

# Microgard™ Bulk Photochemical Filters

*Solvent-based, bulk photochemical filtration*

Microgard™ solvent-based filters enable bulk photochemical filtration in semiconductor, data storage and chemical manufacturing applications. Utilizing a high-density polyethylene (HDPE) construction, these filters deliver high flow rate performance and excellent contaminant retention capabilities.

## APPLICATIONS

- Photolithography
- Bulk photochemical filtration
- Wet etch and clean
- Bulk chemical distribution systems (BCDS)
- Facilities



## FEATURES & BENEFITS

<b>Contaminant control technology</b>	Low organic and metal extractables Improved removal efficiency
<b>Polyethylene construction</b>	Low surfactant binding Excellent wettability Reduced metallic and ionic contamination
<b>Broad chemical compatibility</b>	Photoresist, photochemical and other solvent-based chemistries

# Microgard Plus and Microgard Plus LE Filters

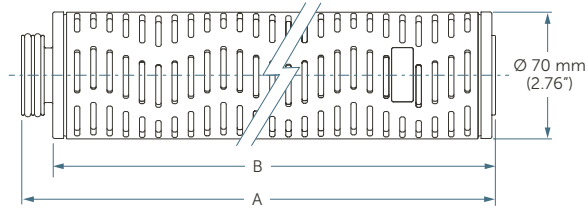
## SPECIFICATIONS

	MICROGARD PLUS FILTERS	MICROGARD PLUS LE FILTERS
<b>Materials</b>	Membrane	UPE (Hydrophobic)
	Supports, core, sleeve	HDPE
	Chemlock® key	PFA
	O-ring	E-FKM
	UPE: EPDM or E-FKM UPX: E-FKM, Kalrez® or Perfluoroelastomer	
<b>Filter type</b>	Symmetric	Asymmetric: 3 nm, 5 nm, 10 nm
		Symmetric: 30 nm
<b>Retention rating</b>	10 nm, 20 nm, 30 nm, 0.05 µm, 0.1 µm, 0.2 µm	3 nm, 5 nm, 10 nm, 30 nm
<b>Surface area</b>	10 nm, 20 nm, 30 nm	3 nm, 5 nm, 10 nm
	UPE (width 70 mm)	UPE (width 70 mm)
	10": 1.18 m <sup>2</sup> (12.70 ft <sup>2</sup> )	10": 1.31 m <sup>2</sup> (14.10 ft <sup>2</sup> )
	20": 2.36 m <sup>2</sup> (25.40 ft <sup>2</sup> )	20": 2.62 m <sup>2</sup> (28.20 ft <sup>2</sup> )
	30": 3.54 m <sup>2</sup> (38.10 ft <sup>2</sup> )	30": 3.94 m <sup>2</sup> (42.41 ft <sup>2</sup> )
	UPX (width 83 mm)	UPX (width 83 mm)
4": 0.79 m <sup>2</sup> (8.50 ft <sup>2</sup> )	10": 1.88 m <sup>2</sup> (20.24 ft <sup>2</sup> )	
10": 1.88 m <sup>2</sup> (20.24 ft <sup>2</sup> )		
	0.05 µm, 0.1 µm, 0.2 µm	30 nm
	UPE (width 70 mm)	UPX (width 70 mm)
	10": 0.86 m <sup>2</sup> (9.26 ft <sup>2</sup> )	10": 1.18 m <sup>2</sup> (12.70 ft <sup>2</sup> )
	20": 1.72 m <sup>2</sup> (18.51 ft <sup>2</sup> )	20": 2.36 m <sup>2</sup> (25.40 ft <sup>2</sup> )
	30": 2.59 m <sup>2</sup> (27.88 ft <sup>2</sup> )	
	UPX (width 83 mm)	
	10": 1.11 m <sup>2</sup> (11.95 ft <sup>2</sup> )	
<b>Operating conditions</b>	Maximum forward differential pressure: 0.34 MPa (3.4 bar, 49 psid, 3.5 kg/cm <sup>2</sup> ) @ 25°C (77°F)	
	Maximum reverse pressure: 0.24 MPa (2.4 bar, 35 psi, 2.4 kg/cm <sup>2</sup> ) @ 25°C (77°F)	
	Maximum operating temperature: 60°C (140°F)	

