Viper Ease

GNHL 2-288 fibers G657A1 TIA598

Features

- Dry loose tubes for easy preparation of the fibers
- Binder yarns that do not tangle when opening
- Up to 288 fibers
- Super slim design
- Excellent installation performance
- Temperature range from -45 to +70°C
- Excellent bend performance, ≥70 mm
- Easy to prepare and identify fibers
- Ultra low attenuation in cable

Application

The Hexatronic Viper Ease is optimized for faster installation without compromizing performance. By eliminating gel filling in the loose tubes and incorporating binders that blend into the sheath, fiber preparation time is significantly reduced—saving up to 50–70% of the time—while maintaining all critical characteristics such as blowing performance, mechanical durability, and environmental resistance.

The cable is optimized for air-blown installation in microducts and is especially suited for complex access network environments where flexibility and speed are key. All parameters such as outer diameter, sheath friction, and cable stiffness are fine-tuned to ensure maximum installation efficiency, even in challenging conditions.

The design is based on a slim loose tube structure with up to 36 tubes per cable, further facilitating fiber preparation and mid-span access. It is ideal for long-distance installation in microducts with an inner diameter of 8 to 12 mm, offering excellent bend performance and a wide operating temperature range.

Design

The Micro Cables are designed with one, two or three layers of inner protective tubes made of a unique Polyamide 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. Each tube contains 12 or 24 fibers.

As a result, The Viper 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 -45 to +70°C can be used in many environments, on all continents where heat and cold are often a major concern.

Product Information

For illustration only. Color code may vary.

1. Primary coated fiber: Silica, acrylate
2. Water blocking yarn
3. Loose tube: PA
4. Central strength member: Glass fiber reinforced plastic, PE
5. Slit up yarn
6. Sheath: Polyethylene, halogen-free

Black fillers can replace empty white tubes.

Technical Information

Color Code	TIA598
Fiber Type	G657A1
Product Color	Black jacket
Conformance	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. Test standards, conditions and requirements: • Operational temperature: IEC 60794-1-22 Method F1; max attenuation 0.05dB/km* • Storage temperature: IEC 60794-1-22 Method F1; max attenuation 0.15dB/km* reversible • Ageing: IEC 60794-1-22, Method F9; 168h@85°C,+2 cycles, no attenuation after test • Water blocking: IEC 60794-1-2, Method F5C, 3m sample, 1m head of water, no leakage after 24 hours • Bend radius: IEC 60794-1-21, Method E11B; 4 turns, 3 cycles, max attenuation 0.05dB* • Installation tensile load: IEC 60794-1-21, Method E1; max fiber tension 0.6%, reversible attenuation • Crush: IEC 60794-1-21, Method E3; 1 minute load, 100mm plate, no attenuation after test • Impact: IEC 60794-1-21, Method E4; 3 different places, max attenuation 0.1dB* after test * All attenuation measurements performed @ 1550nm
Temperature, Installation [°C]	-15 to +50
Installation Notes	Typical installation performance: • Ducts ID 8-10 mm, cable OD ≤6.7 mm: 2000 m • Ducts ID 12 mm, cable OD ≤8.0 mm: 2000 m • Ducts ID 15-16 mm, cable OD <11 mm: 2000 m, cable OD 11-12 mm: 1500 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.
Marking	Example of jacket marking, 1 time/meter: “HEXATRONIC A35 Viper Ease yymmddhh TOL4019700/288AH GNHL-U-CDGNRV 288/T12 G657A1 TIA598 xxxxx m”

	where yymmddhh = year, month, day and hour of manufacture, xxxxx=running meter marking
Temperature, Operation [°C]	-45 to +70
Ordering Information	Supplied lengths: 2, 4, 8 km
Temperature, Storage [°C]	-45 to +70
Water Blocking	Length water blocking according to IEC 60794-1-2-F5C
Average Attenuation [dB/km]	0.33/0.33/0.21
Maximum Attenuation [dB/km]	0.36/0.36/0.23
Typical Attenuation [dB/km]	0.32/0.32/0.18
Attenuation @Wavelength [nm]	1310/1383/1550

Technical Details

TIA-598 Fibers and Tubes	1	2	3	4	5	6	7	8	9	10	11	12
	Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua
	13	14	15	16	17	18	19	20	21	22	23	24
	Blue |	Orange |	Green |	Brown |	Slate |	White |	Red |	Clear |	Yellow |	Violet |	Rose |	Aqua |

TIA 598 Color Code Chart

Items 7

Item Name	Color	No. of Fibers	Layout	Bend Radius [mm]	Tensile Force, Installation [N]	Crush [N/100 mm]	Impact [J]	Diameter Ø [mm]	Weight [kg/km]	Length [m]
GNHL 12/T12 G657A1 TIA598 TOL4019700/12C	**Black**	**12**	**1x12**	**75**	**1200**	**2000**	**2**	**5.7**	**28**	**4000/K8, 8000/K10**
GNHL 24/T12 G657A1 TIA598 TOL4019700/24C	**Black**	**24**	**2x12**	**75**	**1200**	**2000**	**2**	**5.7**	**28**	**8000/K10, 4000/K8**
GNHL 48/T12 G657A1 TIA598 TOL4019700/48C	**Black**	**48**	**4x12**	**75**	**1200**	**2000**	**2**	**5.7**	**28**	**8000/K10, 4000/K8**
GNHL 72/T12 G657A1 TIA598 TOL4019700/72C	**Black**	**72**	**6x12**	**75**	**1200**	**2000**	**2**	**5.7**	**28**	**4000/K8, 8000/K10**
GNHL 96/T12 G657A1 TIA598 TOL4019700/96C	**Black**	**96**	**8x12**	**80**	**1200**	**1000**	**3**	**6.0**	**28**	**8000/K10, 4000/K8**
GNHL 288 T/12 G657A1 TIA598 TOL4019700/288C	**Black**	**288**	**24x12**	**80**	**3000**	**2000**	**3**	**10.3**	**86**	**2000/K10, 4000/K12**
GNHL 144/T12 G657A1 TIA598 TOL4019700/144C	**Black**	**144**	**12x12**	**80**	**2000**	**2000**	**-**	**7.9**	**35**	**-**

