# Sub-Lite-Wall™ Multi-Lumen

Ultra-Thin-Walled PTFE Multi-Lumen Tubing

#### Overview-

The design and production of steerable and deflectable catheters can be a difficult challenge, especially when manufacturers are required to procure and bundle several individual liners of varying sizes into a final catheter assembly. This delicate bundling process is time consuming and prone to error in both development and manufacturing settings.

Zeus PTFE Sub-Lite-Wall™ multi-lumen tubing helps simplify the process while eliminating multiple manufacturing steps and complex tooling by providing engineers a single, process-ready multi-lumen extrusion. Consisting of one large central lumen with one to four smaller satellite lumens, Zeus PTFE Sub-Lite-Wall™ multi-lumens enable advanced catheter designs with improved structural integrity, planarity, and other precision steering capabilities.

As a part of our Sub-Lite-Wall™ family of ultra-thinwalled extrusions, Sub-Lite-Wall™ multi-lumen tubing can be produced with 0.0035" (0.0889 mm) max average wall thicknesses.

#### Special Note:

All Sub-Lite-Wall™ multi-lumens are custom ordered to a drawing. Please see the "Design Your Sub-Lite-Wall™ Multi-Lumen" guide on the second page.











Sub-Lite-Wall™ multi-lumen tubing helps simplify steerable catheter production and improve yields.

#### **APPLICATIONS**

- Steerable catheters used in:
  - o Cardiovascular
  - Neurovascular
  - Peripheral
  - o Structural Heart
  - ° CRM / EP

#### CAPABILITIES AND SIZING

- 1 large center lumen with 1-4 external satellite lumens
- ID lumen sizes from 0.010" to 0.300" (0.254 mm to 7.62 mm)
- External lumens available in round and elliptical shapes
- ID tolerances as low as +/- 0.002"  $(0.051 \, \text{mm})$
- 0.0035" (0.0889 mm) max average wall
- Etched OD available upon request
- Cut lengths up to 86" +/- 1"
- Tie Layer available upon request (max cut length with Tie Layer is 72" +/- 1")

### **KEY PROPERTIES**

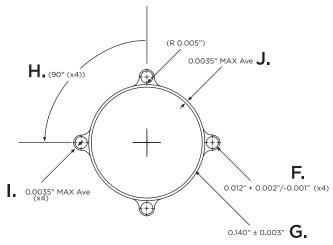
- Biocompatible certified USP Class VI
- Highly lubricious
- Working temperature to 260 °C (500 °F)
- Excellent dielectric strength / insulation properties



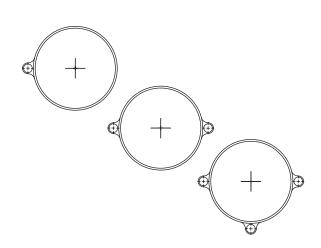
## Design Your Sub-Lite-Wall™ Multi-Lumen

Below drawings are for reference only. Sub-Lite-Wall™ multi-lumens are available in multiple configurations. Satellite lumens can be internal, external, or embedded.





### E. x1. x2. x3 External Lumens



### SPECIFICATION GUIDE TO DESIGN AND BUILD YOUR PTFE SUB-LITE-WALL™ MULTI-LUMEN: (See list of values and examples below)

	Extrusion Specifications:	Enter Value:	Completed Example:
A.	Material		PTFE
B.	Color		Natural
C.	Etch OD		Yes
D.	Tie Layer		Yes; Tie Layer type: 55D
E.	Number of external lumens (1 to 4)		x4
F.	ID of external lumens (include tolerance)		0.012" + 0.002"/-0.001" (x4)
G.	ID of internal lumen (1) (include tolerance)		0.140" + /- 0.003"
Н.	Spacing between external lumens		x4; Ref: 90 degrees
1.	Wall Thickness - external lumen		0.0035" MAX Ave Wall
J.	Wall Thickness - internal lumen		0.0035" MAX Ave Wall
K.	Cut Length (include tolerance)		72" +/- 1"
L.	Tensile Target (as applicable)		N/A
M.	Elongation Target (as applicable)		N/A
N.	% Twist Target (as applicable)		N/A
Ο.	Application		

P. Other (i.e. packaging, cleanliness)

<sup>\*</sup>Once completed, please attach your drawing and submit to your account manager for review.

