu$ M OM1 MULTIMODE  
OM3 - 50 $\mu$ M OM3 MULTIMODE  
OM4 - 50 $\mu$ M OM4 MULTIMODE

#### OUTER SHEATH COLOUR

BU - BLUE  
BL - BLACK



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