

## Concentric Core Loose Tube Micro Cable – TOL 401 9029

For Aerial Duct Installation - GNHL-U-CDGNRV (GNHLDV) Dielectric 12-96



### Features

- Optimized for Aerial duct installations
- Excellent installation performance
- Bend resistant G657A1 fibers
- Unique design with robust inner tubes
- Temperature range from -40 to +70°C
- Easy to prepare and identify fibers
- Slim design for microducts down to 8mm
- Halogen-free
- Up to 96 fibers

### Application

GNHLDV Aerial is a fiber optic micro cable for installation into microducts mounted on pole lines (aerial installation). The cable is part of the Hexatronic Micro Cable System. The system is used for installing optical fibers in all types of metropolitan and rural access networks. The system provides an easy, cost-efficient rollout and maintenance, which creates the opportunity for increasing broadband penetration, with the capability to grow with user needs.

### Design

The Micro Cables are designed with inner protective tubes made of a unique compound. The Polyamide gives a special strength to the product, while increasing the bending properties as well as other benefits such as extreme temperature resistance.

As a result, Hexatronic Micro Cables are more durable during the installation process as they are able to withstand rough handling. The unique cable design with an extended operational temperature range of -40 to +70°C can be used in many environments, on all continents where heat and cold are often a factor.

The micro cable consists of up to 8 loose tubes with 12 fibers per tubes. This enables a fiber count from 12 to 96 fibers.



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## Typical Data

Temperature range

Operation ..... -40 to +70°C

Storage\* ..... -40 to +70°C

Handling ..... -15 to +50°C

Cable temperature,

blow installation ..... -15 to +40°C

Bending radius

Cable bend radius, ¼ turn permanent

1-72 fiber ..... 80 mm

96 fiber ..... 80 mm

Cable bend radius, single turn permanent

1-72 fiber ..... 100 mm

96 fiber ..... 100 mm

Cable bend radius, multiple turns permanent

1-72 fiber ..... 230 mm

96 fiber ..... 230 mm

Tensile force

During installation

1-72 fiber ..... 700 N

96 fiber ..... 1700 N

During operation

(temporary when subjected to wind & ice,  
0,5% tension, no attenuation change)

1-72 fiber ..... 700 N

96 fiber ..... 1700 N

Crush resistance ( $\Delta\alpha \leq 0.05$  dB after test, no damage)

1-96 fiber .....  $\leq 2000$  N/10 cm

Cable weight

1-72 fiber ..... 28 kg

96 fiber ..... 39 kg

Typical installation performance

1-72 fiber, 10/8 tube ..... up to 1500 m

96 fiber, 10/8 tube ..... up to 1200 m

## Delivery Information

Supplied lengths ..... 2, 4, 8 km

The cable is length water blocking according to IEC 60794-1-2-F5B.

Mechanical and environmental test in accordance with IEC 60794-5

Fiber parameters and tests according to the IEC series 60793-2 and 60793-1

\* The cable shall not be stored in direct sun light. The sun may heat up the cable over the permitted temperature limit

## Design

1. Primary coated fiber ..... Silica, acrylate

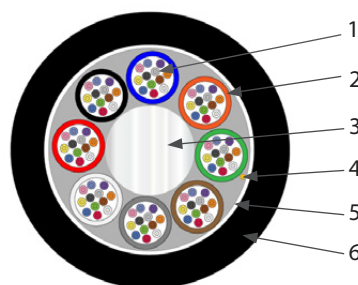
2. Loose tube ..... PA

3. Central strength member ..... Glass fiber reinforced plastic

4. Slit up yarn ..... Aramide yarn

5. Wrapping ..... Water blocking yarns

6. Sheath ..... Polyethylene, halogen-free



## Color Coding

The cables are available in several versions with different color coding systems: S12 or TIA598 (Bellcore). Other color code systems are available on request.

Black fillers can replace white tubes.

## Transmission Characteristics

ATTENUATION	@ 1310NM	@ 1383NM	@ 1550NM
Typical	0.32dB/km	0.32dB/km	0.18dB/km
Average in cable	0.33dB/km	0.33dB/km	0.21dB/km
Max	0.36dB/km	0.36dB/km	0.23dB/km

## Ordering Information

Product No.	Product Name	Tubes/Fibers		Diame-ter ø (mm)	Weight kg/km
		No.	Color Code		
TOL4019029/12AH	Micro Cable, Aerial 12f G657A1 S12	1x12 (12f)	S12	5.7	28
TOL4019029/24AH	Micro Cable, Aerial 24f G657A1 S12	2x12 (24f)	S12	5.7	28
TOL4019029/48AH	Micro Cable, Aerial 48f G657A1 S12	4x12 (48f)	S12	5.7	28
TOL4019029/72AH	Micro Cable, Aerial 72f G657A1 S12	6x12 (72f)	S12	5.7	28
TOL4019029/96AH	Micro Cable, Aerial 96f G657A1 S12	8x12 (96f)	S12	6.7	39
TOL4019029/12C	Micro Cable, Aerial 12f G657A1 TIA598	1x12 (12f)	TIA598	5.7	28
TOL4019029/29C	Micro Cable, Aerial 24f G657A1 TIA598	2x12 (24f)	TIA598	5.7	28
TOL4019029/48C	Micro Cable, Aerial 48f G657A1 TIA598	4x12 (48f)	TIA598	5.7	28
TOL4019029/72C	Micro Cable, Aerial 72f G657A1 TIA598	6x12 (72f)	TIA598	5.7	28
TOL4019029/96C	Micro Cable, Aerial 96f G657A1 TIA598	8x12 (96f)	TIA598	6.7	39

## Color Code Systems

S12	1	2	3	4	5	6	7	8	9	10	11	12
Fibers and Tubes	Red	Blue	White	Green	Yellow	Slate	Brown	Black	Violet	Orange	Aqua	Rose
TIA-598	1	2	3	4	5	6	7	8	9	10	11	12
Fibers and Tubes	Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua