

# Wafergard® SG Max Gas Filters

*Superior particulate filtration for  
photovoltaic and display applications*

Wafergard® SG Max gas filters provide superior particulate filtration designed for flow rate range up to 1000 slpm\* to maximize photovoltaic cell and display manufacturing production yields.

The PTFE membrane and PFA supports filter cartridge are compatible with process gases\*\* as well as inert gas and CDA applications.

\*20°C, 101 kPa

\*\*Not compatible for  $F_2$



## APPLICATIONS

- Process gases for photovoltaic cells
- Process gases for flat panel displays
- Gas cabinets
- Valve manifold boxes
- Gas panels: Downstream of MFC, upstream of MFC, upstream of pressure regulator
- Upstream of process chamber
- Purge/vent/pressure control line: Process/transfer/load-lock chambers, back side wafer cooling

## FEATURES & BENEFITS

- Low pressure drop filter saves time and costs
- Removal of particles greater than 0.0015  $\mu\text{m}$  from incoming gas minimizes process defects
- Small footprint means easier implementation
- Interior surface of this product is  $\leq 25 \mu\text{in Ra}$  and provides a cost-effective solution for filtration of compressed air, inert gases, and process gases
- Cleanroom manufactured, welded and tested for high reliability

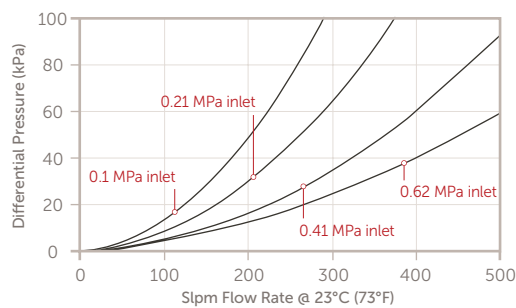
## SPECIFICATIONS

<b>Materials</b>	Filter element	Hydrophobic PTFE membrane supported by molded PFA structure
	Housing	Electropolished 316L stainless steel
<b>Particle retention</b>	≥99.9999999% (9 LRV) (referenced at the most penetrating particle size)	@ 500 slpm
<b>Removal rating</b>	≥0.0015 µm	
<b>Surface finish interior</b>	≤25 µin Ra	
<b>Helium leak rating</b>	Qualified	$2 \times 10^{-11}$ Pa m <sup>3</sup> /sec ( $2 \times 10^{-10}$ atm cc/sec)
	Tested	$1 \times 10^{-9}$ Pa m <sup>3</sup> /sec ( $1 \times 10^{-8}$ atm cc/sec)
<b>Operating conditions</b>	Maximum operating pressure: 6.0 MPa (60 bar; 870 psig) @ 23°C (73°F)  Maximum forward differential pressure: 0.703 MPa (7.03 bar; 102 psid) @ 23°C (73°F)  Maximum reverse differential pressure: 0.248 MPa (2.48 bar; 36 psid) @ 23°C (73°F)  Maximum operating temperature: 120°C (248°F) in inert gases	
<b>Flow rating</b>	Refer to performance data	

## PERFORMANCE DATA

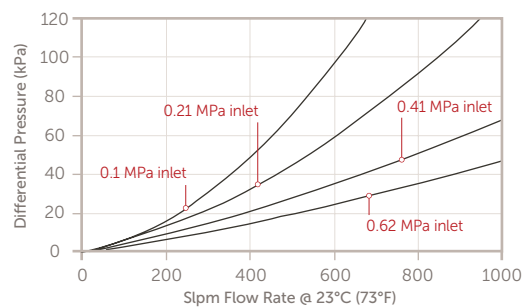
### Wafergard SG Max Gas Filters

WGFGMBSS2 ¼" Compression Seal  
WGFGMBPRF2 ¼" Gasket Seal



### Wafergard SG Max Gas Filters

WGFGMBRR4 ½" Gasket Seal  
WGFGMBSS3 ¾" Compression Seal  
WGFGMBSS4 ½" Compression Seal

