



**FOR IMMEDIATE RELEASE**

**Sabeus Releases AG-1 Laser with 100X Improvement in Signal Precision for More Accuracy, Stability and Bandwidth**

*AG-1 laser intended for interferometric sensing applications in oil & gas, military, test & measurement and telecommunications applications*

**CALABASAS, CA – Oct. 2, 2006** – Sabeus, Inc. today announced the commercial availability of the AG-1 distributed feedback (DFB) laser. The AG-1 is the first Sabeus product to implement the company's patent-pending Multi Variable Control System (MVCS) for dynamic signal feedback. MVCS allows the AG-1 to achieve 100-times the signal precision of comparable semiconductor diode lasers without the bulk, complexity and cost of laser isolation systems. The AG-1 is the latest addition to the company's line of Precision Advantage™ optical components that have been shipping since 2000.

The AG-1 laser with MVCS incorporates multiple feedback loops to deliver an effective linewidth of 10-400 kHz and frequency stability of  $\pm 5$  MHz for approximately two orders of magnitude improvement over today's state-of-the-art semiconductor lasers. In addition, the AG-1's narrow linewidth offers very high signal coherency for accurate measurements over long distances. The AG-1 is tunable across C & L bands with a tuning range of 3nm and a minimum step size of 0.5 pm. In systems that operate at multiple wavelengths, the tunable AG-1 reduces overall system cost because a 1:1 sparing ratio is not required - also facilitating support logistics.

"We've been selling our other components and systems into rugged applications for several years, and the AG-1 was born out of our own need to source a laser that provided the right balance of accuracy, cost and durability," said André de Fusco, president and CEO of Sabeus. "Our strategy with the AG-1 will be to incorporate it into our Field Sense products for the oil & gas industry, and also to work with OEM partners to target other markets."

**Meets the Needs of a Wide Range of Applications**

The low-cost and durability of the DFB form factor along with the increased accuracy of the laser make it ideal for a wide range of applications:

- **Oil & Gas Seismic Surveys**: The AG-1 provides a cost-effective and highly stable solution for a new generation of fiber-optic seismic survey systems being deployed to map the earth's subsurface for hydrocarbons using interferometric interrogation techniques. The laser features coherency over long distances, and can be used in harsh undersea or downhole applications. The AG-1 needs no costly isolation for accurate measurements and it is capable of reading twice the number of sensors previously possible. The AG-1's low phase noise and non-microphonic qualities

guarantee highly accurate surveying results with a low total cost of ownership. The AG-1 will enable a new generation of fiber-optic sensing systems that in the past were too fragile or prohibitively expensive for the rugged operating environment of the energy industry.

- **Military/Homeland Security:** Similar to the seismic applications in the oil & gas industry, military/homeland security surveillance applications will benefit from the AG-1's immunity to environmental interference and its ability to be deployed in harsh environments on land, sea and in the air. The AG-1 is the ideal source laser for acoustic demodulators that sense pressure waves in the water and ground for a wide variety of surveillance applications. Typical AG-1 applications are in harbor security, perimeter security, towed arrays and fixed arrays. The AG-1 will accelerate the deployment of fiber-optic surveillance systems that previously were deemed too expensive or too unreliable for DOD service.
- **Test & Measurement:** By precisely measuring very small deviations in magnetic media the AG-1 can serve as a highly accurate and tunable source laser for optical test systems. At roughly half the cost of gas lasers, the AG-1 can usher in a new generation of affordable, ultra-precise test & measurement systems to improve a wide variety of manufacturing processes, including wafer deposition and magnetic systems.
- **Telecommunications:** telecom systems providers can benefit from the AG-1's signal stability to create ultra-dense wave division multiplexing (UDWDM) networks with up to 68 Gbps per wavelength for metropolitan and long-distance networks vs 40 Gbps per wavelength today.

"The benefit of the AG-1 is that it offers the precision of more expensive lasers in a durable, rugged form factor – and it opens up a new world of applications," said Armando Montalvo, Sabeus' vice president of Engineering. "Our groundbreaking MVCS provides the increased precision, and we'll apply this technique to more Sabeus devices in the future."

### **High Power Output with Low Power Consumption**

The AG-1 has an optical output level of between 10-50 mW and consumes 4 watts of power (typical). It is a complete laser solution in a compact 3" x 4" x .5" (76mm x 102mm x 12.7mm) package that weighs only 9.2 ounces (261 grams) and includes TE cooler, laser driver, power regulator and embedded microprocessor for control.

### **Pricing and Availability**

The Precision Advantage AG-1 laser is now available directly from Sabeus, or its worldwide network of distributors for design into OEM systems. Pricing starts at \$15,000. Sabeus will deliver Field Sense sensor systems with the AG-1 beginning in early 2007.

**About Sabeus, Inc.**

Sabeus provides precise, reliable, cost effective fiber optic sensing solutions for rugged environments in oil & gas sensing, defense/homeland security and telecommunications applications. The company's products include Field Sense downhole oil & gas sensing systems, Precision Advantage lasers and gain flattening filters for signal conditioning, and acoustic monitoring arrays for defense applications. Sabeus, founded in 1998, has facilities in Calabasas, CA, Houston, TX and Freeport, PA. The company is ISO 9000 certified and Telcordia qualified. For more information, please visit [www.sabeus.com](http://www.sabeus.com).

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