

Wafergard® SG F Micro/Mini XL Gas Filters

Superior particulate filtration for photovoltaic and display applications

Wafergard® SG F Micro/Mini XL gas filters provide superior particulate filtration designed for flow rate range up to 120 slpm* to maximize photovoltaic cell and display manufacturing production yields.

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

Entegris has provided solutions to critical materials and processing challenges to maximize high-technology productivity and reduce production costs. Our filtration, purification, and materials integrity management products and technologies provide our customers with leading-edge product performance capabilities.

*20°C, 101 kPa

**Not compatible for F₂



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 µm from incoming gas minimizes process defects
- Interior surface of this product is ≤25 µin Ra and provides cost-effective solution for filtration of compressed air, inert gases, and process gases
- Cleanroom manufactured, welded and tested for high reliability
- Compact footprint with a maximum diameter of 19 mm allows installation even when space is limited

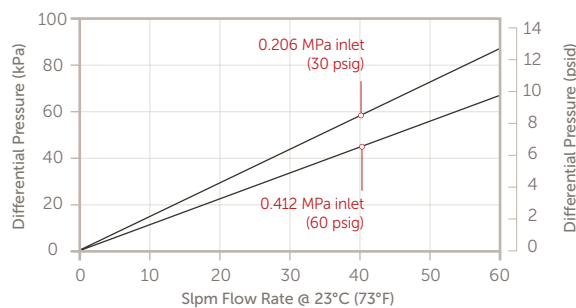
SPECIFICATIONS

Materials	Filter element	Hydrophobic PTFE membrane supported by PFA structure
	O-ring	PFA O-Ring (SG F Mini XL only)
	Housing	Electropolished 316L stainless steel
Particle retention	≥99.9999999% (9 LRV) (referenced at the most penetrating particle size)	@ 30 slpm: SG F Micro @ 90 slpm: SG F Mini XL
Removal rating	≥0.0015 µm	
Surface finish interior	≤25 µin Ra	
Helium leak rating	Qualified	2×10^{-11} Pa m ³ /sec (2×10^{-10} atm cc/sec)
	Tested	1×10^{-9} Pa m ³ /sec (1×10^{-8} atm cc/sec)
Operating conditions	Maximum operating pressure: 20 MPa (200 bar; 2900 psig) @ 23°C (73°F) Maximum forward differential pressure: 0.414 MPa (4.14 bar; 60 psid) @ 23°C (73°F) Maximum reverse differential pressure: 0.069 MPa (0.69 bar; 10 psid) @ 23°C (73°F) Maximum operating temperature: 120°C (248°F) in inert gases	
Flow rating	Refer to performance data	

PERFORMANCE DATA

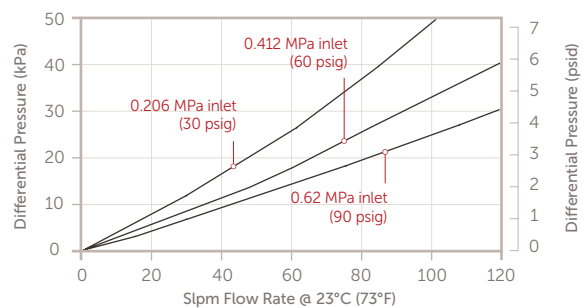
Wafergard SG F Micro Gas Filters

WGFGT1PS1 ¼" Compression Seal
WGFGT1PR1 ¼" Gasket Seal



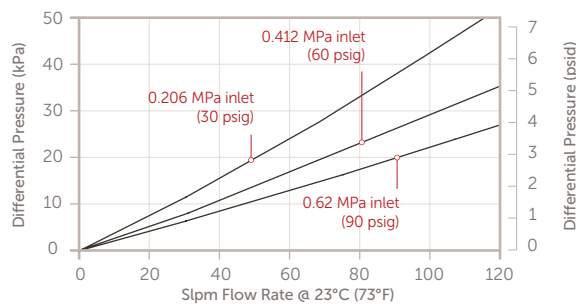
Wafergard SG F Mini XL Gas Filters

WGFG02PS1 ¼" Compression Seal
WGFG02PR1 ¼" Gasket Seal



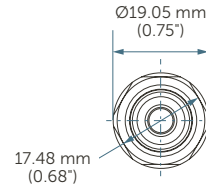
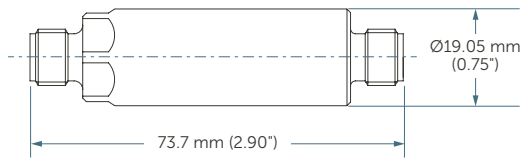
Wafergard SG F Mini XL Gas Filters

