



## OPTIMIZER® PR 16 AND PR 40 FILTERS

*Patented hydrophobic UPE filters designed for small- to mid-volume point-of-use photochemical filtration applications*



# the solution for point-of-use photochemical filtration

## Overview

The Optimizer® PR 16 and PR 40 filters use Entegris' patented ultra-high molecular weight polyethylene (UPE) membrane. This eliminates prewetting, optimizes the full use of the membrane and ensures maximum flow.

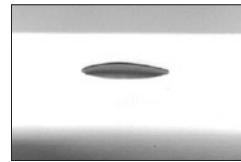
### Superior Performance

This UPE membrane has the highest retention efficiency of any membrane: >99.999% at the rated pore size.

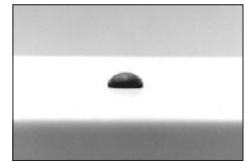
- Reliably removes soft gel particles
- Provides superior downstream cleanliness, low surfactant binding and spontaneous wettability

### Superior Manufacturing

- Manufactured in a world-class, ISO 9001 Quality Systems Standard facility
- Manufactured, tested and packaged in a cleanroom to ensure product cleanliness at time of installation



*UPE membrane—photoresist wets within 10 seconds*



*PTFE membrane—resists instantaneous wetting*

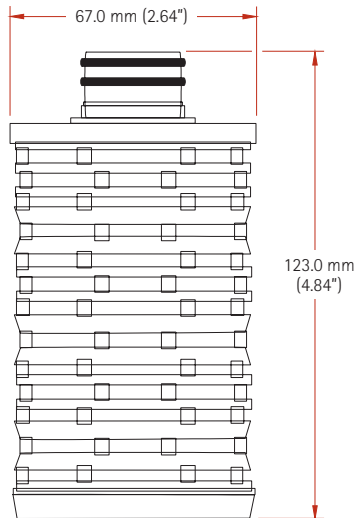
Features	Benefits
Hydrophobic, patented UPE membrane	Eliminates prewetting and flushing. Saves time, increases equipment uptime, provides better, more consistent filtration.
High retention rating: >99.999% at rated pore size, >99.99% for 20 nm	Low particle counts on the wafer.
Large filtration area	Provides maximum flow rate in a compact design.
All-polyethylene support construction	Reduces particle contamination with superior downstream cleanliness. The filter's all-polyethylene construction lowers metallic/ionic contamination that can leach from filters that are manufactured with materials such as polypropylene and nylon.

## Specifications

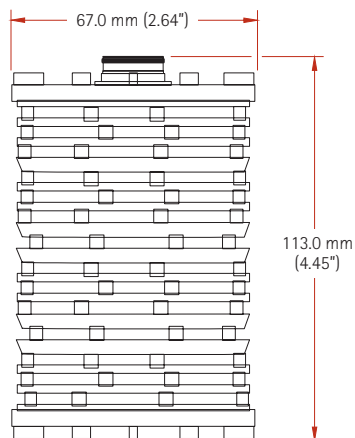
Materials:	Membrane	Hydrophobic ultra-high molecular weight polyethylene (UPE)		
	End caps, support, cage, core	High-density polyethylene (HDPE)		
	O-ring	EPDM, Kalrez® perfluoroelastomer or Teflon® fluoropolymer encapsulated Viton® fluoroelastomer (TEV)		
Membrane area:	PR16	1,500 cm <sup>2</sup> (1.62 ft <sup>2</sup> )	20 nm	1,900 cm <sup>2</sup> (2.05 ft <sup>2</sup> )
	PR40	3,500 cm <sup>2</sup> (3.76 ft <sup>2</sup> )	20 nm	4,400 cm <sup>2</sup> (4.74 ft <sup>2</sup> )
Maximum operating conditions:	Maximum inlet pressure	0.34 MPa (3.4 bar, 50 PSI) @ 25°C		
	Maximum forward differential pressure	0.34 MPa (3.4 bar, 50 PSID) @ 25°C		
	Maximum reverse differential pressure	0.27 MPa (2.7 bar, 40 PSID) @ 25°C		
	Maximum operating temperature	60°C (140°F)		
Particle retention:	20 nm	99.99% retention of 0.034 µm PSL beads		
	0.05 µm	99.999% retention of 0.055 µm PSL beads		
	0.1 µm	99.999% retention of 0.100 µm PSL beads		
	0.2 µm	99.999% retention of 0.198 µm PSL beads		