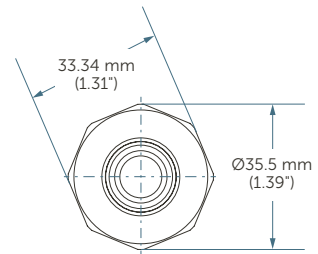
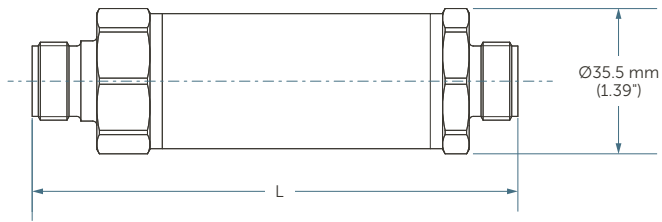


## DIMENSIONS

WGFGMBSS2 (1/4" fitting): L = 112.7 mm (4.44")

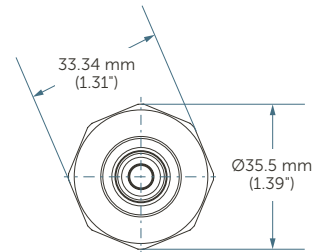
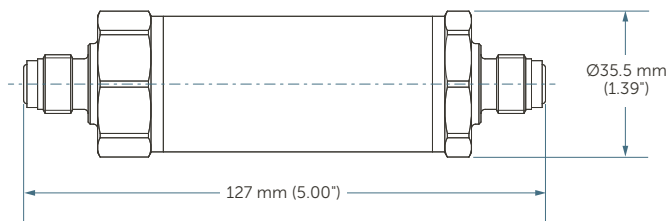
WGFGMBSS3 (3/8" fitting): L = 117.9 mm (4.64")

WGFGMBSS4 (1/2" fitting): L = 118.7 mm (4.67")

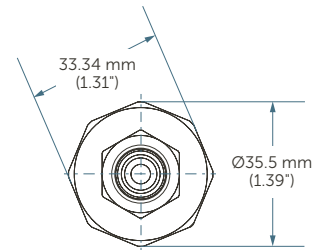
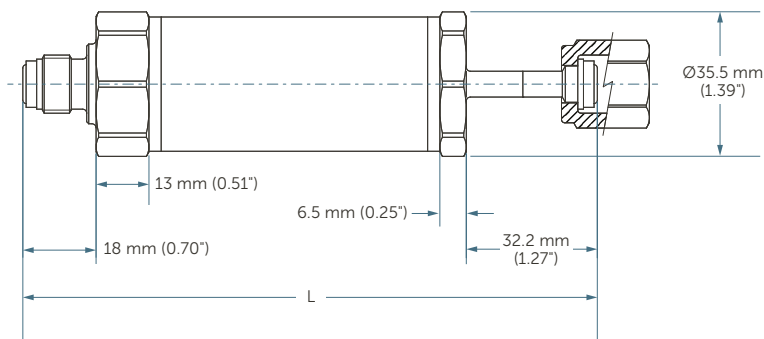


WGFGMBRR2 (1/4" fitting)

WGFGMBRR4 (1/2" fitting)



WGFGMBPRF2 (1/4" fitting): L = 141.2 mm (5.56")



## ORDERING INFORMATION

PART NUMBER			
Compression seal (Swagelok® tube fitting compatible)	Gasket seal (VCR® compatible)	Description	Fitting size
WGFGMBSS2	WGFGMBRR2	Wafergard SG Max gas filter	1/4"
	WGFGMBPRF2*	Wafergard SG Max gas filter	1/4"
WGFGMBSS3		Wafergard SG Max gas filter	3/8"
WGFGMBSS4	WGFGMBRR4	Wafergard SG Max gas filter	1/2"

\*Male in, female out

## FOR MORE INFORMATION

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