

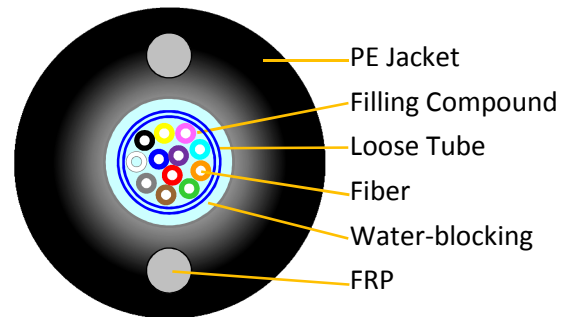


## INDOOR/OUTDOOR NON-METALLIC FIBER OPTIC CABLE

### NMS Series

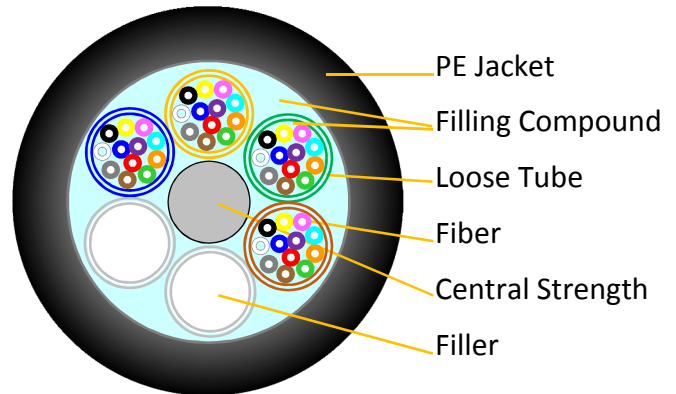
#### Description

The fibers, either single mode or multimode type, are positioned in a loose tube made of a high modulus plastic. The tubes are filled with a water-resistant filling compound. A Fiber Reinforced Plastic (FRP) locates in the centre of the core as a non-metallic strength member. Tubes (and fillers) are stranded around the strength member into a compact and circular cable core. The cable core is filled with filling compound and covered with a thin layer of LSZH inner sheath. The cable is completed with Outer Fire Retardant LSZH sheath/ Polyethylene (PE) sheath.



#### Application

This cable is suitable for Indoor or Outdoor Direct Burial, Tunnel and Duct environment for metropolitan network and access network, where metallic element is not allowed. It is commonly used for high voltage and low voltage crossing route.



#### Standards

ISO/IEC 11801, ANSI/TIA/EIA 568.2: 2002, ITU Recommendation G652A/B/C/D, IEC 60754-1, IEC 61034, Fire Retardant IEC 60332-1(LSZH Jacket).

#### Characteristics

- Accurate fiber excess length ensures good mechanical and temperature performance
- High strength loose tube that is hydrolysis resistant and special tube filling compound ensure a critical protection of fiber
- Specially designed compact structure is good at preventing loose tube from shrinking
- Crush resistance and flexibility
- LSZH provides fire resistance, meet IEC 60332-1
- Single Fiber Reinforced Plastic (FRP) used as the central strength member
- Loose tubes are filled with filling compound to ensure tubes are watertight.
- 100% cable core filling ensures cable is watertight

#### Cable Properties

Fiber Count	No. of Tubes	No. of Fillers	Cable Diameter, mm	Cable Weight, kg/km
4 ~ 12	1	0, Unitube	10.0	~ 81
24	2	4	10.5	~ 90
36	3	3	10.5	~ 90
48	4	2	10.5	~ 90
60	5	1	10.5	~ 90
72	6	0	10.5	~ 90
96	8	0	11.9	~ 123
144	12	0	14.6	~ 178



### Physical Characteristics

<b>Fiber Cores</b>	<b>4 ~ 12</b>	<b>24 ~ 72</b>	<b>96</b>	<b>144</b>
<b>Sheath Thickness, mm</b>	nominal 2.8	nominal 1.8		
<b>Loose Tube Diameter, mm</b>	~ 2.0	2.1		
<b>Center Strength Member, FRP, mm</b>	2 x FRP	2.25	3.7	6.4 (FRP 3.7)
<b>Tensile Strength, N</b>	<b>Long Term</b>	400	300	
	<b>Short Term</b>	1000		
<b>Crush Resistance, N/100 mm</b>	<b>Long Term</b>	300		
	<b>Short Term</b>	1000		
<b>Operating Temperature</b>	-40°C to +70°C			
<b>Operating Temperature</b>	-40°C to +70°C			

### Fibers Colour

Fiber No.	1	2	3	4	5	6	7	8	9	10	11	12
<b>Colour</b>	Blue	Orange	Green	Brown	Grey	Natural	Red	Black	Yellow	Violet	Pink	Aqua

### Loose Tubes Colour

Fiber No.	1	2	3	4	5	6	7	8	9	10	11	12
<b>Colour</b>	Blue	Orange	Green	Brown	Grey	Natural	Red	Black	Yellow	Violet	Pink	Aqua

No. of Fiber	Part Number	Description
306-NMS7xx-a000		For fiber below 96 core
12	306-NMS712-a000	12core 9/125 μm Single Mode Indoor/Outdoor Non-Metallic Fiber Optic Cable
306-NMS700-a000-0xxx		For fiber above 100 core
144	306-NMS700-a000-0144	144core 9/125 μm Single Mode Indoor/Outdoor Non-Metallic Fiber Optic Cable

- Substitute **xx** : Number of fiber core
  - Substitute 306-NMS7, with 4XG-NMS5 for OM4, 3XG-NMS5 for OM3, 306-NMS5 for OM2, 306-NMS6 for OM1
  - Available in LSZH Jacket
- \* -a000, a = production code, subjected to change upon shipping



### Optical Properties

		SM G.652.D	OM4 50/125 $\mu\text{m}$	OM3 50/125 $\mu\text{m}$	OM2 50/125 $\mu\text{m}$	OM1 62.5/125 $\mu\text{m}$
Attenuation (+ 20 °C)	@ 850 nm	-	$\leq 3.0$ dB/km	$\leq 3.0$ dB/km	$\leq 3.0$ dB/km	$\leq 3.0$ dB/km
	@ 1300 nm	-	$\leq 1.0$ dB/km	$\leq 1.0$ dB/km	$\leq 1.0$ dB/km	$\leq 1.0$ dB/km
	@1310 nm	$\leq 0.36$ dB/km	-	-	-	-
	@1550 nm	$\leq 0.22$ dB/km	-	-	-	-
Bandwidth (Class B)	@ 850 nm	-	$\geq 3500$ MHz-km	$\geq 1500$ MHz-km	$\geq 500$ MHz-km	$\geq 200$ MHz-km
	@ 1300 nm	-	$\geq 500$ MHz-km	$\geq 500$ MHz-km	$\geq 500$ MHz-km	$\geq 500$ MHz-km
Cable Cut-off Wavelength , $\lambda_{cc}$		$\leq 1260$ nm		-		-

Note: Single mode G.655 fiber are available upon request