



**TECHNICAL DATA SHEET  
SECTION 1  
CABLE CONSTRUCTION**

**GYFTSXX-OM4**

**MULTI LOOSE TUBE, SINGLE LSOH SHEATH, NON METALLIC ARMORED**

- Light weight structure enables easy and fast installation
- Application as Indoor cable as well as Outdoor due to light structure
- Installation in cable ducts, cable trays or in cable conduits.  
Special LSOH outer jacket provides excellent resistance during installation and protection against external effects.
- Suitable to be installed with blowing / plugging method
- Application both as backbone cable for WAN Telecommunication Systems and as data lines for LAN/Structure Cabling

<b>Characteristics</b>	
Fibre optic type	50 / 125 / 242 µm Multimode Fiber (OM4)
Central strength member	
- Material	- PE coated Reinforced Glass Fibre
- Diameter	- 2.2 mm nominal
Loose tubes	
- Material	- Polybuteneterephtheleta (PBT)
- Outer Diameter	- 2.05 mm nominal
- Type of filling compound	- Thixotropic jelly
Tube assembly	
- Tube layout	- Tubes stranded around central strength member symmetrically
- Stranding type	- Tubes stranded with SZ stranding method
Flooding compound	
- Material	- Water Swellable Yarns/Jelly Filling
Core wrapping	- Water Swellable Tape//Polyester Tape
Rip Cords	Rip cord applied longitudinally to open cable easily
Dielectric tensile strength member	Glass Yarn
Outer Sheath	
- Material	- BLUE LSOH UV resistant
- Thickness	- 1.5 mm nominal
Drum Length	- 4000 meters ± 5 %

<b>Mechanical Characteristics</b>			
<b>Test</b>	<b>Reference Standard</b>	<b>Specified Value</b>	<b>Acceptance Criteria</b>
Tensile Strength -Installation	IEC 60794-1-2-E1(A-B)	$\geq 1200$ N	$\Delta\alpha \leq 0.05$ dB/km
Bending Under Tension	IEC 60794-1-2-E18	1500N; 10 cycles	$\Delta\alpha \leq 0.05$ dB/km
Repeated Bending	IEC 60794-1-2-E6	200mm; 100N; 35 cycles; 2s	No sheath damage.
Crush	IEC 60794-1-2-E3	2200 N /100 mm (15min.)	$\Delta\alpha \leq 0.05$ dB, no damage
Impact	IEC 60794-1-2-E4	D=300 mm, 3 impacts, R= 50 mm, 20 Joule hammer impact energy	No sheath damage; No permanent change in attenuation.
Torsion	IEC 60794-1-2-E7	100N, +/- 1, 1000mm, 5 cycles	$\Delta\alpha \leq 0.10$ dB, no damage
Kink	IEC 60794-1-2-E18	300 mm loop, T=20°C	No kink shall occur
Cable Bend	IEC 60794-1-2-E11 (A)	R=400 mm, 5 turns, 3 cycles, T=-15°C	$\Delta\alpha \leq 0.05$ dB, no damage
Temperature Cycling	IEC 60794-1-2-F1	-40°C to +70°C	Max.0.10 dB/km
Ageing	IEC 60794-1-2-E5	Accelerated aging test	Stripping force stability
Water Penetration	IEC 60794-1-2-F5B	Sample=3m, Water column=1m	No water leakage in 24h

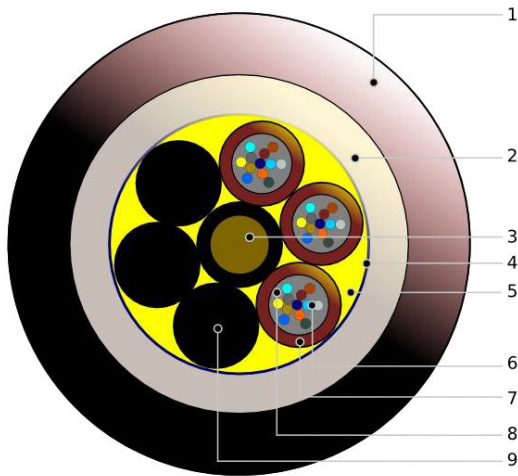
<b>Fiber Count</b>	<b>Buffer Count</b>	<b>Filler Count</b>	<b>Cable Diameter nominal (mm)</b>	<b>Cable Weight (kg/km)</b>
6,12,24,48	3	3	10.5	100

