

OUYEMURA STARLINE-DASH[™] Electroless Nickel Plating Controller

The ultimate in automated sampling, analysis and replenishment



STARLINE-DASH[™] 4-NP Plating Controller

Uyemura, the industry leader in electroless nickel plating and plating control, presents the STARLiNE-DASH 4-NP, the most advanced process control technology for EN plating.

DASH 4-NP builds on the highly successful track record of NP-3 - with important added features that EN platers have designated "most important" for effective, consistent plating performance.

DASH 4-NP samples the electroless nickel plating solution, analyzes nickel and pH values, and replenishes automatically. As a result, baths can be maintained continuously at 2-4% of optimum, nickel can be controlled within +/-0.05 g/L, and overall plating rate can usually be increased.



It also offers these 12 important advantages:

- A foundation in the field-proven analysis protocols of the DASH NP-3
- Automatic pH and nickel calibration
- Pre-programming with parameters applicable to specific EN chemistry; simply select the plating product from the menu
- Data collection tabulates in situ without downloading with simple PC connection

Replenishment of Major Components



- Controls up to two independent plating baths
- Intuitive operation via password-protected HMI
- Immediately displays real time analysis; will also display remotely
- Archives analysis and error records to removable USB memory
- Connects to an external monitoring system for real time bath condition monitoring
- Exceptionally "green;" plating rinse water cools sampling solutions, for example, precluding the need for additional cooling water.

And because it reduces the amount of chemistry used, and the parts rejected, 4-NP contributes to pollution prevention.

- Side-accessible reservoir column
- Precise tracking of chemical use, bath age, and replenisher inventory



STARLINE-DASH[™] 4-NP operators review system history, establish sampling schedules, calibrate bath sensors, and specify tolerances.

The system does the rest.

As a result:

- Deposition rates are exceptionally uniform.
- The plating line can perform at maximum productivity, even when loading is highest.
- Management has a proven way to control costs and prevent rejects.

SAMPLIN	G '11/0	3/12 17:0)3	RUN
TANK-1	مر در معرد	ور ام _ل ملو		4.70 4.50 4.80
Ì→← Ì ¦ ≁≁			·~~~	4.80
10		14		18
		R	ENEW	рН
STOP		to VALUE	MEAS. MENU	ALARM RESET

Display during analysis

SAMPLI	NG	'11/0	3/12	17:03			RUN	
TANK-1	, 11 /03,	/06 16:	:56	TANK	-2	, 11/) /03/0(3 17:00
	4.	. 4	7			2	4.	48
	REP	815r	nL			RE	P)	224mL
	4.	. 51	6	بردي		4	4.	57
	REP	1371	nL			RE	P)	85mL
1hour	MTO O.	31 21.	5 c	1hou		MTO	0.18	22.5 c
STOP					ME	AS. ENU		ALARM RESET

Display showing analysis

Uyemura's STARLiNE-DASH[™] 4-NP Plating Controller gives EN platers precise bath control, and a significant competitive advantage. Learn more today.



STARLINE-DASH[™] 4-NP Provides Ultimate Control for Uyemura EN Chemistries:

NIMUDEN™ NPR-4 Electroless Nickel for

electronic and PCB applications with fine line circuitry. Acidic bath formulation allows the deposition of electroless nickel without bridging. Process operates at lower temperatures for improved resist tolerance.

NIMUDEN[™] NPR-8 EN-phosphorus is

mildly acidic, was developed for EN / gold plating to selective PWBs with dry film masking. Catalyst, electroless nickel, and immersion gold components are optimized for highest productivity and bath life.

EPITHAS™ NPR-18 mildly acidic electroless nickel plating bath for fine line circuitry in silicon wafer plating. Stable bath allows bridge-free electroless nickel deposit. Nickel layer adheres to the IC and creates a diffusion barrier. **NBB Electroless Nickel** is a mid-phos electroless nickel process in the range of 6 to 8%. Deposits are bright and robust, and free of lead and cadmium.

ANP Electroless Nickel provides excellent adhesion through at least six MTOs. The process does not employ a strike and adds no additional steps compared to normal aluminum preparation double zincating. **KTY Electroless Nickel** is bright, stable, and heavy metal–free.



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