



**PANELGARD™ 1-2-3 UPE AND
PDP DISPOSABLE FILTERS**

*Advanced filtration for point-of-use
flat panel and photolithography applications*



the solution for rapid filter changeout

Overview

The disposable point-of-use (POU) filters are well suited for small- to mid-volume process fluid filtration needs. Developed to enable maximum flow rate, superior wettability and particle capture, Panelgard™ UPE 1-2-3 filters utilize an ultra-high molecular weight polyethylene (UPE) membrane that eliminates filter pre-wetting, optimizes the membrane capabilities and ensures maximum flow for photoresist POU applications in flat panel display applications. Panelgard 1-2-3 PDP filters provide critical particle removal performance for pigment dispersed color resist. The filters utilize nonwoven media constructed of all polypropylene (PP) for color-resist POU applications in flat panel display manufacturing applications.

One-minute Filter Changeout

The self-contained filter structure minimizes contamination caused from operator handling of the membrane cartridges. The compact, stable design provides easy installation or retrofit into existing tools. Users of Panelgard 1-2-3 and Panelgard PDP filters can rapidly change out filters with minimal dripping. With NO tools and NO draining required, operators can change the filter in less than one minute!

Trusted Manufacturing

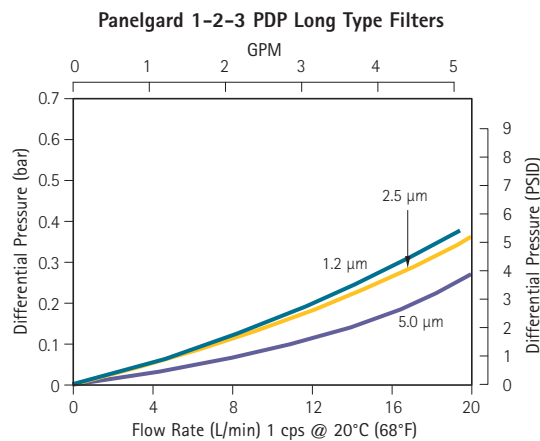
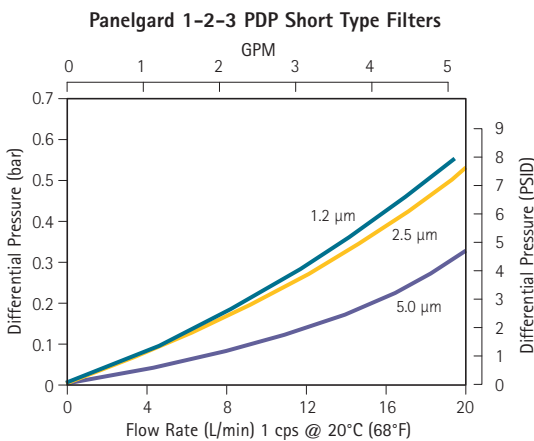
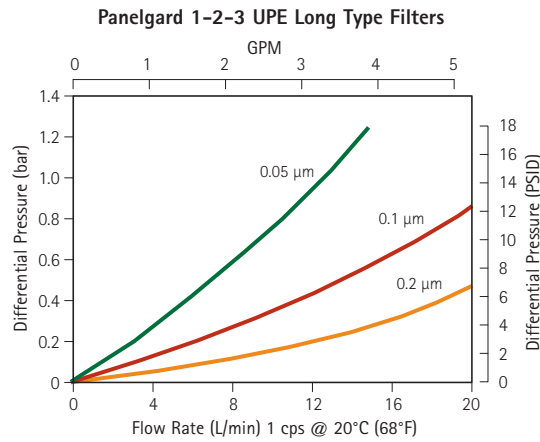
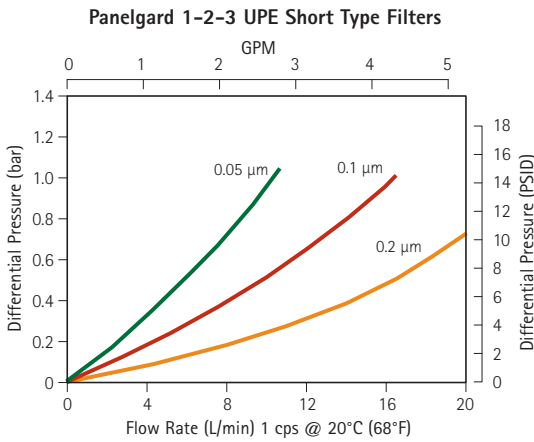
Panelgard filters are manufactured in a world-class ISO certified facility. Each filter is manufactured, tested and packaged in a cleanroom to assure product cleanliness at the time of installation.