**TECHNICAL DATA SHEET  
SECTION 2  
OPTICAL CABLE CHARACTERISTIC**

<b>Property</b>	<b>Value</b>
Attenuation @ 850 nm maximum	2.8 dB/Km
Attenuation @ 1300 nm maximum	0.8 dB/Km



**TECHNICAL DATA SHEET**  
**SECTION 3**  
**TECHNICAL DRAWING**

6,12.24,48 Fiber Optic



1. LSOH Outer Sheath
2. Glass Yarn
3. Central Strength Member
4. Core Wrapping
5. Water Swellable Yarns/Jelly Filling
6. Buffer Material (PBT)
7. Thixotropic Jelly
8. PE Fillers

## OPTICAL FIBER and TUBE COLORS

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

**Notes:**

- 1) Different color coding available on request.
- 2) Number of tubes per cable and number of fibers per tube depend on cable design.

**TECHNICAL DATA SHEET**  
**SECTION 4**  
**OPTICAL FIBER CORE SPECIFICATIONS**  
**50/125/242  $\mu\text{m}$  Multimode Fiber**  
**Standard ITU-T G.651 (OM4)**  
(Uncoloured Fibre)

Geometrical Characteristics		
Core diameter	50±2.5 μm	
Core non-circularity	≤5%	
Core/Cladding concentricity error	≤ 1 μm	
Cladding diameter	125.0 ± 1.0 μm	
Cladding non-circularity	≤ 0.7 %	
Coating/Cladding concentricity error	≤ 6 μm	
Primary coating material	UV curable acrylate	
- Diameter	242 ± 5 μm (Uncoloured)	
Optical Characteristics		
Attenuation	at 850 nm	≤ 2.2 dB/km
	at 1300 nm	≤ 0.5 dB/km
Overfilled Modal Bandwidth	at 850 nm	≥3500 MHz.km
	at 1300 nm	≥500 MHz.km
Effective Modal Bandwidth	at 850 nm	≥4700 MHz.km
Fiber capacity	at 850 nm; 10Gb/s	≤550 m
Point discontinuity at 850 and at 1300 nm	≤ 0.1 dB	
Numerical Aperture (NA)	0.200 ± 0.015	
Zero dispersion wavelength λ <sub>0</sub>	1295 nm ≤λ <sub>0</sub> ≤ 1340 nm	
Zero dispersion slope, S <sub>0</sub>	1295 nm≤λ <sub>0</sub> ≤1310 nm	≤0.105 ps/nm <sup>2</sup> x km
	1310 nm≤λ <sub>0</sub> ≤1340 nm	≤0.000375 ps/nm <sup>2</sup> x km
Mechanical Characteristics		
Proof test (off line)	>100 kpsi (0.7 GPa)	
Bending Loss		
• 100 turn on 75 mm diameter 850 nm	≤ 0.5 dB	
	• 100 turn on 75 mm diameter 1300 nm	
Coating strip force (F)	1.3 N ≤ F ≤ 8.9 N (Peak value)	
	1.0 N ≤ F ≤ 5.0 N (Average value)	
Dynamic tensile strength (0.5 meter gauge length)	>550 kpsi (3.8 GPa)	
Dynamic fatigue (n <sub>d</sub> )	Aged	
	25 (typical value)	
• -60°C ~ +85°C Temperature Cycling	≤ 0.1 dB/km	
• -10°C ~ +85°C/up to 98% RH Dump Heat Cycling	≤ 0.1 dB/km	
• +85°C ± 2°C Dry Heat	≤ 0.1 dB/km	
• +23°C ± 2°C Water Immersion	≤ 0.1 dB/km	
Performance Characteristics		
Group index of refraction typical	1.482@850nm	
	1.477@1300nm	

NOTE: Unless otherwise verified using measurement method according to international standard such like ITU-T G.650