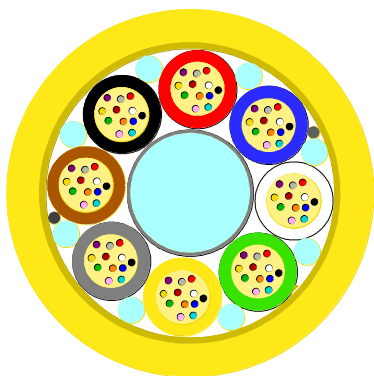


# Stranded loose tube mini cables for use in ducts

## Cable Design

In line with 1056-TOLA 10408 rev 4.0



- not to scale -

- **Optical fibre:** see specification CFS09002 for G.652.D, CFS090011 for G.657.A1 and CFS09003 for G.657.A2.
- **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-swellaible 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
- **Fillers:** between stranded tubes and sheath to improve mechanical characteristics.
- **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

No. of Fibres		96
Design		8 x 12
Loose Tube- Ø	mm	1.35
Sheath thickness	mm	0.4
Cable Diameter	mm	5.8
Cable Weight	kg / km	31
Tensile performance	N	600

## 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 5min.	$\Delta\alpha \leq 0.05$ dB, during test, no damage $\Delta\alpha \leq 0.05$ dB, after test, no damage	
Impact	IEC 60794-1-2-E4	3 Nm, R=300mm, 3 impacts	No damage	
Torsion	IEC 60794-1-2-E7	$\pm 180^\circ$ , L=1m, 10 cycles, 40N	No damage	
Kink	IEC 60794-1-2-E10	Min diameter=100mm	$\Delta\alpha \leq 0.05$ dB, 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=3m, water=1m	No water leakage after 24 hour	
Min. bending radius	mm	Without Tension 15 x Cable-Ø	Under Maximum Tension 25 x Cable-Ø	
Temperature range	°C	Installation -15 to +40	Transport. & Storage -40 to +70	Operation -40 to +60

All optical measurements at 1550 nm.








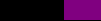




## Optical Characteristics

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
Colour	Red	Blue	White	Green	Yellow	Grey	Brown	Black
								

### Sheath Marking:

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

---

## Logistic

---

### Packing:

Plastic or Plywood Drums with protection.

### Delivery Lengths:

Standard delivery length is 4km, 6 km with a tolerance of - 1% / + 3%

---

© PrysmianGroup 2017, All Rights Reserved

All sizes and values without tolerances are reference values. Specifications are for product as supplied by PrysmianGroup: 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 PrysmianGroup. The information is believed to be correct at the time of issue. PrysmianGroup reserves the right to amend this specification without prior notice. This specification is not contractually valid unless specifically authorized by PrysmianGroup.