



IONGARD™ DL PURIFIER

Ideal for metal ion removal in semiconductor wafer cleaning applications

IONGARD™ DL PURIFIER

FAST AND EFFECTIVE REMOVAL OF METAL IONS AND PARTICLES IN SEMICONDUCTOR WAFER CLEANING APPLICATIONS

Cobetter IonGard™ DL Purifiers have been specifically designed for semiconductor wafer cleaning applications.

Utilizing the structure of polyethylene and polyethersulfone composite membranes, IonGard DL Purifiers assure excellent removal of trace metal ions as well as particles on the wafer surface. The Ultraclean product design minimizes system start up time and downtime.

IonGard DL is available in a wide variety of sizes and configurations to meet all your requirements.

FEATURE	BENEFIT
Polyethersulfone filter membrane with modified PE ion exchange media	Superior removal of cations in critical cleaning water applications
	High removal efficiency of particles from 7nm.
	Ultra-low Particles and Metal Ions extractables
Ultraclean capsules	Ultraclean capsules with industry-standard fittings are ideal for research and single-wafer wafer rinse steps.
	Designed to fit space-limited on-tool installations.
Manufactured in a cleanroom	IonGard DL is cleanroom packaged and ready to install.
Cartridge length to 30"	Longer cartridges are available for higher flow chemical blending production.

SPECIFICATIONS

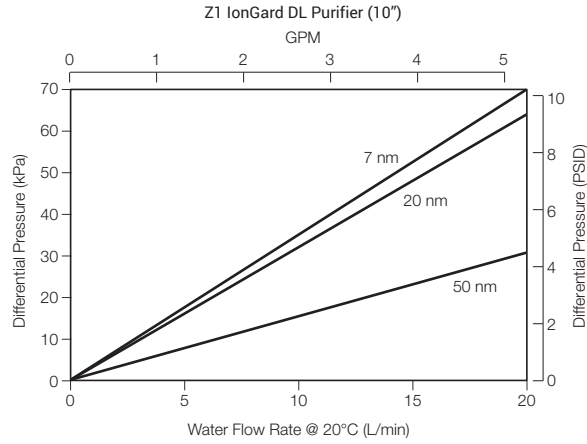
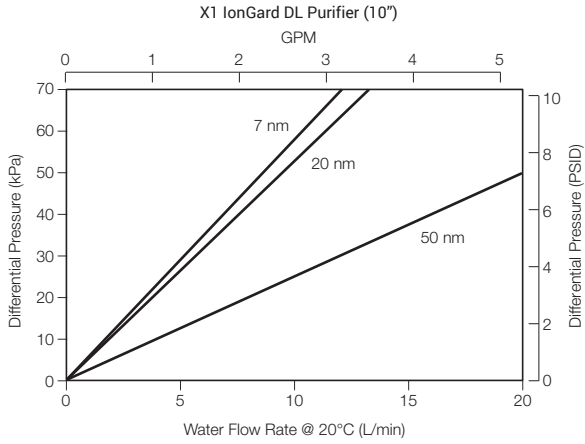
	Cartridge		Capsule
Filtration Membrane	Polyethersulfone		Polyethersulfone
Purification Membrane	Modified PE		Modified PE
Support/Core/Cage/End Caps	HDPE	PP0	HDPE
Shell	-		PP
O-rings	TEV or FFKM		TEV or EPDM
Max. Operating Temperature	60°C	80°C	60°C
Max. Operating Pressure	0.34 MPa (3.4 bar, 49 psi) @ 25°C		
Filter Areas	X1: (68 mm) 0.5 m ²	Z1: (83 mm) 0.7 m ²	X1: (68mm) 0.1 m ²
Total Metal Ion Exchange Capacity (90% Efficiency)	>80 meq	>120 meq	>16 meq



