

For ultra-pure water management in semiconductor and FPD processes

## High Sensitivity **SILICA MONITOR** **SLIA-300**



CE marking compliant

### High sensitivity in a compact body for silica analysis of ultra-pure water

The silica concentration in ultra-pure water has an enormous influence on product accuracy and yields in semiconductor and FPD processes. The SLIA-300 High Sensitivity Silica Monitor perfectly meets the need in these industries for measurement below 1  $\mu\text{g/L}$  (1 ppb). It is capable of highly sensitive measurement throughout the full measurement range in a compact, desktop unit. Complete with the highly-reputed basic features, such as high-speed response and self-diagnosis, it boasts performance that takes sensitivity to a new level. The SLIA-300 provides the support you need when it comes to pure-water processes in the fabrication of semiconductors and FPDs.



#### Features

##### ● High sensitivity and high repeatability

Employing newly-developed, unique cell technology, the SLIA-300 achieves high sensitivity for handling measurements at low concentrations. With a high-speed measurement of five minutes, it guarantees  $\pm 2\%$  of full-scale repeatability in a range of 0 to 2  $\mu\text{g/L}$ .

##### ● Desktop-type compact design

Newly developed cell technology enables a breakthrough in compact design. Fitting into small spaces, it is able to accommodate a wider range of installation conditions. Its portability also allows it to be used in multiple locations.

##### ● Reagent consumption reduced by 80%

Improved cell technology enables reagent consumption to be reduced to one fifth of its predecessor. Less reagent translates to reduced "Cost-Of-Ownership".

##### ● Up to 6-point measurement possible (option)

Supporting multi-point measurement, a single SLIA-300 is able to measure more points. Set anywhere between one and six points.

##### ● Self-diagnosis function checks for running errors

This function monitors and self-diagnoses operational errors relating to sample water and reagent injection, calibration, cell temperature, and lamp operation. If an error arises, the warning lamp illuminates and a text message is displayed.

##### ● Automatic calibration or superior maintainability

Zero calibration is performed automatically prior to each measurement. In addition to verifying light transmission, the effect of turbidity can be corrected.

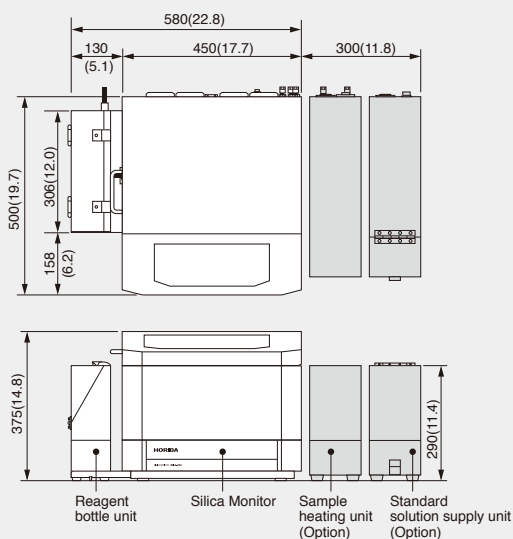
##### ● Reliable light source eliminates need for replacement

The SLIA-300 uses a monochromatic semiconductor light source that provides stable, long-lasting illumination. It can be used as a semi-permanent light source.

## Specifications

<b>Principle</b>	Molybdenum blue method
<b>Measuring range</b>	0 to 2/0 to 20 µg/L or 0 to 5/0 to 50 µg/L (specified when ordering)
<b>Repeatability</b>	±2% of full scale
<b>Measuring time</b>	5 minutes
<b>Measuring cycle</b>	5 to 995 minutes
<b>Indication</b>	• Measuring value: 3.5 digits, 7-segment LCD • Guidance: 16 characters x 4 lines, dot matrix LCD
<b>Measuring point</b>	1 to 6 points (specified when ordering)
<b>Calibration</b>	Standard calibration solution (from factory)
<b>Compensation</b>	Blank, Calibration curve (per line)
<b>Reagent</b>	• Reagent A: Sulfuric acid + ammonium molybdate • Reagent B: Oxalic acid • Reagent C: L (+) - ascorbic acid
<b>Reagent replacement cycle</b>	1 week (Manufacturer's recommendation)
<b>Power</b>	100 to 240 V AC, 50/60 Hz
<b>Power consumption</b>	Approx. 600 VA
<b>Environment condition</b>	• Location: Indoor • Temperature: 10 to 35 degrees °C • Humidity: 85% or less
<b>Sample condition</b>	• Sample water temperature: 15 to 35 degrees °C • Flow rate: 250 to 300 mL/min (should be adjustable) • Pressure: 0.1 to 0.5 MPa (14.5 to 72.5 psi)
<b>Dimension</b>	375 (H) x 580 (W) x 500 (D) mm 14.8 (H) x 22.8 (W) x 19.7 (D) in
<b>Mass</b>	Approx. 41 kg (additional 1 kg per sampling point)
<b>External input/output</b>	Output: 4 to 20 mA DC, 0 to 16 mA DC, or 0 to 1 V DC (specified when ordering) Contact output: • Measuring lines (common): Measurement, Sync signal, Alarm, Heater, Power-off calibration signal* 1, 2, Upper limit alarm, Sample-off* • Measuring lines (individually): Measuring range, Sample-off, Upper limit alarm *marked notes should be specified when ordering. Contact input: • Measuring lines (common): Calibration start, Measurement start, Economy operation, Line selection, Low range measurement, High range measurement
Serial input/output	RS-232C
<b>Applied regulation /standard</b>	CE marking, FCC Part 15
<b>Option</b>	Sample heating unit, Standard solution supply unit, Reagent kit

## External dimensions Unit: mm (in)



### Dissolved Oxygen Monitor SD-300

This portable-type DO monitor enables high-precision measurement and monitoring of DO level in ultra-pure water for cleaning

#### Measurement range:

0 to 20 µg/L, 0 to 200 µg/L,  
0 to 2 mg/L, 0 to 20 mg/L

**Repeatability:** ±1% of full scale

#### Response speed:

30s/90% (With temperature of sample water 20°C or higher.)



### 2-Channel Resistivity Meter GC-96RW

While maintaining advanced functionality and accuracy, this single converter allows simultaneous measurement and output of the resistivities of two locations.

#### Measurement range:

Resistivity: 0 to 20.00 MΩ · cm  
0 to 2.00 MΩ · cm  
0 to 0.200 MΩ · cm  
0 to 100.0 MΩ · cm

Temperature: 0 to 100°C

**Repeatability:** ±0.5% of full scale



### In-line Particle Sensor for Ultra-pure Water PLCA-800 Series

This sensor has been designed to count the particles in ultra-pure water, and display the results on a monitor in real-time.

#### Measurement principle:

Laser scattering method (90 degrees scattering)

#### Measurement range:

PLCA-800Q: 0.2 µm min.  
PLCA-801Q: 0.1 µm min.

#### Threshold:

PLCA-801Q: 2 channels [0.1] [0.2]  
PLCA-800Q: 2 channels [0.2] [0.5]



Please read the operation manual before using this product to assure safe and proper handling of the product.

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Bulletin: HAE-T0067B

[Recycled Paper] Printed in Japan 0407SK13

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