## DIMENSIONS

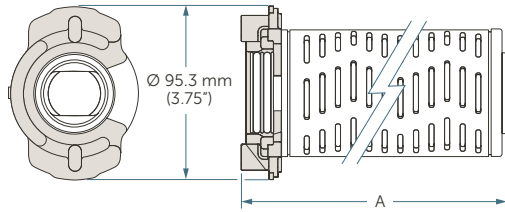
### Microgard Plus UPE/Plus LE Code 0 (70 mm width) Filters

#### Without Chemlock Key



Length	A	B
10"	262.3 mm (10.33")	245.0 mm (9.65")
20"	506.5 mm (19.94")	489.2 mm (19.26")
30"	750.0 mm (29.53")	732.7 mm (28.85")

#### With Chemlock Key

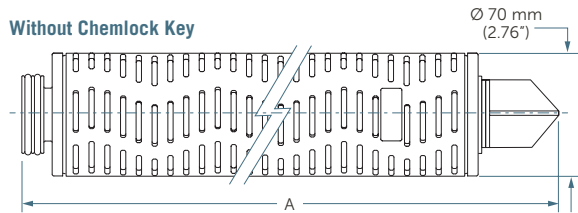


Length	A*
10"	266.5 mm (10.50")
20"	510.7 mm (20.11")

\* Cartridge with key

### Microgard Plus/Plus UPE/Plus LE Code 5 (70 mm width) Filters

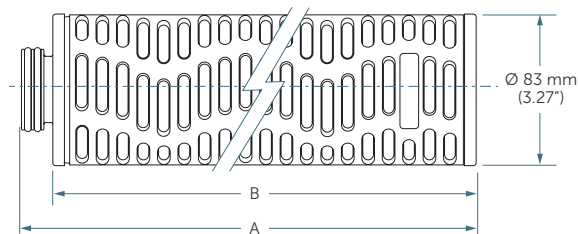
#### Without Chemlock Key



Length	A
10"	309.0 mm (12.17")
20"	550.0 mm (21.85")

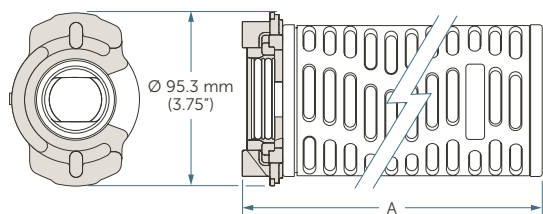
### Microgard Plus UPX/Plus LE Code 0 (83 mm width) Filters

#### Without Chemlock Key



Length	A	B
4"	127.3 mm (5.01")	110.0 mm (4.33")
10"	242.3 mm (9.54")	225.0 mm (8.86")

#### With Chemlock Key

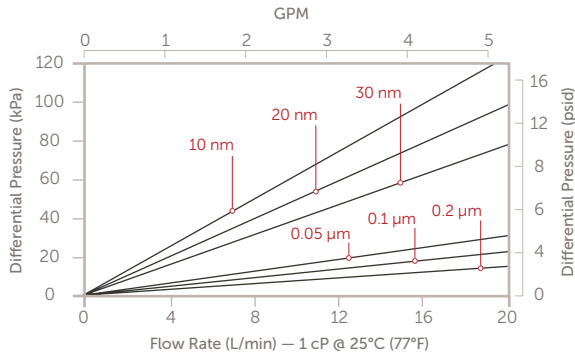


Length	A*
10"	246.5 mm (9.71")