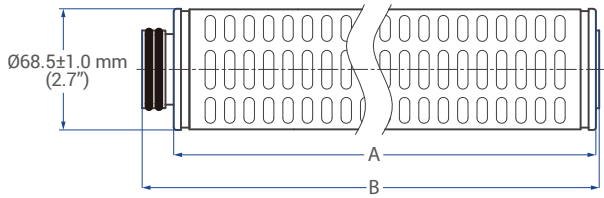
Typical Applications

- Bulk and point-of-use critical cleaning DI water purification

IONGARD DL FLOW CURVES

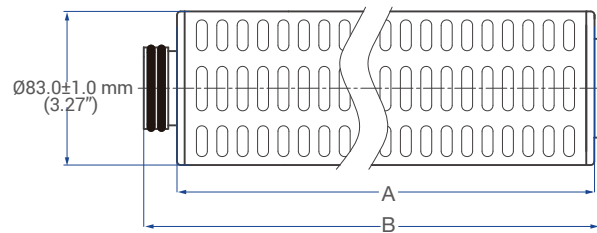


IONGARD DL: X1 CARTRIDGE FILTERS (2-222/FLAT)



Length Code	A	B
10	242.5 ± 2 mm (9.5")	262.5 ± 2 mm (10.3")
20	488.0 ± 3 mm (19.2")	508.0 ± 3 mm (20.0")
30		

IONGARD DL: Z1 CARTRIDGE FILTERS (2-222/FLAT)

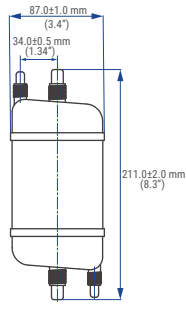


Length Code	A	B
10	225.0 ± 2 mm (8.9")	247.0 ± 2 mm (9.7")
20	452.0 ± 3 mm (17.8")	472.0 ± 3 mm (18.6")

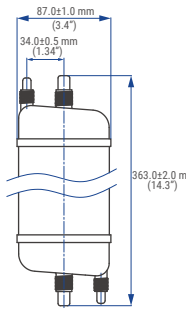
EXAMPLE: **MGDZ1NM2010PSW** = IonGard DL cartridge, HDPE support/core, 222/flat 83mm diameter, 20nm modified PE membrane, 10" length, E-FKM O-ring, <10ug/device cleanliness, prewet

MGD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OTC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S	<input type="checkbox"/>	W
Support/Core		Diameter	Removal Rating	Nominal Length		Seal Material		Cleanliness		Package
_ = HDPE P = PP	X1 = 68 mm Z1 = 83 mm	NM07 = 7 nm NM20 = 20 nm NM50 = 50 nm 0010 = 0.1 μm	10 = 10" 20 = 20" 30 = 30"		P = E-FKM E = FFKM	S = < 10 ug/device		W = Prewet, UPW + 1% H ₂ O ₂		

