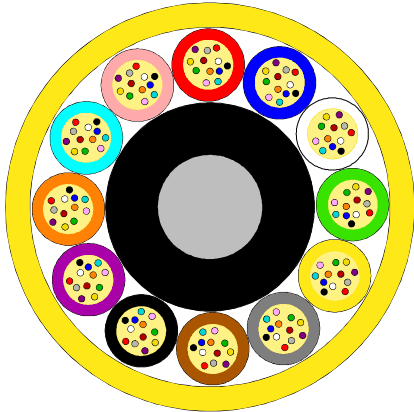


## Stranded loose tube micro cables for use in ducts

### Cable Design



- not to scale -

- **Optical fibre:** see specification CFS090011 for G.657.A1
- **Secondary coating:** The fibres are, uniquely identified by a different colour, placed inside 'loose tubes' made of high tensile strength thermoplastic compound.
- **Gel compound:** The tubes are fully filled with a non-toxic and dermatological safe gel compound.
- **Central Strength Member (CSM):** The central element consists of FRP (Fibre Reinforced Plastic), with a water-swellable layer.
- **Cable core:** The required number of tubes (and dummy elements) are stranded (SZ method) around the central element.
- **Strength members:** Under the outer sheath 2 aramid yarns are applied, serving as ripcord and as strengthening yarns.
- **Outer sheath:** HDPE.

This loose tube dielectric optical cable is designed for outdoor installation in ducts and micro ducts by blowing or pulling techniques.

### Technical data

<b>No. of Fibres</b>		<b>144</b>
Design		12 x 12
Loose Tube- Ø	mm	1.35
Sheath thickness	mm	0.4
Cable Diameter	mm	7.8
Cable Weight	kg / km	52
Tensile performance	N	1250

### Main characteristics

Test	Standard	Specified value	Acceptance Criteria**
Tensile performance	IEC 60794-1-2-E1	See table above	$\Delta\alpha \leq 0.05$ dB, fibre strain $\leq 0.33\%$
Crush	IEC 60794-1-2-E3	500N, 100mm plate/plate 1min. 1000N, 100mm plate/plate 1min.	$\Delta\alpha \leq 0.05$ dB, during test, no damage $\Delta\alpha \leq 0.05$ dB, after test, no damage
Impact	IEC 60794-1-2-E4	5 Nm, R=300mm, 3 impacts	no damage
Torsion	IEC 60794-1-2-E7	$\pm 180^\circ$ , L=1m, 10 cycles	$\Delta\alpha \leq 0.05$ dB, no damage
Kink	IEC 60794-1-2-E10	Min diameter=100mm	No damage
Repeated bending	IEC 60794-1-2-E6	R= 15x cable Ø, 100 cycles, 20N	No damage
Cable bend	IEC 60794-1-2-E11	D=250mm, 5 turns, 3 cycles, -10°C	$\Delta\alpha \leq 0.05$ dB, no damage
Temperature range	IEC 60794-1-2-F1	-30 to +60°C -40 to +70°C	$\Delta\alpha \leq 0.05$ dB $\Delta\alpha \leq 0.15$ dB
Water Penetration	IEC 60794-1-2-F5B	sample=1m, water=1m	No water leakage after 24 hour

\*\* values for single-mode fibres, all optical measurements performed at 1550 nm.

Min. bending radius	mm	Without Tension 10 x Cable-Ø	Under Maximum Tension 20 x Cable-Ø
---------------------	----	---------------------------------	---------------------------------------








Temperature range	°C	Installation -15 to +50	Transport. & Storage -40 to +70	Operation -40 to +70
-------------------	----	----------------------------	------------------------------------	-------------------------

### Optical Characteristics











See the attached cabled optical fibre data sheet.

### Identification

#### Fibre Colours

No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Red	Blue	White	Green	Yellow	Grey	Brown	Black	Violet	Orange	Turquoise	Pink
												

#### Tube Colours

No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Red	Blue	White	Green	Yellow	Grey	Brown	Black	Violet	Orange	Turquoise	Pink
												

#### Sheath Colour

The colour is yellow for single mode fibres.

#### Sheath Marking:

The outer sheath is marked in 1 meter intervals as follows:

RALA DRAKA(DL) JN-SM-Versa XS78/GRHLDV 144 x G657A1 S12 Idno.[xxxxxx] [Year] [length marking]m

### Logistic

#### Packing:

Plastic or Plywood Drums with protection.

#### Delivery Lengths:

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

© PRYSMIANGROUP, All Rights Reserved

All sizes and values without tolerances are reference values. Specifications are for product as supplied by Prysmian: any modification or alteration afterwards of product may give different result.

The information contained within this document must not be copied, reprinted or reproduced in any form, either wholly or in part, without the written consent of Prysmian. The information is believed to be correct at the time of issue. Prysmian reserves the right to amend this specification without prior notice. This specification is not contractually valid unless specifically authorised by Prysmian.