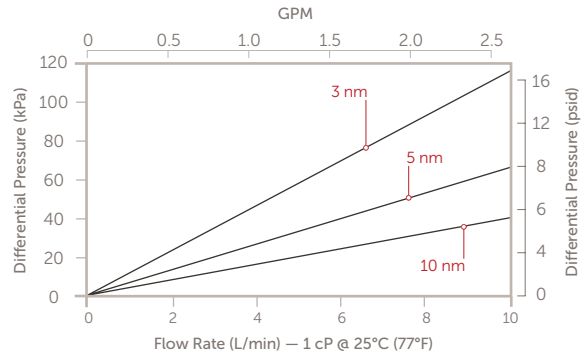
\* Cartridge with key

## PERFORMANCE DATA

Microgard Plus 10" Filters



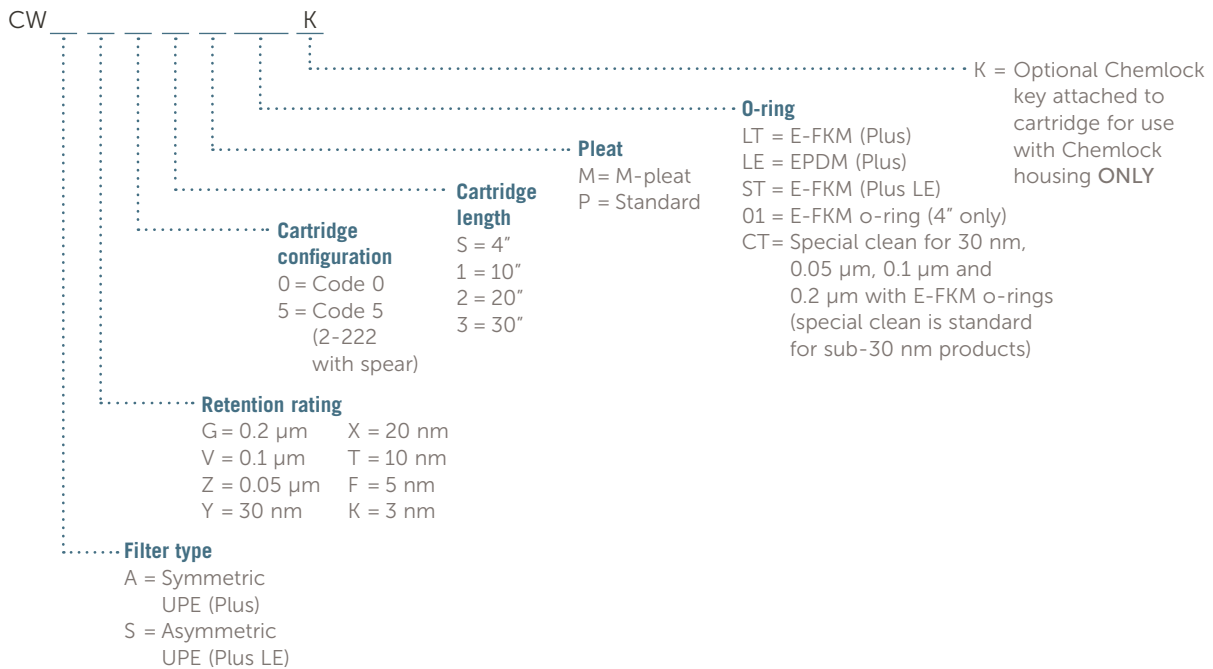
Microgard Plus LE 10" Filters



## ORDERING INFORMATION

This information serves as a guide. Please contact your local representative to confirm part numbers.

Microgard Plus/Plus LE Filters: part number



# Microgard LE Nylon Filters

## SPECIFICATIONS

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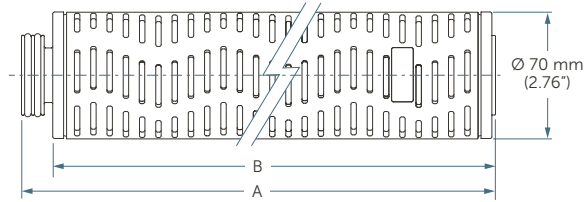
<b>Materials</b>	Membrane	Polyamide (nylon 6)
	Supports, core, sleeve	HDPE
	Chemlock key	PFA
	O-ring	E-FKM
<b>Filter type</b>	Asymmetric	
<b>Retention rating</b>	10 nm, 20 nm	
<b>Surface area</b>	10 nm, 20 nm (width 70 mm)	
	10": 0.71 m <sup>2</sup> (7.64 ft <sup>2</sup> )	
	20": 1.42 m <sup>2</sup> (15.28 ft <sup>2</sup> )	
	30": 2.13 m <sup>2</sup> (22.93 ft <sup>2</sup> )	
	10 nm, 20 nm (width 83 mm)	
	10": 1.31 m <sup>2</sup> (14.10 ft <sup>2</sup> )	
<b>Operating conditions</b>	Maximum forward differential pressure: 0.28 MPa (2.8 bar, 41 psid, 2.9 kg/cm <sup>2</sup> ) @ 25°C (77°F)	
	Maximum reverse pressure: 0.21 MPa (2.1 bar, 31 psi, 2.9 kg/cm <sup>2</sup> ) @ 25°C (77°F)	
	Maximum operating temperature: 60°C (140°F)	

