

Optical Fiber in Steel Tube



Design :

Optical Fiber : Single Mode Optical Fiber (ITU-T G652D; G655C or other)
Multi Mode Optical Fiber (ITU-T G651)

Each fiber in the tube has color and ring marked identification.

The tube is filled with hydrogen absorber gel.

Stainless steel is according to EN 10082-2(2005) 1.4301

Application Areas :

Stainless steel tubes has several application areas, basically for;

√ Communication

- OPGW – Optical ground wires
- OPPC - Optical phase conductors
- Submarine cables
- High voltage power cables

√ Temperature sensing

- OPPC – Optical phase conductors
- Submarine cables
- High voltage power cables



Optical Fiber in Steel Tube, General Technical Information

Steel Tube Specification:

Stranding Type Stainless Steel Loose Tube:

Max. Number of Fibers		Fiber Excess Length	Tube Diameter (inner / outer)	Tube Weight	Pulling Force
Single Mode	Multi Mode	%	mm	kg/km (approx.)	N (approx.)
8	8	0,1-0,4	1,4/1,8	7,6	200
14	14	0,1-0,4	1,8/2,2	12,4	200
20	18	0,1-0,4	2,1/2,5	14,8	200
24	20	0,1-0,4	2,3/2,7	16,5	200
30	24	0,1-0,5	2,6/3,0	19,1	200
36	32	0,1-0,5	2,8/3,2	21,2	200
40	36	0,1-0,5	3,0/3,4	23,1	200
48	36	0,1-0,5	3,2/3,6	25,1	200
48	48	0,1-0,5	3,4/3,8	27,2	200

Central Type Stainless Steel Loose Tube:

Max. Number of Fibers		Fiber Excess Length	Tube Diameter (inner / outer)	Tube Weight	Pulling Force
Single Mode	Multi Mode	%	mm	kg/km (approx.)	N (approx.)
30	24	0,55-0,75	2,6/3,0	19,1	200
34	30	0,55-0,75	2,7/3,1	20,5	200
36	32	0,55-0,75	2,8/3,2	21,2	200
40	36	0,55-0,75	3,2/3,6	23,1	200

Other Information :

Diameter Tolerance on Steel Tube: $\pm 0,05\text{mm}$

Installation temperature : $-5\text{ }^{\circ}\text{C}$ & $+50\text{ }^{\circ}\text{C}$

Operation & storage temperature: $-30\text{ }^{\circ}\text{C}$ & $+80\text{ }^{\circ}\text{C}$

Further technical information available, please contact with us

Factory Acceptance Tests are carried out with Optical Attenuation; outside tube diameter, checking colors visually.