

Fiber in Metal Tubes for OPGW/OPPC

Stainless Steel with or without Aluminum

General Datasheet

Fiber in Metal Tubes (FIMT) are designed as loose tube construction and protect the integrated optical fibers against mechanical stress, hydrogen and other environmental influence in order to provide maximum optical lifetime for their application. As due to the full metallic armor protection, FIMT for OPGW and OPPC cables offer the best mechanical protection in combination with the highest density, enabling smallest cable designs. The metallic tube is filled with a thixotropic gel, with or without hydrogen absorbing additives, and fully complies with EN60794-2-22 method F5. Common fiber types used for this construction include but not limited to ITU-T G.652.D, ITU-T G.657.A1 and ITU-T G.655.

Available Steel Material

- EN 1.4301 (304)
- EN 1.4306 (304L)
- EN 1.4303 (305)
- EN 1.4404 (316L)

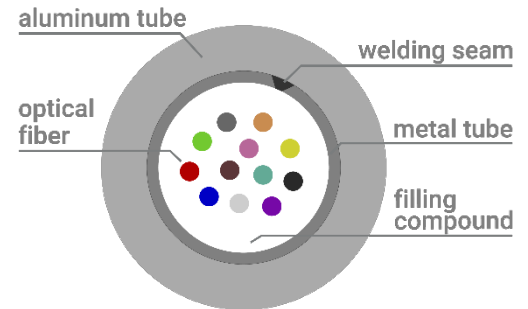
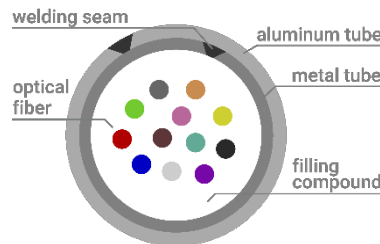
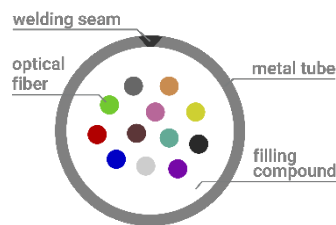
Aluminum layering

- Thin wall alu cladding with wall thickness of 0.25 or 0.30mm
- Thick wall alu extrusion with wall thickness between 0.95 - 3.00mm

Cable Types

Suitable for OPGW / OPPC cables in

- central position
- stranding layer



Stainless Steel Tube Dimensions and Fiber Count

Table shows the minimum diameter for certain number of fibers. Outer diameter in steps of 0.05/0.10mm available. Other dimensions available on request!

OD FIMT mm (inch)	max. no. of fibers 250µm (200µm)	Single Tube Wall Thickness in mm (inch)			
		0.15 (.0059)	0.20 (.0079)	0.25 (.0098)	0.30 (.0118)
2.20 (0.087)	16 (24)	●	●	○	
2.40 (0.094)	24 (36)	●	●	●	
2.75 (0.108)	30 (42)	●	●	●	
2.90 (0.114)	36 (48)	●	●	●	○
3.30 (0.130)	48 (64)	●	●	●	●
3.60 (0.142)	56 (72)	●	●	●	●
4.00 (0.157)	64 (80)	○	●	●	●
4.40 (0.173)	72 (96)		○	○	●
4.50 (0.177)	80 (96)				●
5.30 (0.209)	144 (192)				●

Coloring and bundling options

Fiber coloring done based on EIA/TIA-598-C, DIN VDE V 0888, DIN IEC 60304 or on customer request. Bundling with colored yarns, ring marking on fiber and outer tube marking (meter marking, ring code) can be chosen for identification.

Packaging and produced length

Standard packaging with wooden reels in standing position fixed on pallet. Optionally, machine spools from customer can be used. Layers protected with bubble foil and flexible cardboard. Optionally, machine spools from customer can be used. Produced single lengths are based on customer request.