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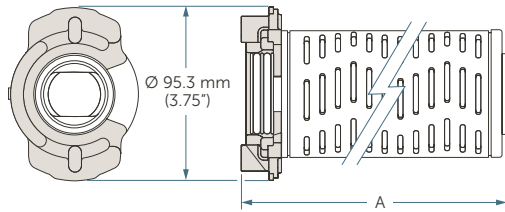
## DIMENSIONS

### Microgard LE Nylon Code 0 (70 mm width) Filters

#### Without Chemlock Key



#### With Chemlock Key



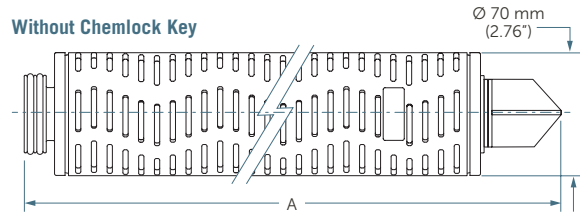
Length	A	B
10"	262.3 mm (10.33")	245.0 mm (9.65")
20"	506.5 mm (19.94")	489.2 mm (19.26")
30"	750.0 mm (29.53")	732.7 mm (28.85")

Length	A*
20"	510.7 mm (20.11")

\* Cartridge with key

### Microgard LE Nylon Code 5 (70 mm width) Filters

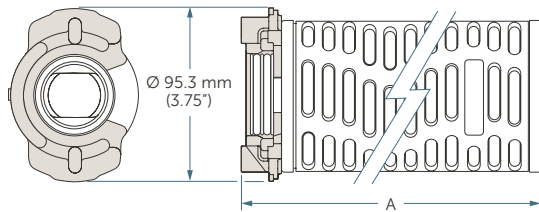
#### Without Chemlock Key



Length	A
10"	309.0 mm (12.17")
20"	550.0 mm (21.85")

### Microgard LE Nylon Code 0 (83 mm width) Filter

#### With Chemlock Key

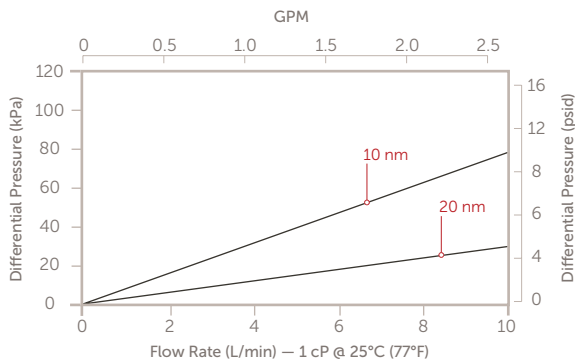


Length	A*
10"	246.5 mm (9.71")

\* Cartridge with key

## PERFORMANCE DATA

### Microgard LE Nylon 10" Filters



## ORDERING INFORMATION

This information serves as a guide. Please contact your local representative to confirm part numbers.

