



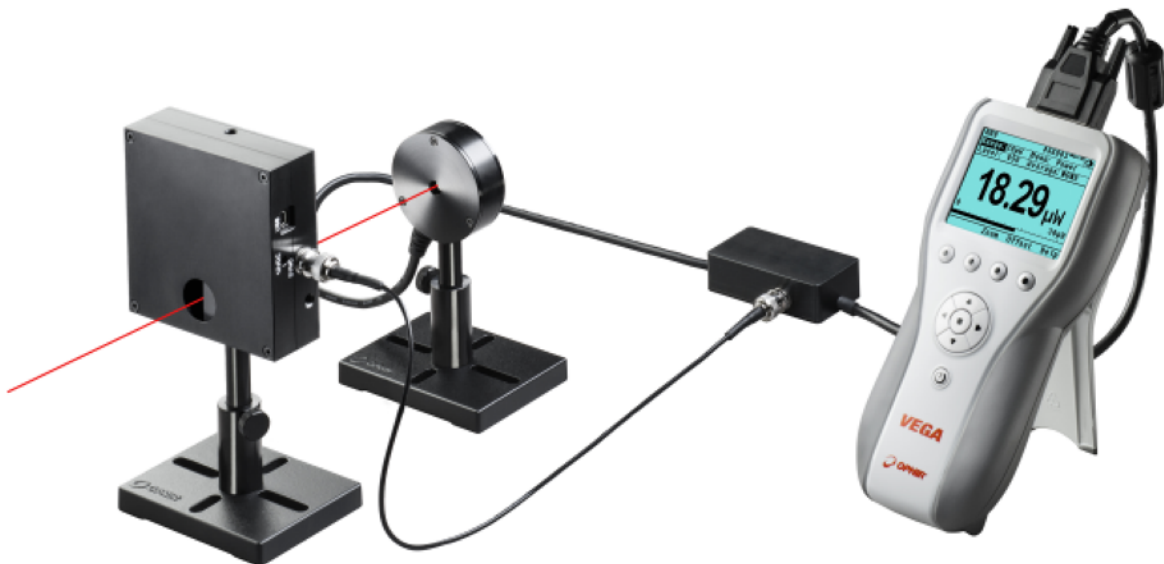
2 Tech Drive, Suite 201
Andover MA 01810
www.mksinst.com

Contact:
Bill Casey
bill_casey@mksinst.com

MKS' Ophir® Business Unit Announces Calibrated Sensor for Measuring Very Low Power THz Sources

Andover, MA, May 8, 2017 – [MKS Instruments, Inc.](http://www.mksinst.com) (NASDAQ: MKSI), a global provider of technologies that enable advanced processes and improve productivity, has announced the Ophir® **RM9-THz Radiometer**, a low noise, high sensitivity sensor for measuring low power levels of 50nW to 100mW from short pulse or CW lasers in the 0.7 to 10 THz wavelength range.

The RM9-THz is a complete sensor measurement package that includes a NIST-calibrated pyroelectric sensor, THz absorber, and 18Hz chopper to measure a wide range of radiation. A digitally synthesized lock-in amplifier reduces external noise to a minimum, allowing the sensor to measure powers as low as 50nW. The output of the sensor can be displayed on any standard Ophir meter or on a PC.



According to Ephraim Greenfield, CTO, Ophir Products, "The RM9-THz is the newest member of Ophir's THz product family, which includes the 3A-P-THz high sensitivity thermal power/energy sensor, the Pyrocam™ IV next generation beam profiling camera, and the Pyrocam™ IIIHR beam profiling camera for OEMs. The RM9-THz sensor is designed for detecting very low powers and is not sensitive to background radiation. This makes it ideal for such applications as materials characterization, medical imaging, surveillance, and high-speed communications."

The RM9-THz features an 8mm aperture, very low noise levels of of ~20nW over 10s, and fast response times of 3.5s with display. The sensor can be connected to any standard Ophir meter or PC interface to display data, including Ophir's StarLite, Nova II, and Vega smart displays, and Juno PC interface. The display is automatically configured and calibrated when plugged into one of the company's laser measurement heads.

Availability & Pricing

The RM9-THz Radiometer is available now. OEM prices available on request.

DATA SHEET: <http://ow.ly/rME430brUug>

VIDEO: <https://www.youtube.com/watch?v=SwPt9grlsME>

About MKS Instruments

MKS Instruments, Inc. (NASDAQ: MKSI) is a global provider of instruments, subsystems and process control solutions that measure, control, power, monitor, and analyze critical parameters of advanced manufacturing processes to improve process performance and productivity. Our products are derived from our core competencies in pressure measurement and control, flow measurement and control, gas and vapor delivery, gas composition analysis, residual gas analysis, leak detection, control and information technology, ozone generation and delivery, RF & DC power, reactive gas generation, vacuum technology, photonics, sub-micron positioning, vibration isolation and optics. Our primary served markets include semiconductor capital equipment, general industrial, life sciences and research. Additional information can be found at www.mksinst.com.

About the Ophir Brand

With over 40 years of experience, the Ophir brand comprises a complete line of instrumentation, including power and energy meters and beam profilers. Dedicated to continuous innovation in laser and LED measurement, the company holds a number of patents, including the R&D 100 award-winning BeamTrack power/position/size meters; BeamWatch®, the industry's first non-

contact, focus spot size and position monitor for lasers in material processing; and Spiricon Ultracal™, the baseline correction algorithm that helped establish the ISO 11146-3 standard for beam measurement accuracy. The NanoScan family of scanning-slit technology products are capable of measuring beam size and position to sub-micron resolution. The Ophir Optics products include high performance IR thermal lenses and optical elements for the defense, security, and commercial markets, as well as high quality optics for high power CO² lasers and 1 micron lasers for cutting, welding, drilling, and 3D printing systems. Ophir is ISO/IEC 17025:2005 accredited for calibration of laser measurement instruments. The company's modular, customizable solutions serve manufacturing, medical, military, and research industries throughout the world. For more information, visit <http://www.ophiropt.com/>.

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Sales Inquiries: sales@us.ophiropt.com

For more information, contact:

Gary Wagner, General Manager
Ophir Business Unit (U.S.)
3050 North 300 West
North Logan, UT 84341
Tel: +1 435-753-3729
E-mail: gary.wagner@us.ophiropt.com
Web: www.ophiropt.com/photronics

PR Office:

Shari Worthington
Telesian Technology
49 Midgley Lane
Worcester, MA 01604
Tel: +1 508-755-5242
E-mail: sharilee@telesian.com