

## Applications Matrix

## Point-of-Use (POU) Temperature Control System

2006 Update

Dynamic Temperature Control



## A Message to our Customers

Originally founded in 1985, our Company has grown into a recognized leader in providing temperature control systems to the global semiconductor industry.

Today, Noah Precision, LLC is a privately held, employee owned and managed company. We are guided in our belief that prosperity in this competitive industry stems from providing customers with highly engineered new products and world class customer service.

We know that great products are often the result of great customer feedback and the application of innovative technology. We strive to create value for our customers through a process that lets the customer influence our goals, objectives, product developments and business practices.

We embrace personal accountability and accept responsibility for prudent risk taking. We encourage personal values, which guide us to consistently meet the commitments we make and we endeavor to treat those with whom we interact with respect as we wish to be treated ourselves.

Sincerely,



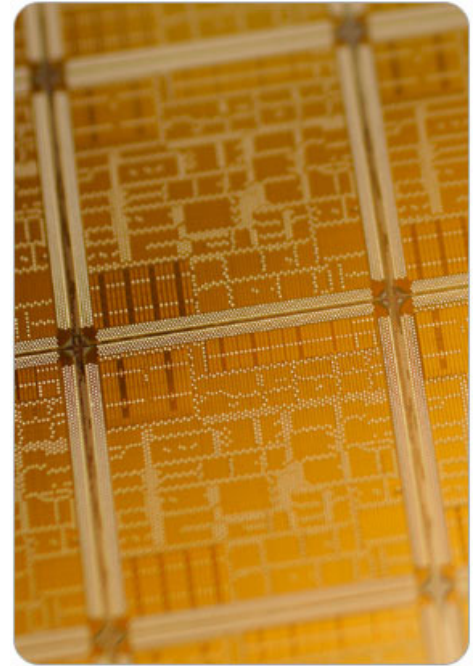
Pete Adams, President  
Noah Precision, LLC

**VISIT OUR NEWLY REDESIGNED WEBSITE: [WWW.NOAHPRECISION.COM](http://WWW.NOAHPRECISION.COM)**

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## Temperature Control Systems Applications Matrix

In the mid-1990's, Noah Precision introduced the Point-of-Use (POU) chiller system. Its modular design concept was quickly embraced by Semiconductor IDM's and recognized as a viable alternative to conventional, compressor-based chillers. This remarkable system, offering a small form factor, low Cost-of-Ownership and Dynamic Temperature Control have created significant demand amongst those Process and Equipment Engineers who are looking to optimize their temperature sensitive processes. This demand has driven Noah's market and product development focus primarily toward end-user customers at their volume manufacturing sites.



Today, Noah Precision Temperature Control Systems are installed on more than sixty (60) different applications at over fifty (50) wafer fabs, worldwide.

The table of contents below are categorized by semiconductor process tool manufacturer. Each page includes an Applications Matrix that shows each process tool & chamber where Noah Temperature Control Systems are installed and operating:

- Applied Materials
- Lam Research
- Mattson
- Novellus
- TEL

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# Certificate



Certificate no.

WA 72050148 01

**License Holder:**

Noah Precision, LLC  
2501 SE Columbia Way, Ste. 140  
Vancouver WA 98661  
USA

**Manufacturing Plant:**

Noah Precision, LLC  
2501 SE Columbia Way, Ste. 140  
Vancouver WA 98661  
USA

Test report no.: USA-UH 09872654 004

Client Reference: Duane Kogler

Tested to: SEMI S2-93A/01.96

Certified Product: Temperature Controller

License Fee - Units

Model Designation: 3300, 3500

4

Rated Voltage: DC 180V

Rated Current: 30A max

Protection Class: I

Special Remarks: Replaces Certificate WA72041645.

4

Licensed Test mark:

Signatures

Date of Issue

(day/mo/yr)

18/01/2005



Stephan Schmitt  
President

Dipl.-Ing. M. Raap  
QA Certification Officer

# Applied Materials®

Chambers	Platforms	Process	Loops	Model
ASP(+)	Centura 5200 - Centura 2 & 300mm	Strip	Wall	3300
DPS – DPS II	Centura 5200 - Centura 2 & 300mm	Si	Cathode	3300
			Wall	3300
		Metal	Cathode	3300
			Wall	3300
eMax – eMax (DT)	Centura 5200 - Centura 2 & 300mm	Oxide	Cathode	<b>3500</b>
			Wall	2015
HART(+)	Centura 300mm	Si - DT	Cathode	<b>3500</b>
			Wall	2015
MxP(+)- eMxP+	P5000 - Centura 5200 - Centura 2	Si	Cathode	3300
			Wall	3300
		Metal	Cathode	3300
			Wall	3300
		Oxide	Cathode	3300
			Wall	3300
PVD	Endura 5500 - Endura 2 (300mm)	Al - TiN	Platen	3300
RPS	Centura 5200 - Centura 2	Strip	Cathode	3300
			Wall	3300
Super e	Centura 5200 - Centura 2	Oxide	Cathode	<b>3500</b>
			Wall	3300

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**Lam Research®**

Chambers	Platforms	Process	Loops	Model
4400 – 4400XLe	Standalone - Alliance	Si	Upper electrode	3300
			Lower electrode	3300
4500 – 4500i 4500XLe	Standalone - Alliance	Oxide	Upper electrode	3300
			Lower electrode	3300
4700 – 4700XLe	Standalone - Alliance	Metal	Upper electrode	3300
			Lower electrode	3300
Exelan HPT / Flex	Alliance - 2300 (200 & 300mm)	Oxide	Upper electrode	
			Lower electrode	3300 <b>3500</b>
Kiyo	2300 (300mm)	Si	Lower electrode	3300
TCP 9100	Alliance	Oxide	Lower electrode	<b>3500</b>
TCP 9400	Standalone - Alliance	Si	Lower electrode	3300
TCP 9600	Standalone - Alliance	Metal	Lower electrode	3300
Versys	2300 - 2300 Domino (200 & 300mm)	Si	Lower electrode	3300
		Metal	Lower electrode	3300

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## Mattson

Chambers	Platforms	Process	Loops	Model
ICPsm	Aspen II	Strip / Poly	Platen	3300
Highlands(+)	Aspen III (300mm)	Strip / Poly	Platen	3300

## Novellus

Chambers	Platforms	Process	Loops	Model
Iridia	PEP	Strip	Platen	3300
Sierra	Sierra (300mm)	Strip	Platen	3300

## TEL™

Chambers	Platforms	Process	Loops	Model
DRM	Unity II(e) - Unity M(e) - TELIUS	Oxide	Lower electrode	3300 <b>3500</b>
SCCM	Unity II(e)	DT	Lower electrode	3300
		Poly	Lower electrode	3300
		Oxide	Lower electrode	<b>3500</b>
SCCM	Unity M(e) - TELIUS (SP)	Poly	Upper electrode	3300
			Lower electrode	<b>3500</b>
		Oxide	Upper electrode	3300
			Lower electrode	<b>3500</b>

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**NOAH PRECISION, LLC**  
ENABLING TECHNOLOGY  
*Thermoelectric Temperature Control  
for Semiconductor Wafer Processing*

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**Plasma Etch**

POU 3300    POU 3500

**MOCVD Source Bubbler**

POU therMostat

**Stand-Alone**

2008    2015    2021

POU evolution

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