Features	Benefits
Membranes/construction to match your specific application needs	Panelgard 1-2-3 UPE: Patented UPE membrane eliminates pre-wetting and flushing. Saves time at changeout, increases equipment uptime, reduces chemical usage and provides better, more consistent performance. Panelgard 1-2-3 PDP: All-polypropylene filter for compatibility and appropriate particle removal performance for pigment dispersed color resist.
Quick change-out design	Self-contained, compact unit, requires NO tools to change filter. Provides rapid filter changeout of less than one minute.
Unique connection design	Ensures rapid startup with minimal exposure to process chemicals for a safer filter change. Minimal hold-up volume decreases chemical waste at changeout.
Compact, disposable design	Provides dramatic space savings advantage and plumbing flexibility, enabling smaller footprint system configurations.

Specifications

		Panelgard 1-2-3 UPE Filters	Panelgard 1-2-3 PDP Polypropylene Filters
Materials:	Membrane	Patented hydrophobic ultra-high molecular weight polyethylene (UPE)	Polypropylene
	Supports	High-density polyethylene (HDPE)	Polypropylene
	O-ring	Perfluoroelastomer	Perfluoroelastomer, EPDM
	Shell	Polypropylene	Polypropylene
Connections:	See ordering information		
Membrane area:	Short	1600 cm ² (248 in ²)	1.2 μm, 2.5 μm 1300 cm ² (201.5 in ²)
			5.0 μm 1700 cm ² (263.5 in ²)
	Long	3000 cm ² (465 in ²)	1.2 μm, 2.5 μm 2300 cm ² (356.5 in ²)
			5.0 μm 3000 cm ² (465 in ²)
Maximum operating conditions:	Maximum inlet pressure	0.39 MPa (3.9 bar; 56.6 PSI) @ 25°C	0.39 MPa (3.9 bar; 56.6 PSI) @ 25°C
	Maximum forward/reverse differential pressure	0.27 MPa (2.7 bar; 39.2 PSID) @ 25°C	0.27 MPa (2.7 bar; 39.2 PSID) @ 25°C
	Maximum operating temperature	40°C	40°C

Performance Data



Ordering Information

Panelgard 1-2-3 UPE Filters

Part Number		
Short Type	Long Type	Retention Rating
AFUZ OSP M1	AFUZ OLP M1	0.05 µm
AFUV OSP M1	AFUV OLP M1	0.1 µm
AFUG OSP M1	AFUG OLP M1	0.2 µm

Panelgard 1-2-3 PDP Filters

Part Number				
Perfluoroelastomer O-ring		EPDM O-ring		Retention Rating
Short Type	Long Type	Short Type	Long Type	
APD 06S PM1	APD 06L PM1	APD 06S EM1	APD 06L EM1	0.6 µm
APD 12S PM1	APD 12L PM1	APD 12S EM1	APD 12L EM1	1.2 µm
APD 25S PM1	APD 25L PM1	APD 25S EM1	APD 25L EM1	2.5 µm
APD 50S PM1	APD 50L PM1	APD 50S EM1	APD 50L EM1	5.0 µm

Optimizer® ST2 Manifolds

STANDARD TUBE

Part Number	Inlet/Outlet	Vent
AMVT44201	12.70 mm	6.35 mm
AMVT33201	9.53 mm	6.35 mm
AMVT22201	6.35 mm	6.35 mm
AMVT88401	8.00 mm	4.00 mm
AMVT66401	6.00 mm	4.00 mm

THIN TUBE

Part Number	Inlet/Outlet	Vent
AMVT442NT	12.70 mm	6.35 mm
AMVT332NT	9.53 mm	6.35 mm
AMVT222NT	6.35 mm	6.35 mm

For More Information

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit www.entegris.com and select the "Customer Service" link for the center nearest you.

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