



CVD / ALD / Etching Process
Qulee RGM2 Series

RGM2-201F



The Qulee RGM2-201 F reactive process gas monitor is a process monitor with a differential exhaust system that supports reactive gases such as etching, CVD and ALD equipment of the Qulee series. With the unique ion source and exhaust system structure of Alvac, it has excellent corrosion resistance for reactive gases and can be measured stably for a long time.

Features

- The exhaust system and the control system are integrated to realize vertical positioning, and the world's smallest footprint makes it possible to monitor reactive gases even in production lines with limited space.
- The replacement speed of filament kits during maintenance has been dramatically improved, and 120 minutes of work by 2 workers can be completed in 10 minutes by 1 person.
- Dual filament enables gas analysis without stopping the production line if the first filament breaks.
- Uses touch panel for real-time status checking.
- Operation from startup to measurement is complete only on the computer.
- The use of our company's unique Closed Ion Source with magnet enables long and stable measurement even during reactive processes.
- The highly sensitive ionization chamber with low gas dissociation enables highly sensitive gas analysis using only a Faraday cup.
- Compact channel control valve that prevents decomposition and adsorption due to thermal reactions.
- Reduces the distance from the process chamber to the ion source, enabling fast response decomposition.
- Enhances preventive maintenance functions
Preventive maintenance of ion sources and secondary electron multiplier tubes
Installation of tresability function of analytical tube (Patent No. 5016031)
- The standard software is compatible with Windows 8/10/11.

Applications

In CVD/ALD/Etching equipment

- Monitoring of reactive gases during the process

- Endpoint monitoring of the etching cleaning process
- Residual gas measurement

Specifications

Sensor

Mass number range (amu)	1~200
Resolution (M/ Δ M)	M/ Δ M=1M(10%P.H.)
detector	Faraday Cup (FC)
Sensitivity (A/Pa) ^{*1}	1e-5A/Pa (Direct orifice installation, Ie=50uA) N2 gas =5e-4Pa at Ee50V
Minimum detected partial pressure (Pa) ^{*1}	e-10Pa (EE50V, Ie500uA)
Total pressure measurement function ^{*1}	Yes.
Total pressure measurement range ^{*1}	1e-3 ~ e-6 Pa
ion source	Closed Ion Source with Magnet
filament	Ir/Y2O3 2 pieces (one of them is spare)
ionization voltage (EE; eV)	20~70eV (50 V setting is recommended for Ie50 uA)
Emission current (IE; uA)	50uA/500uA (EE50V, 50uA recommended for process measurement)

*1 The spare filament (FIL2) is not applicable.

Differential exhaust system

Connecting flange	VCR1/2 "Osnut Equivalent
Specification pressure	Select from 0.5~30 Pa/10~500 Pa
Turbomolecular pump	UTM70B (70L/s)
Foreline pump	None Foreallimport: KF16 Guaranteed operating foreline pressure: 500 Pa or less Pirani Vacuum Gauge for Foreline Pressure Checking: SW100-A
Vacuum gauge for monitoring equipment pressure	Capacitance Manometer CCMT Series

Utilities

Power supply voltage	Select from AC100~120 V/6 A, AC200~220 V/3 A
Compressed air	Dry N2:0.4MPa

Other

Mass	20Kg
Control unit	touch panel
Block type heater unit	110°C ±10°C

ULVAC, Inc.

