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Sunpower Offers Active Vibration Cancellation for CryoTel® Cryocoolers

ATHENS, OH, August 21, 2017 -- Sunpower, Inc., the world leader in free-piston Stirling engine and cryocooler technology, has officially released an Active Vibration Cancellation (AVC) system for its CryoTel® MT, CT, and GT cryocoolers.

The development of the AVC system opens opportunities for Sunpower cryocoolers that were previously unavailable due to the inherent vibration of Stirling machines. The AVC system's active balancer uses a feedback signal from an accelerometer to cancel the first 10 harmonics of the 60 Hz operation of the cryocooler, minimizing vibration at the cold tip as well as exported vibration to its mounting structure.

CryoTel Cryocoolers with AVC systems have been used for applications that require extremely low vibrations, such as laser cooling, infrared detectors, spectroscopy, x-ray diffraction, atomic microscopy, high-temperature superconductivity, neutron beams, space infrared applications and radio telescopes, among others.

Johns Hopkins University, MIT's Lincoln Laboratory, NASA's Jet Propulsion Laboratory, and many others have either implemented the AVC system or are developing products that will use it. Several large terrestrial observatories, including the Subaru Telescope and Gemini South Observatory in Hawaii, have AVC-equipped instruments.

The AVC system includes a controller, an active balancer and an accelerometer, as well as the necessary cabling for power and instrumentation. The controller drives both the cryocooler and the active balancer.



The Sunpower AVC system is backward compatible with any CryoTel CT, MT, and GT cryocooler. Installation is simple. The AVC system is a drop-in replacement for the standard passive balancer already offered on Sunpower cryocoolers.

Sunpower plans to extend its AVC technology to its other cryocoolers, including the CryoTel DS1.5 and DS2.1 as well as the DS30, when it becomes commercially available. For performance data on the AVC system, contact Sunpower or visit www.sunpowerinc.com

Sunpower designs and develops high reliability cryocoolers and externally heated Stirling cycle engines. Its cryocoolers are used to lower temperatures below -150°C without the use of expensive liquid nitrogen, while its heat engines are used in micro co-generation (heat and power) devices.

Sunpower, Inc. is a business unit of the Materials Analysis Division of AMETEK, Inc., a leading global manufacturer of electronic instruments and electromechanical devices with annual sales of approximately \$4.0 billion. For more information, visit www.sunpowerinc.com

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Sunpower AVC (Active Vibration Cancellation) System

