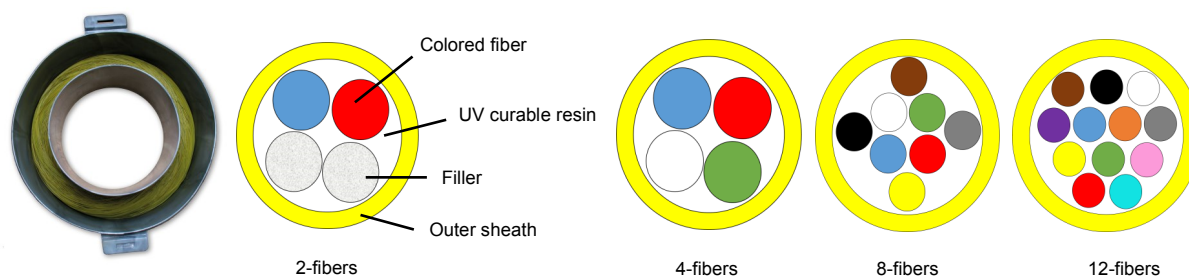


EUROLAN Fiber cable

Blown fiber smooth SM



Ordering information

Part number	E-number	Description
39BS-S3-02YL	5044246	Eurolan Blown fiber smooth surface 2x9/125 G.657.A1
39BS-S3-04YL	5044548	Eurolan Blown fiber smooth surface 4x9/125 G.657.A1
39BS-S3-08YL	5044549	Eurolan Blown fiber smooth surface 8x9/125 G.657.A1
39BS-S3-12YL	5044550	Eurolan Blown fiber smooth surface 12x9/125 G.657.A1

Construction

Fibres	2,4	8	12
Coating Material	UV curable Acrylate Resin		
Outer sheat	HDPE		
Outer Ø (mm)	1,2 +/- 0,2	1,4 +/- 0,2	1,6 +/- 0,2
Unit color	Yellow		

Diameter, weight and minim. bending radius

No of fibers	Nominal diameter (mm)	Appr. Cable weight (kg/km)	Minim. Bend. Radius (mm) (Handling)
2 and 4	1,2 ± 0,2	1,4 ± 0,1	40
8	1,4 ± 0,2	1,6 ± 0,1	60
12	1,6 ± 0,2	1,9 ± 0,1	60

Fiber color order

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

✓ Application:

For blowing in microducts of 2,5 to 3,5mm inner diameter.

✓ Glass:

OS2 9/125 G.657.A1

Performance of G.657. A Single Mode Fiber

Items	Units	Specification
Attenuation	dB/km	$\leq 0,40$ at 1310nm $\leq 0,40$ at 1383nm $\leq 0,30$ at 1550nm
Chromatic Dispersion	ps/nm.km	$\leq 3,5$ at 1285nm ~ 1330nm ≤ 18 at 1550nm
Zero Dispersion Wavelength	nm	1300 ~ 1324
Zero Dispersion Slope	ps/nm ² . km	$\leq 0,092$
Cable PMD (PMD ₀)	ps/√km	$\leq 0,2$ (20 section link)
Cut-off Wavelength, (cabled fiber)	Nm	≤ 1260
Attenuation vs. Bending (15mm radius x 10turns)	dB	$\leq 0,25$ at 1550nm $\leq 1,0$ at 1625nm
Attenuation vs. Bending (10mm radius x 1turn)	dB	$\leq 0,75$ at 1550nm $\leq 1,5$ at 1625nm
Attenuation vs. Bending (7,5mm radius x 1turn)	dB	-
Mode Field Diameter	μm	$8,9 \pm 0,4$ at 1310nm
Core/cladding Concentricity Error	μm	$\leq 0,5$
Cladding Diameter	μm	$125 \pm 0,7$
Cladding Non-circularity	%	$\leq 1,0$
Coating Diameter	μm	245 ± 10
Proof Test	Gpa	$\geq 0,69$

Mechanical performance of the smooth sheat

Items	Test method and acceptance criteria
Tensile performance	# Test method: IEC 60794-1-21: Method E1 - Fixed Mandrel Diameter: ≥ 60 mm - Load Mandrel Diameter: ≥ 60 mm - Tensile Load: $9,81 \times W$ (W: mass of 1km of component in kg) - Unit lenght: ≥ 10 m - Rate of extension: ≥ 20 mm/min - Duration Maximum Tension: 1 minute - Selection of fibers to be monitors: All fibers in the unit # Acceptance Criteria - Fiber strain at Max. load: $\leq 0,6\%$ - Change in Attenuation after test: $\leq 0,05$ dB - No significant damage to unit component
Crush	# Test method: IEC 60794-1-21: Method E3 - Maximum Load: 100N - Unit lenght: ≥ 30 m - During of Maximum Load: 60 seconds - Selection of fibers to be monitors: All fibers in the unit # Acceptance Criteria - Change in Attenuation during test: To be recorded - Change in Attenuation after test: $\leq 0,05$ dB (SMF), $\leq 0,01$ dB (MMF) - No significant damage to unit component
Repeated bending	# Test method: IEC 60794-1-21: Method E6 - Bending diameter: 60mm - Number of cycles: 25 # Acceptance Criteria - No significant damage to unit component

Mechanical performance of the smooth sheat (continued)

Items	Test method and acceptance criteria
Torsion	# Test method: IEC 60794-1-21: Method E7 - Test length: 300mm - Load: adequate to assure test sample is straight at start of test # Acceptance Criteria - Change in Attenuation after test: $\leq 0,05\text{dB}$ (SMF), $\leq 0,01\text{dB}$ (MMF) - No significant damage to unit component
Kink	# Test method: IEC 60794-1-21: Method E10 - Minimum diameter: 60mm # Acceptance Criteria - No significant damage to unit component
Bend	# Test method: IEC 60794-1-21: Method E11 - Mandrel diameter: 60mm - Unit sample Length: $\geq 30\text{m}$ - Selection of fibers to be monitors: All fibers in the unit - Number of cycles: 3 - Number of turns: 4 # Acceptance Criteria - Change in Attenuation after test: $\leq 0,05\text{dB}$ (SMF), $\leq 0,01\text{dB}$ (MMF) - No significant damage to unit component
Temperature cycle	# Test method: IEC 60794-1-2: Method F1 - Length of unit to be tested: $\geq 1\text{ km}$ - Temperature T_A : -40°C - Temperature T_B : $+60^\circ\text{C}$ - Dwell time: $\geq 24\text{ hours}$ - Number of cycles: ≥ 2 - Selection of fibers to be monitors: All fibers in the unit # Acceptance Criteria - Attenuation variation during and after test: $\leq 0,15\text{dB/km}$ (SMF), $\leq 0,25\text{dB/km}$ (MMF)
Water immersion	# Test method: IEC 60793-1-53 - Length of unit to be tested: $\geq 1\text{ km}$ - Temperature of the water solution: $+40^\circ\text{C} \pm 2^\circ\text{C}$ - Water: Distilled, demineralized or de-ionized water (PH 5,0-8,0) - Dwell time: $\geq 30\text{ days}$ # Acceptance Criteria - Attenuation variation: $\leq 0,05\text{dB/km}$ (SMF), $\leq 0,1\text{dB/km}$ (MMF)