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## **Entegris Introduces InVue(TM) Line of Process Control Solutions for Monitoring Liquid Chemical Processes in Semiconductor Manufacturing**

### **Broad Range of Products Will Help Increase Yield and Reduce Cost by Protecting Process Integrity**

BILLERICA, Mass., July 15, 2015 (GLOBE NEWSWIRE) -- Entegris, Inc. (NASDAQ:ENTG), a leader in yield-enhancing materials and solutions for highly advanced manufacturing environments, today launched a newly branded suite of products designed to monitor liquid chemical delivery systems used on process tools in semiconductor manufacturing. The products, to be marketed under the InVue™ brand, allow customers to better monitor their liquid processes by providing a real-time "window" into critical process parameters.

Photos accompanying this release are available at <http://www.globenewswire.com/newsroom/prs/?pkgid=34399>

<http://www.globenewswire.com/newsroom/prs/?pkgid=34400>

The initial suite consists of a series of chemical concentration monitors, integrated flow controllers, flowmeters and oxygen sensors that are primarily used in CMP, plating and wet etch and clean applications. They are designed to support greater process efficiencies in front-end-of-line, back-end-of-line and sub-fab liquid chemical delivery systems by enabling reduced chemical costs and increasing wafer throughput.

"Manufacturing cost management is paramount in today's fabs, but you can't manage what you can't measure," said Entegris Vice President of Fluid Management Solutions, John McDaniel. "Our new line of InVue chemical monitors, flow controllers and sensors allow our customers to see 'inside' of their manufacturing processes, reduce process variability and improve device yields."

Initially included in the new InVue suite are the following products:

- **The InVue Integrated Flow Controller**

This controller is designed for point-of-use chemical blending and dispense in ultrapure liquid chemical applications, as well as DI (de-ionized) water and slurries. Two models are available: NT 6510 for low to medium flow rates (15 milliliters/minute to 1,250 milliliters/minute), and NT 6520 for medium to high flow rates (2.5 liters/minute to 40 liters/minute). Both products have also been recently updated to include new ultra-stable pressure sensing technology with temperature compensation that minimizes error during process fluctuations. Additionally, the valve-seat and diaphragm in each are designed to minimize dead volume and fluid shear, reducing the possibility of process contamination.

- **The InVue Dissolved Oxygen Sensor**

Monitoring dissolved oxygen is critical for plating processes in order to ensure the deposition rate does not accelerate or decrease, causing voids/gaps. To address this problem, Entegris offers this advanced, optically-based high sensitivity luminophore sensor targeted for high purity chemical plating tool and bath applications. This sensor is housed in a PTFE enclosure to monitor dissolved oxygen in metal-reactive plating chemistries, improving device yields, extending process chemistry lifetimes and lowering operating costs. It also features a small footprint for installation in a limited space.

- **The InVue CR 288 and InVue NX 148 Chemical Concentration Monitors**

Both systems provide real-time information for point-of-use chemical blending, spiking and dilution without process intrusion or interruption. Each employs a PC-based graphical user interface for easy set-up, data collection, analysis and field calibration. These systems also use an innovative refractive index technology that measures the refraction of light in the process fluid, resulting in an accurate, safe and repeatable means of measuring liquid concentration.

- **The InVue Vortex Flowmeter**

This is an economical, low-maintenance device designed for basic flow measurement in high-purity DI water and some chemical dispense applications. Available in two models, the JMA Series and the JMB Series, each is designed to be mounted in-line with existing piping systems and features no moving parts for reduced particle generation.

For more information about the InVue line of products, go to [www.entegris.com](http://www.entegris.com).

## About Entegris

Entegris is a leading provider of a wide range of products for purifying, protecting and transporting critical materials used in processing and manufacturing in the semiconductor and other high-tech industries. Entegris is ISO 9001 certified and has manufacturing, customer service and/or research facilities in the United States, China, France, Germany, Israel, Japan, Malaysia, Singapore, South Korea and Taiwan. Additional information can be found at [www.entegris.com](http://www.entegris.com).

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The InVue Dissolved Oxygen Sensor monitors dissolved oxygen in metal-reactive plating chemistries to improve yields and extends chemistry lifetimes.

The InVue NX 148 Chemical Concentration Monitor provides real-time information for point-of-use chemical blending, spiking and dilution without process intrusion or interruption