## Dimensions

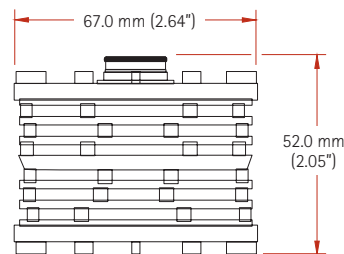
**Optimizer PR 40, 2-118**



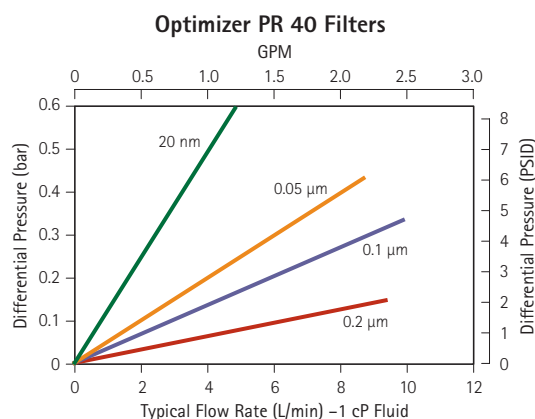
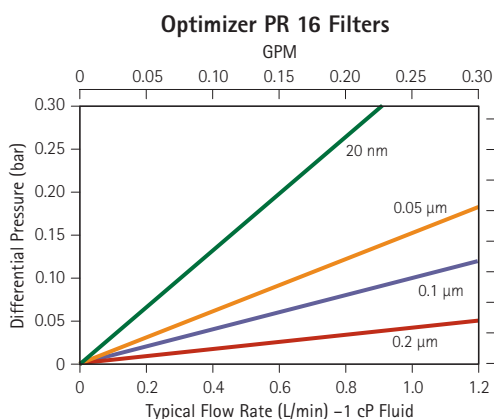
**Optimizer PR 40, 2-015**



**Optimizer PR 16, 2-015**



## Performance Data



## Ordering Information

### Optimizer PR 16, 2-015 O-ring<sup>1</sup>

Part Number (O-ring)				
EPDM	Kalrez	TEV	No O-ring	Retention Rating
—	CWAX 16 KL1	—	—	20 nm
CWAZ 16 EL1	CWAZ 16 KL1	—	CWAZ 16 OL1	0.05 µm
CWAV 16 EL1	CWAV 16 KL1	—	CWAV 16 OL1	0.1 µm
CWAG 16 EL1	CWAG 16 KL1	—	CWAG 16 OL1	0.2 µm

### Optimizer PR 40, 2-118 O-ring<sup>2</sup>

—	CWAX 40 KL1	—	—	20 nm
CWAZ 40 EL1	CWAZ 40 KL1	CWAZ 40 TL1	CWAZ 40 OL1	0.05 µm
CWAV 40 EL1	CWAV 40 KL1	CWAV 40 TL1	CWAV 40 OL1	0.1 µm
CWAG 40 EL1	CWAG 40 KL1	CWAG 40 TL1	CWAG 40 OL1	0.2 µm

### Optimizer PR 40, 2-015 O-ring<sup>3</sup>

CWAZ 40 EM1	CWAZ 40 KM1	—	—	0.05 µm
CWAV 40 EM1	CWAV 40 KM1	—	—	0.1 µm
CWAG 40 EM1	CWAG 40 KM1	—	—	0.2 µm

<sup>1</sup>Use with Wafergard® chemical dispense systems (16-stack) or the stainless steel F-16 housing.

<sup>2</sup>Use with Wafergard ECTFE 40-stack housings.

<sup>3</sup>Use with Wafergard chemical dispense system (40-stack) or the stainless steel F-40 housing.

## For More Information

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit [www.entegris.com](http://www.entegris.com) and select the “Customer Service” link for the center nearest you.

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