### Microgard LE Nylon Filters: part number

CWN ..... ST K

- .....K = Optional Chemlock key attached to cartridge for use with Chemlock housing ONLY
- .....O-ring
- .....ST = E-FKM
- .....Pleat
  - M = M-pleat
  - P = Standard
- .....Cartridge length
  - 1 = 10"
  - 2 = 20"
  - 3 = 30"
- .....Cartridge configuration
  - 0 = Code 0
  - 5 = Code 5 (2-222 with spear)
- .....Retention rating
  - T = 10 nm
  - X = 20 nm
- .....Filter type
  - N = Nylon

# Microgard UPE and UPX Filters

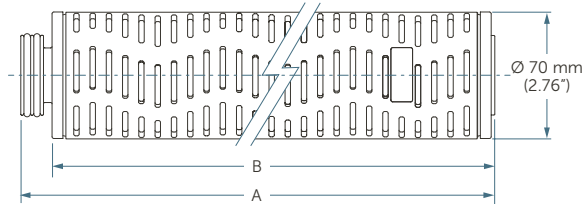
## SPECIFICATIONS

	MICROGARD UPE FILTERS	MICROGARD UPX FILTERS
<b>Materials</b>	Membrane	UPE (Hydrophobic)
	Supports, core, sleeve	HDPE
	Chemlock key	PFA
	O-ring	EPDM or E-FKM
<b>Filter type</b>	Symmetric	
<b>Retention rating</b>	0.05, 0.1, 0.2, 0.5, 1.0 $\mu\text{m}$	
<b>Surface area</b>	10": 0.86 m <sup>2</sup> (9.26 ft <sup>2</sup> )	4": 0.53 m <sup>2</sup> (5.70 ft <sup>2</sup> )
	20": 1.72 m <sup>2</sup> (18.51 ft <sup>2</sup> )	10": 1.11 m <sup>2</sup> (11.95 ft <sup>2</sup> )
	30": 2.59 m <sup>2</sup> (27.88 ft <sup>2</sup> )	
<b>Operating conditions</b>	Maximum forward differential pressure: 0.35 MPa (3.5 bar, 50 psid, 3.5 kg/cm <sup>2</sup> ) @ 25°C (77°F)  Maximum reverse pressure: 0.27 MPa (2.7 bar, 40 psi, 2.8 kg/cm <sup>2</sup> ) @ 25°C (77°F)  Maximum operating temperature: 60°C (140°F)	

## DIMENSIONS

### Microgard UPE Code 0 (70 mm width) Filters

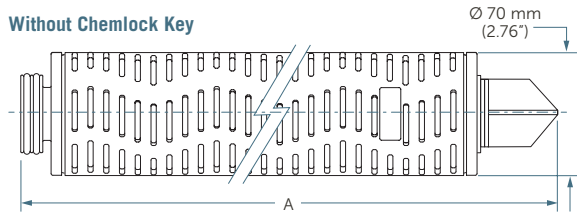
#### Without Chemlock Key



Length	A
10"	309.0 mm (12.17")
20"	550.0 mm (21.85")
30"	797.0 mm (31.38")

### Microgard UPE Code 5 (70 mm width) Filters

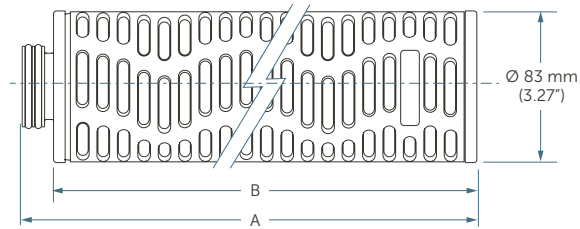
#### Without Chemlock Key



Length	A	B
10"	262.3 mm (10.33")	245.0 mm (9.65")
20"	506.5 mm (19.94")	489.2 mm (19.26")
30"	750.0 mm (29.53")	732.7 mm (28.85")

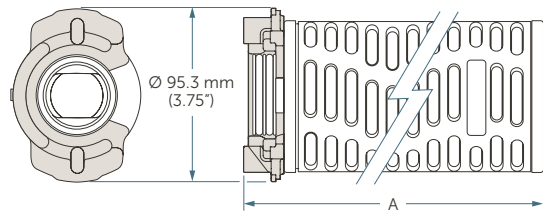
### Microgard UPX Code 0 (83 mm width) Filters

#### Without Chemlock Key



Length	A	B
4"	127.3 mm (5.01")	110.0 mm (4.33")
10"	242.3 mm (9.54")	225.0 mm (8.86")

