

# Basic Process Gas Monitor [Qulee BGM Series]

"Qulee" (pronounced as "KLEE"), is ULVAC's latest model for residual gas analysis. Feedback from facility engineers in various production lines are incorporated in the new product design offering utmost simplicity.

Most appropriate for system control of vacuum evaporator and various types of vacuum furnaces.



## Features

- ▶ **Excellent in Cost Performance**  
Suitable for RGA application
- ▶ **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, leak up
- ▶ **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 the options catalog for details)
- ▶ **Applicable Standard**  
Conforms with CE

## Applications

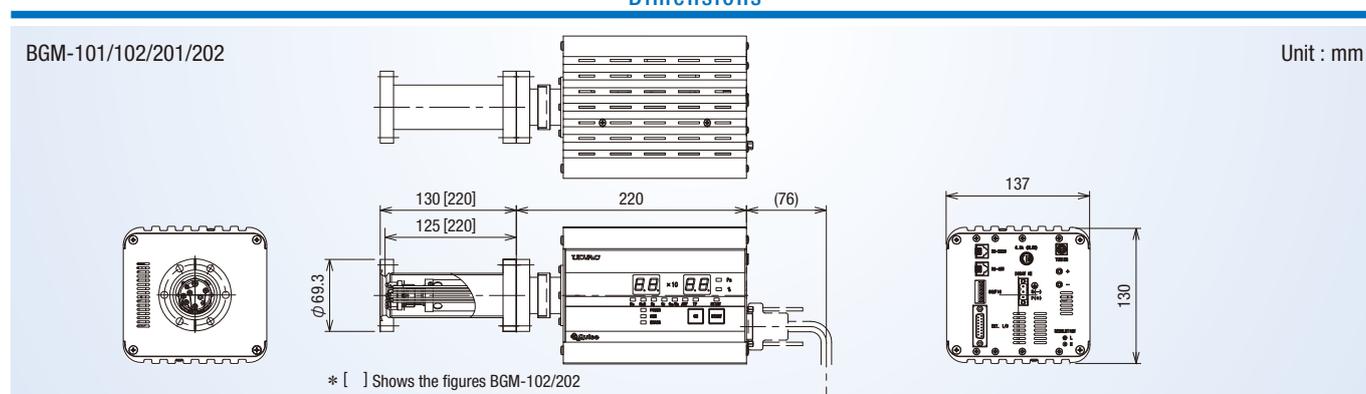
- ▶ Residual gas monitoring for PV, FPD, and semiconductor manufacturing system
- ▶ Residual gas analysis in PVD system and vacuum deposition
- ▶ Residual gas analysis for high vacuum pumping equipment, etc.
- ▶ Residual gas analysis for freeze drying system
- ▶ Various types of gas analysis for research and development

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## Specifications

Model	BGM-101	BGM-102	BGM-201	BGM-202
Mass filter type	Quadrupole			
Mass range	1 to 100 amu		1 to 200 amu	
Resolution	M/ΔM=1M (10% P.H.)			
Detector type	Faraday cup	EM tube/Faraday cup	Faraday cup	EM tube/Faraday cup
Sensitivity	10 <sup>-7</sup> A/Pa	4 A/Pa	10 <sup>-7</sup> A/Pa	4 A/Pa
	1.33×10 <sup>-5</sup> A/Torr	533 A/Torr	1.33×10 <sup>-5</sup> A/Torr	533 A/Torr
	1×10 <sup>-5</sup> A/mbar	400 A/mbar	1×10 <sup>-5</sup> A/mbar	400 A/mbar
Minimum detectable partial pressure	10 <sup>-8</sup> Pa	10 <sup>-12</sup> Pa	10 <sup>-8</sup> Pa	10 <sup>-12</sup> Pa
	7.5×10 <sup>-11</sup> Torr	7.5×10 <sup>-15</sup> Torr	7.5×10 <sup>-11</sup> Torr	7.5×10 <sup>-15</sup> Torr
	1×10 <sup>-10</sup> mbar	1×10 <sup>-14</sup> mbar	1×10 <sup>-10</sup> mbar	1×10 <sup>-14</sup> mbar
Maximum operating pressure	1×10 <sup>-2</sup> Pa			
	7.5×10 <sup>-3</sup> Torr			
	1×10 <sup>-4</sup> mbar			
Filament	Ir/Y <sub>2</sub> O <sub>3</sub> , 2pcs			
Ionizing voltage	50eV			
Emission current	0.5mA			
Degas	Electron bombard type 300V, 5mA			
Total pressure function	Capable			
One Click function	Capable/He/He/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/0.50kg	2.2kg/0.64kg	2.1kg/0.50kg	2.2kg/0.64kg
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)	Communication cable (5m, 10m, 15m long), AC power adapter, RS232C/485 converter, RS485 branch connector and junction cable, Input/output connector, Jacket heater (BGM-102/202), Carry case			
Applicable standard	CE			

## Dimensions



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