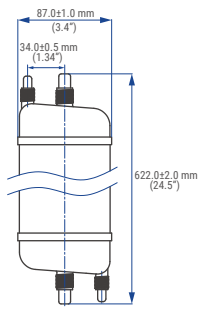
LONGARD DL CAPSULE DIMENSIONS



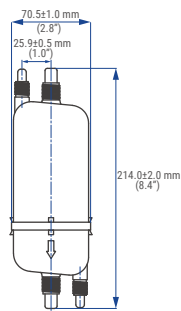
BFL64-4



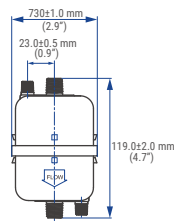
BFL64-10



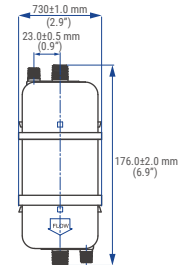
BFL64-20



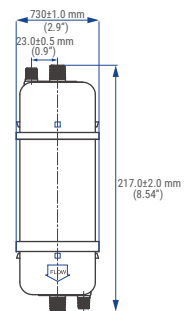
FL64



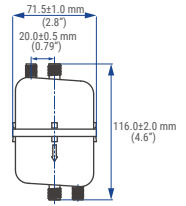
NPT42



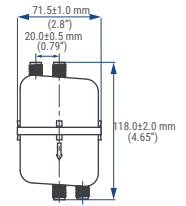
NPT742



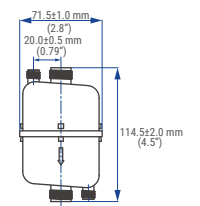
NPT942



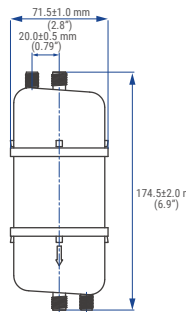
SW43



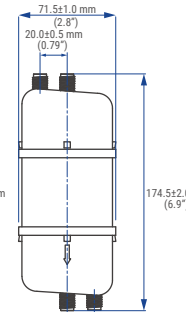
SW4



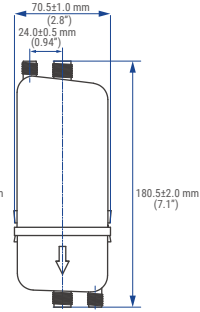
SW84



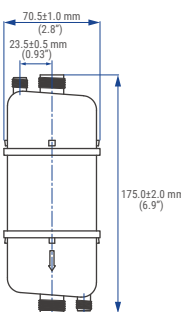
SW743



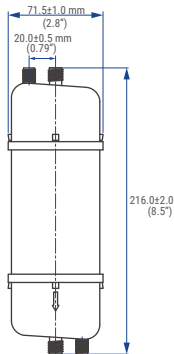
SW744



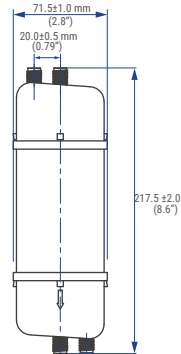
SW764



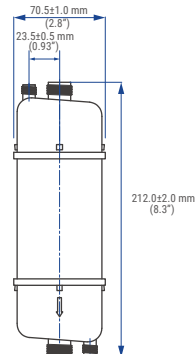
SW784



SW943



SW944



SW984

IONGARD SL PURIFIERS - CAPSULE ORDERING INFORMATION¹

EXAMPLE: **MGDNM20FL64SW** = IonGard DL capsule, 20nm modified PE membrane, 3/8" flare I/O, 1/4" V/D, <10ug/device cleanliness, prewet

MGD



Removal Rating

NM05 = 7 nm
 NM20 = 20 nm
 NM50 = 50 nm
 0010 = 0.1 µm



Cleanliness

S = < 10 ug/device



Package

W = Prewet,
 UPW + 1% H₂O₂

Connection Type	Inlet/ Outlet	Vent/ Drain	Lengths
BFL64-4 = Flare Type	3/8"	1/4"	211 mm (8.3")
BFL64-10 = Flare Type	3/8"	1/4"	363 mm (14.3")
BFL64-20 = Flare Type	3/8"	1/4"	622 mm (24.5")
FL64 = Flare Type	3/8"	1/4"	214 mm (8.4")
NPT42 = NPT	1/4"	1/8"	119 mm (4.7")
NPT742 = NPT	1/4"	1/8"	176 mm (6.9")
NPT942 = NPT	1/4"	1/8"	217 mm (8.5")
SW43 = Compression	1/4"	4 mm	116 mm (4.6")
SW743 = Compression	1/4"	4 mm	174.5 mm (6.9")
SW943 = Compression	1/4"	4 mm	216 mm (8.5")
SW44 = Compression	1/4"	1/4"	118mm (4.6")
SW744 = Compression	1/4"	1/4"	174.5 mm (6.9")
SW944 = Compression	1/4"	1/4"	217.5 mm (8.6")
SW84 = Compression	1/2"	1/4"	114.5 mm (4.5")
SW784 = Compression	1/2"	1/4"	175 mm (6.9")
SW984 = Compression	1/2"	1/4"	212 mm (8.3")
SW764 = Compression	3/8"	1/4"	180.5 mm (7.1")



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