

# Product Specifications

## Sensor

Model	MPA8-7-2/65C SMPA8-7-2/65C SMPA8-7-2/65K	MPA8-5-2/100C SMPA8-5-2/100C SMPA8-5-2/100K	MPA8-1-4/300C SMPA8-1-4/300C SMPA8-1-4/300K	SMPA8-5-2/100CR SMPA8-5-2/100KR
Measured Upper Limit Pressure (N <sub>2</sub> ) *1	0.5 Pa	0.2 Pa	0.2 Pa	0.1 Pa
Maximum Operating Pressure (N <sub>2</sub> ) *2	0.9 Pa	0.6 Pa	0.4 Pa	0.1 Pa
Minimum Detectable Partial Pressure (N <sub>2</sub> )	5.0×10 <sup>-8</sup> Pa (70 eV)			
Resolution (FWHM: N <sub>2</sub> )	1.2 ± 0.3 m/z units	1.0± 0.3 m/z units	1.8± 0.3 m/z units	1.5± 0.3 m/z units
Maximum Bake out Temperature (SG removed)	350 °C			
Maximum Operating Temperature (SG installed)	150 °C			
Mounting Flange	ISO-KF16 (NW16), CF34 (ICF34)			
Weight	MPA:CF34 Flange 50 g SMPA:ISO-KF16 Flange 50 g SMPA:CF34 Flange 70 g			SMPA:ISO-KF16 Flange 50 g SMPA:CF34 Flange 70 g
Filament	Y <sub>2</sub> O <sub>3</sub> /Ir 2 pcs			3 %Re / W 2 pcs

\* SMPA type sensor is protected by a mesh on the vacuum fitting, designed to extend the lifetime of sensor in harsh environment such as plasma processes.

\*1 A pressure at which the Q-mass signal output is saturated. Beyond this pressure, signal outputs may not correspond to actual pressures.

\*2 An upper limit pressure that can be operated. If an operating pressure exceed the limit one, the measurement may stop to protect the sensor.

## Spectrum Generator

Model	QL-SG02-065-1A	QL-SG02-100-1A	QL-SG02-300-1A
Mass range	m/z 2-65	m/z 2-100	m/z 4-300
Mass filter type	Quadrupole		
Detector	Faraday cup		
Measurement scan speed	50-6400 m/z / m/z unit		
Ionization voltage	43 eV or 70 eV selectable		
Operating temperature	15-45 °C		
Operating humidity	80 % RH or less (not condensing)		
Storage temperature	0-80 °C		
Weight (with special clamp for SMPA type sensor)	575 g		
Dimension	W150 x H62 x D47 (mm)		
RS485 communication baud rate	115.2 k / 38.4 k / 9.6 kbps		
Analog I/O interface	Input: 0-10 V 2ch, Output: 0-10 V 4ch		
Contact I/O	Tool status 3 ch, Control signal input 3 ch, Set point output 5 ch		
Power input	DC 24 V ± 5 %, 100 mVpp, 50 W		
Connector type	Round type connector: PRC03-23A10-4M		

\* The above sensor specifications are based on a scanning speed of 400 ms/m/z unit

\* Configuration and spectrum acquisition software that runs on windows is included.

## Accessories

### Power Supply Unit [QL-PS01-1A]

Input	AC: 100-240 V, 50/60Hz
Output	DC: 24 V
Operating temperature	15-45 °C
Operating humidity	30-80 %RH
Dimension	W70 x D130 x H92 (mm)
Weight	700 g

### Special Cables

[QL-CR01-M-1A] Between spectrum generator and power supply	Length: 3, 5, 10 m
[SC-EBR] Between spectrum generator and PC (RJ45 connector)	Length: 3, 10 m
[QL-TD02] For external input / output	Length: 3, 5 m

### Special Clamps

[QL-LC] CF34 (ICF34) flange for MPA sensor	Weight: 140 g
[QL-LS] For SMPA sensor	Weight: 190 g

## Process monitoring in a dielectric etching chamber

