

# Compact Process Gas Monitor [Qulee CGM Series]

“Qulee” (pronounced as “KLEE”), is ULVAC’s latest model for residual gas analysis and gas monitoring during process. Feedback from facility engineers in various production lines are incorporated in the new product design offering utmost simplicity.

The Qulee offers high accuracy and resolution even at high pressure (1Pa or less).



## Features

- ▶ **Ideal for Sputtering System**  
Ideal for process monitoring of various sputtering system
- ▶ **Differential Pumping System not Required**  
No differential pumping system required (at 1Pa (7.5×10<sup>-3</sup> Torr, 1×10<sup>-2</sup> mbar) or lower)
- ▶ **Integrated Display**  
No need for PC
- ▶ **Simple Operation**  
"One Click" function
- ▶ **Bake Out**  
Max 120°C (248°F) high temperature bake (250°C (482°F) when sensors are removed)
- ▶ **Degas Function**  
Electron bombard degas
- ▶ **Protection and Maintenance Features**  
Ion source and secondary electron multiplier protection maintenance help function  
Traceability of analysis tube (patent pending)
- ▶ **Various Leak Tests are Available**  
Helium leak test, air leak test, built-up test

- ▶ **Total Pressure Measurement**  
Capable of total pressure measurement (ionization gauge)
- ▶ **Qulee QCS is Included**  
This software is included and compatible with (Windows XP/7)
- ▶ **QIP (Quick Install Package system) is Included**  
Auto measuring package (refer to options catalog for details)
- ▶ **Applicable Standard**  
Conforms with CE

## Applications

- ▶ Process monitoring for PV, FPD, and semiconductor system
- ▶ Residual gas analysis in PVD system
- ▶ Impurities (H<sub>2</sub>O, etc.) control in PVD system
- ▶ For leak testing

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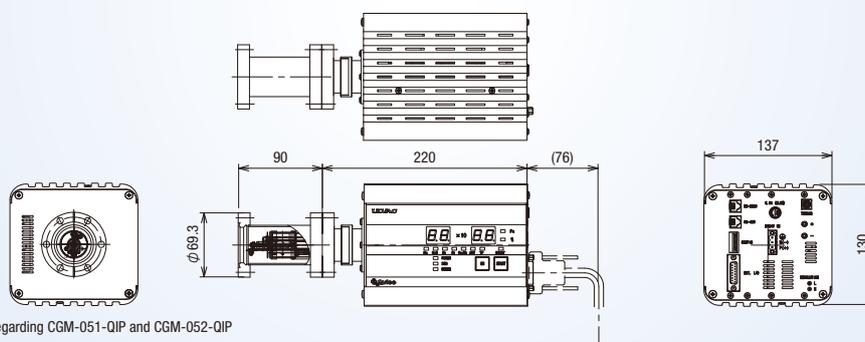
## Specifications

Model	CGM-051	CGM-052
Mass filter type	Quadrupole	
Mass range	1 to 50 amu	
Resolution	M/ $\Delta$ M=1M (10% P.H.)	
Detector type	Faraday cup	EM Tube/Faraday cup
Sensitivity	10 <sup>-7</sup> A/Pa 1.33×10 <sup>-5</sup> A/Torr 10 <sup>-5</sup> A/mbar	10 <sup>-4</sup> A/Pa 1.33×10 <sup>-2</sup> A/Torr 10 <sup>-2</sup> A/mbar
Minimum detectable partial pressure	1×10 <sup>-7</sup> Pa 7.5×10 <sup>-10</sup> Torr 1×10 <sup>-9</sup> mbar	1×10 <sup>-10</sup> Pa 7.5×10 <sup>-13</sup> Torr 1×10 <sup>-12</sup> mbar
Maximum operating pressure	2 Pa 1.5×10 <sup>-2</sup> Torr 2×10 <sup>-2</sup> mbar	FC: 2, SEM: 1×10 <sup>-2</sup> Pa FC: 1.5×10 <sup>-2</sup> , SEM: 7.5×10 <sup>-5</sup> Torr FC: 2×10 <sup>-2</sup> , SEM: 1×10 <sup>-4</sup> mbar
Linearity	1Pa 7.5×10 <sup>-3</sup> Torr 1×10 <sup>-2</sup> mbar	
Filament	Ir/Y <sub>2</sub> O <sub>3</sub>	
Ionizing voltage	40eV	
Emission current	0.1mA/0.4mA	
Degas	Electron bombard type 300V, 5mA	
Total pressure function	Capable	
One Click function	Capable/He/H <sub>2</sub> O/N <sub>2</sub> /O <sub>2</sub> /Any gas	
One Click leak test function	Capable	
Power input	DC24V ±10% 50W	
Weight (Sensor unit/sensor)	2.1kg/0.44kg	2.2kg/0.44kg
Maximum sensor operating temperature	120°C (248°F)	
Maximum bakeout temperature (electronics removed)	250°C (482°F)	
Operating temperature range	10 to 40°C (50 to 104°F)	
Operating humidity range	15 to 80% (not condensing)	
IP rating	IP30 (sensor unit)	
Power connector	MSTBV2.5/3-GF-5.08	
Serial communication type	RS232C/RS485 (with option)	
External input/output connector	D-sub15-pin (M2.6 screw)	
Serial communication connector	6 pole 6 wire modular connector (RJ-11)	
External input / output signal	Analog input (0 to 10V) ×2, External interlock input (pressure protection) ×1, Partial pressure setpoint output ×2 (fault, alarm), Total pressure setpoint output ×1	
Software	Qulee QCS Ver.3.0 later (Windows XP/7)	
Standard accessories	Power connector, Communication cable (3m long), Software (install CD), Instruction manual (clean paper)	
Optional accessories (Cf. Qulee optional catalogue)	QIP (Auto-measuring package spec.), Communication cable (5m, 10m, 15m long), AC power adapter, RS232C/485 converter, RS485 branch connector and junction cable, Input / output connector, Jacket heater, Carry case	
Applicable standard	CE	

## Dimensions

CGM-051/052

Unit : mm



\* Refer to the optional catalogue regarding CGM-051-QIP and CGM-052-QIP

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