## ISHIHARA CHEMICAL

Electroless copper plating solution automatic controller

**METIS-7000** 

# NaOH, HCHO, Cu

#### **Features**

- Metis-7000 NaOH, HCHO, Cu is an electroless copper plating solution automatic controller. It can analyze sodium hydroxide concentration (NaOH), formalin concentration (HCHO) and Cu concentration which are active components of processing solution used for electroless copper plating and replenish (output signals for replenishment) supply solution automatically.
- Can maintain high analysis accuracy by washing sensors every after analysis cycle ends.
- Can perform the optimum control of analysis and replenishment by simple parameter change.
- Easy to integrate into specification of production line.
- Contribute to cost down by reducing amounts of use of process solution and labor costs for analysis and replenishment.

#### **Specification**

#### **■**Function

Control items/ analysis method	<ol> <li>NaOH concentration / neutralization titration         (analysis accuracy ±2.0%)</li> <li>HCHO concentration / neutralization titration         (analysis accuracy ±2.0%)</li> <li>Cu concentration / absorptiometry         (analysis accuracy ±2.0%)</li> </ol>
Replenishing	Controlling replenishing pump from analysis result. **Replenishing system needs mutual consultation about conditions at processing line.
Cycle time	About 20 minutes   *Cycle time depends on solution concentration, etc.



Image picture

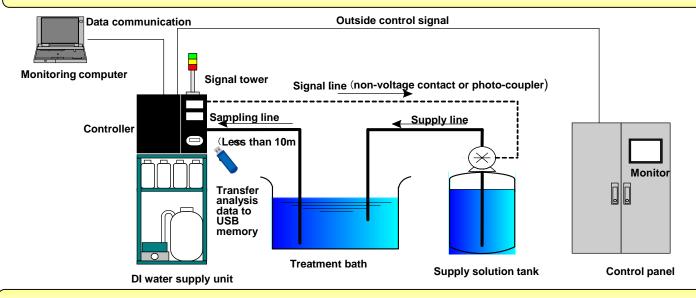
#### ■Specification

Dimension / Weight (body)	W385 × H470 × D455(mm) / 30kg
Dimension / Weight (Footstool)	W465 × H930 × D425(mm) / 15kg
Power supply	AC100V(±10%), 60/50Hz, 3P Plug+ Ground (separated ground line needed for equipped computer)
Power dissipation	200VA(max)

■ Option (Below is just some example for your consideration. If you have requests, please feel free to contact us.)

Replenishing unit	Replenishing pump, tank, replenishing hose, liquid level sensor, etc.
Alarm	Patrol light, various signal towers.
Data communication	CC-Link、RS-232C、RS-485、4-20mA communication、external control, etc.

## System summary



### Automatically analysis flow

**Start** 

Starts analysis flow every after user-fixed time elapses.

Sampling

Samples chemical solution by equipped pump.

Analyzes chemical solution concentration with chemical reagent.

Analyzing

Prints out and saves analysis data, and transfers it to USB memory. (External data communication is available as optional choice.)

Calculating

Calculates necessary replenishment to correct the processing solution concentration to preset value on the basis of analysis result.

Replenishment

Replenishes supply solution into treatment tank by controlling replenishing pump with output signal from the controller.

Cleaning

Cleans reaction cell and sensors and stands-by till next analysis flow begins.

Note1) Please use our designated genuine parts or reagents for maintenance and running in order to prevent unexpected troubles.

Note2) Please be notified that we may change the specification or appearance of the controller for improvement without notice.

Note3) So as to maintain analysis accuracy, we recommend periodical maintenance or adjustment by our skilled engineer. (out of warranty)

### For inquiry contact



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