WGFG32PS1 ¾" Compression Seal
WGFG32PR1 ½" Gasket Seal
WGFG50PR1 ½" Gasket Seal

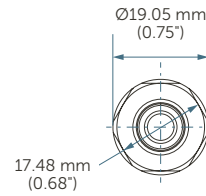
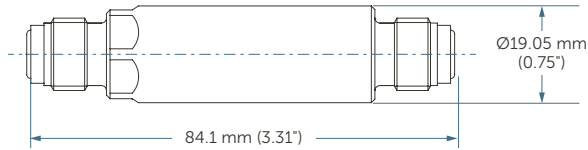


DIMENSIONS

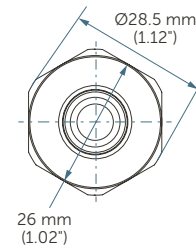
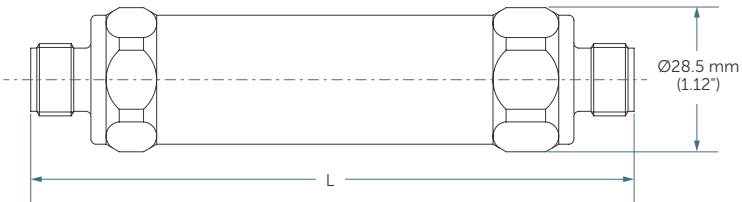
WGFGT1PS1



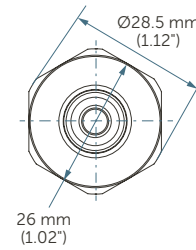
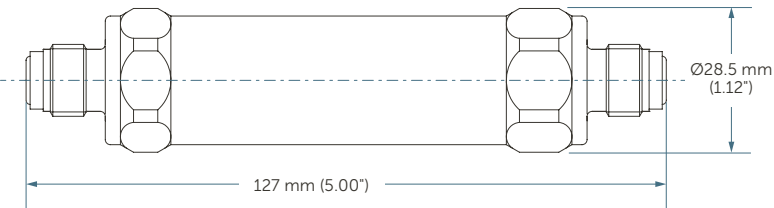
WGFGT1PR1



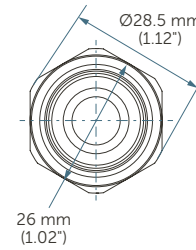
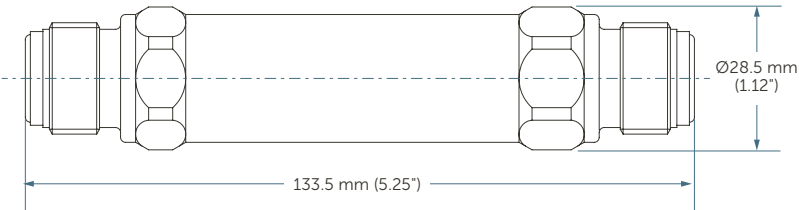
WGFG02PS1: L = 115.5 mm (4.55")
WGFG32PS1: L = 119.3 mm (4.70")



WGFG02PR1
WGFG50PR1



WGFG32PR1



ORDERING INFORMATION

PART NUMBER			
Compression seal (Swagelok® tube fitting compatible)	Gasket seal (VCR® compatible)	Description	Fitting size
WGFGT1PS1	WGFGT1PR1	Wafergard SG F Micro gas filter	1/4"
WGFG02PS1	WGFG02PR1	Wafergard SG F Mini XL gas filter	1/4"
WGFG32PS1		Wafergard SG F Mini XL gas filter	3/8"
	WGFG32PR1	Wafergard SG F Mini XL gas filter	1/2"
	WGFG50PR1	Wafergard SG F Mini XL gas filter	1/2"

FOR MORE INFORMATION

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