

# Flame Retardant Indoor/Outdoor Cable – Slim

**GNHOQ 2-24 fibers G657A1 Dca S12**

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## Features

- Up to 24 fibers
- Fiber G657A1
- Excellent installation performance
- Easy to strip and identify fibers
- Very good temperature performance
- Length water blocked
- Halogen-free flame retardant - CPR Dca

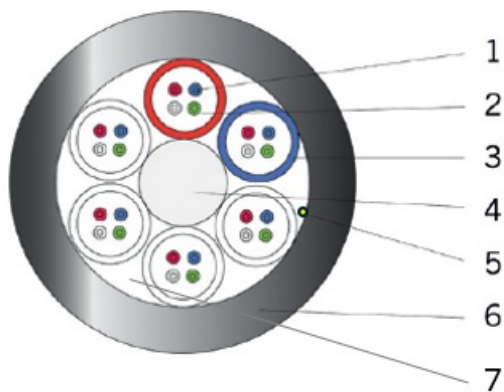
## Application

The cable is a fiber optic micro cable for indoor/outdoor installation. Typical applications are for installations in vertical risers for multi dwelling units in FTTX networks.

## Design

The cable consists of up to 6 loose tubes with 4 fibers per tube.

## Product Information



- 1 G657A1 fiber
- 2 Coating: Acrylate
- 3 Loose tube: PA12
- 4 Central strength member: Glass fiber reinforced plastic, coated
- 5 Water blocking element
- 6 Sheath: Halogen-free, flame retardant polyolefine
- 7 Bedding compound, flame retardant

Slit up yarn

## Technical Information

<b>Product Color</b>	Black sheath
<b>Color Code</b>	S12
<b>Temperature, Operation [°C]</b>	-40 to +70
<b>Temperature, Storage [°C]</b>	-40 to +70
<b>Temperature, Installation [°C]</b>	-15 to +40

<b>Water Blocking</b>	Water penetration in accordance with IEC 60794-1-22 method F5C.
<b>Reaction to Fire</b>	EN 13501-6 CPR classification Dca-s2,d2,a3
<b>Fiber Type</b>	G657A1
<b>Attenuation @Wavelength [nm]</b>	1310/1550/1625
<b>Average Attenuation [dB/km]</b>	0.36/0.22/0.25
<b>Maximum Attenuation [dB/km]</b>	0.38/0.25/0.30
<b>Conformance</b>	<p>Fire rating according to EN 13501-6 CPR classification DCa-s2, d1.</p> <p>Fiber parameters and tests according to the IEC series 60793-2 and 60793-1. Mechanical and environmental tests in accordance with Family Specification IEC 60794-5-10.</p> <p>Test standards, conditions and requirements:</p> <ul style="list-style-type: none"> <li>▪ Operational temperature: IEC 60794-1-22 Method F1; max attenuation 0.05dB/km*</li> <li>▪ Storage temperature: IEC 60794-1-22 Method F1; max attenuation 0.15dB/km* reversible</li> <li>▪ Ageing: IEC 60794-1-22, Method F9; 168h@85°C,+2 cycles, no attenuation after test</li> <li>▪ Water blocking: IEC 60794-1-2, Method F5C, 3m sample, 1m head of water, no leakage after 24 hours</li> <li>▪ Bend radius: IEC 60794-1-21, Method E11B; 4 turns, 3 cycles, max attenuation 0.05dB*</li> <li>▪ Installation tensile load: IEC 60794-1-21, Method E1; max fiber tension 0.6%, reversible attenuation</li> <li>▪ Crush: IEC 60794-1-21, Method E3; 1 minute load, 100mm plate, no attenuation after test</li> <li>▪ Impact: IEC 60794-1-21, Method E4; 3 different places, max attenuation 0.1dB* after test</li> </ul> <p>* All attenuation measurements performed @ 1550nm</p>
<b>Certifications</b>	Fire rating according to EN 13501-6 CPR classification Dca-s2,d2,a3

**Marking**

Example of sheath marking. Standard marking 1 time/meter:

“HEXATRONIC yymmddhh TOL4059022/zzAH GNHOQ-K-CDGNRV zz/T4 G657A1 Dca-s2,d2,a3 xxx m”

where yymmddhh= year, month, day and hour of manufacture, zz=number of fibers in cable, xxx=running meter marking

**Installation Notes**

Typical installation performance:

- Ducts ID 8-10 mm: 400 m

Installation performance verified on Hexatronic test track, according to IEC 60794. Installation performance is affected by the installed path, environmental conditions, installation equipment etc and actual performance may therefore deviate from the above specified values.

If the cable is installed by blowing the temperature shall be -15 to +40°C. The cable shall not be stored in direct sunlight. The sun may heat up the cable over the permitted temperature limit.

Minimum bend radius single bend: 40mm

Minimum bend radius 1/4bend (90°): 30mm

**Ordering Information**

- 2000m/K6 plastic
- 4000m/K8 plastic
- 6000m/K10 plastic
- 8000m/K10 plastic

**Technical Details**

S12 Fibers och rör Fibers and Tubes	1	2	3	4	5	6	7	8	9	10	11	12
	Röd Red	Blå Blue	Vit White	Grön Green	Gul Yellow	Grå Grey	Brun Brown	Svart Black	Violett Violet	Orange	Turkos Turquoise	Rosa Pink
	13	14	15	16	17	18	19	20	21	22	23	24
	Röd Red	Blå Blue	Vit White	Grön Green	Gul Yellow	Grå Grey	Brun Brown	Klar Clear	Violett Violet	Orange	Turkos Turquoise	Rosa Pink

## Articles 5

Article name	Color	No. of Fibers	Layout	Bend Radius [mm]	Tensile Force, Installation [N]	Tensile Force, Operation [N]	Crush [N/100 mm]	Impact [J]	Torsion [°]	Diameter Ø [mm]	Weight [kg/km]
<b>GNHQ.2/T2 G657A1 S12</b> TOL4059022/2AH	Black	2	1x2	60	430	160	700	5	180	5.6	35
<b>GNHQ.4/T4 G657A1 S12</b> TOL4059022/4AH	Black	4	1x4	60	430	160	700	5	180	5.6	35
<b>GNHQ.8/T4 G657A1 S12</b> TOL4059022/8AH	Black	8	2x4	60	430	160	700	5	180	5.6	35
<b>GNHQ.12/T4 G657A1 S12</b> TOL4059022/12AH	Black	12	3x4	60	430	160	700	5	180	5.6	35
<b>GNHQ.24/T4 G657A1 S12</b> TOL4059022/24AH	Black	24	6x4	60	430	160	700	5	180	5.6	35