

# PROFLOW™ II ELECTRONICS GRADE

Pleated PTFE Membrane Cartridge for Generating High Purity Process Fluids



Proflow II-E cartridges were designed to provide micro-filtration users within the Semiconductor/Microelectronics industries with high flow rates (air & liquid), broad chemical resistance, and performance integrity.

Proflow II-E ensures maximum filtration performance in the purification of aggressive liquids and organic solvents, and the PTFE membrane also serves as a highly efficient hydrophobic barrier to ensure a low moisture content of ultrapure gases.

Each Proflow II-E cartridge is manufactured and integrity tested in a certified cleanroom to ensure consistent performance and quality.

## **BENEFITS**

- Excellent liquid & air flow rates reduce batch processing time
- Broad chemical compatibility allows use in most applications
- Broad range of filter ratings allows precise particle retention
- Superior hydrophobicity prevents filters from wetting out in gas purification applications

## **APPLICATIONS**

- Etch Baths
- Solvent Filtration
- Magnetic Media Solvents
- Recirculating Fluids
- Ultrapure Gas For CVD
- Compressed Dry Air
- Wafer Drying Systems

## **SPECIFICATIONS**

### **TYPICAL AIR AND LIQUID FLOW RATES\***

#### **10 inch (250 mm) cartridges:**

0.05 µm	0.8 gpm/psid (4.39 lpm/100 mbar)
0.10 µm	1.7 gpm/psid (9.33 lpm/100 mbar)
0.20 µm	3.2 gpm/psid (17.57 lpm/100 mbar)
0.45 µm	7.6 gpm/psid (41.72 lpm/100 mbar)
1.00 µm	9.1 gpm/psid (49.97 lpm/100 mbar)

#### **5 inch (130 mm) cartridges:**

0.10 µm	1.0 gpm/psid (5.46 lpm/100 mbar)
0.20 µm	1.8 gpm/psid (9.88 lpm/100 mbar)

\*For fluids with a viscosity of 1cP.

### **MATERIALS OF CONSTRUCTION**

Membrane:	PTFE
Support Layers:	Polypropylene
Structure:	Polypropylene

All components are thermally bonded to ensure integrity and to reduce extractables.

### **EFFECTIVE FILTRATION AREA**

10-inch (250 mm) cartridges:	9.3 ft <sup>2</sup> (0.86 m <sup>2</sup> )
5-inch (130 mm) cartridges:	4.6 ft <sup>2</sup> (0.43 m <sup>2</sup> )

### **MAXIMUM DIFFERENTIAL PRESSURE**

Forward:	80 psid (5.5 bar) @ 75°F (24°C)
	40 psid (2.8 bar) @ 180°F (82°C)

Reverse:	50 psid (3.4 bar) @ 75°F (24°C)
----------	---------------------------------

### **CHEMICAL COMPATIBILITY**

Compatible with most semiconductor grade solvents and other chemicals. See [www.pti-afi.com](http://www.pti-afi.com) for specific compatibilities.

### **INTEGRITY TEST VALUES**

FILTER RATING	BUBBLE POINT*			DIFFUSIVE FLOW	
	psig	bar	cc/min	Test Pressure	
µm				psig	bar
<b>5-inch (130 mm) cartridges</b>					
0.1	≥21	1.5	≤15	17	1.2
0.2	≥13	0.9	≤10	10	0.7
<b>10-inch (250 mm) cartridges</b>					
0.05	>40	2.8	<60	33	2.3
0.1	≥21	1.5	≤25	17	1.2
0.2	≥13	0.9	≤15	10	0.7
0.45**	≥5	0.3	≤50	5	0.3
1.0**	≥1	0.07	≤100	1	0.07

\*Tested in a 60/40 IPA/DI water.

\*\*For the 0.45 and 1.0 micron pore sizes, cartridge integrity is arbitrarily defined as a diffusive flow value of ≤100 cc/min per 10 inch (250 mm) equivalent.