#### With Chemlock Key



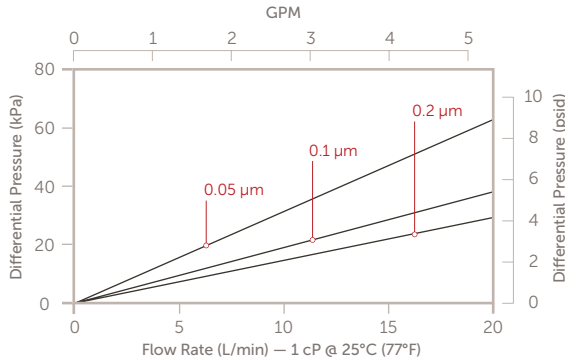
Length	A*
10"	246.5 mm (9.71")

\* Cartridge with key

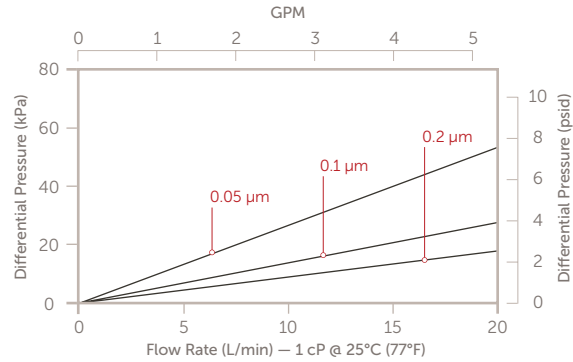


## PERFORMANCE DATA

Microgard UPE 10" Filters



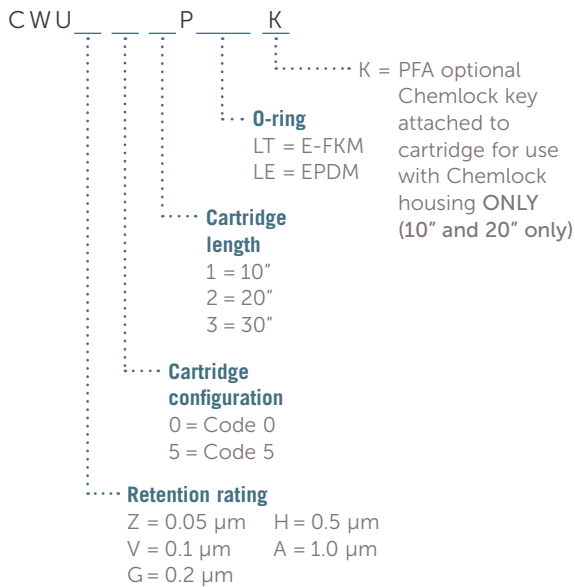
Microgard UPX 10" Filters



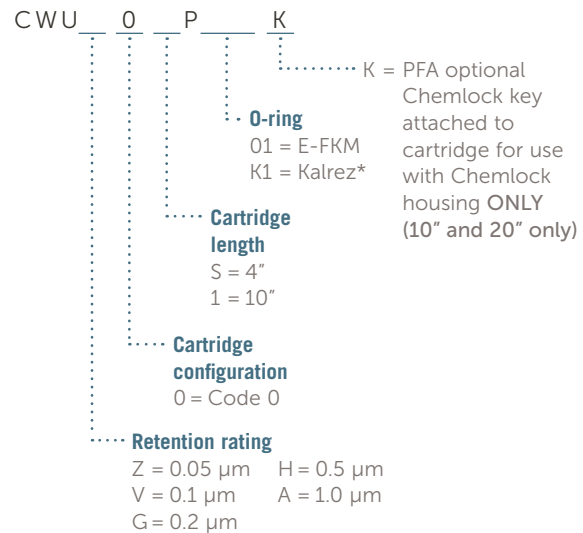
## ORDERING INFORMATION

This information serves as a guide. Please contact your local representative to confirm part numbers.

Microgard UPE Cartridge Filters: part number



Microgard UPX Cartridge Filters: part number



\*Kalrez o-ring available in 10" configuration only.

#### **FOR MORE INFORMATION**

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#### **Corporate Headquarters**

129 Concord Road  
Billerica, MA 01821  
USA

#### **Customer Service**

Tel +1 952 556 4181  
Fax +1 952 556 8022  
Toll Free 800 394 4083

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