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

Contact:
Gary Wagner, GM (U.S.)
gary.wagner@us.ophiropt.com

Shari Worthington, PR
sharilee@telesian.com

MKS Announces Ophir® FGC100, NIST Traceable LED Calibration Standard

Andover, MA – September 12, 2017 – MKS Instruments, Inc. (NASDAQ: MKSI), a global provider of technologies that enable advanced processes and improve productivity, announces the **Ophir® FGC100**, a NIST-traceable LED calibration standard designed to calibrate the Ophir® FluxGage™ system. FluxGage is a compact, all-in-one LED luminaire measurement system that measures flux, color, and flicker, important quantities for evaluating the performance of LED-based products. FluxGage is used instead of large, cumbersome integrating spheres during development and production, and for incoming inspection and quality control of new and replacement parts, allowing LED luminaires and modules to be sorted for consistency.

The FGC100 is a current- and temperature-stabilized LED source that calibrates total spectral radiant flux from 390 to 800 nm. It includes a lamp unit and controller. The lamp unit is a forward emitting source. A special fixture in the FluxGage cover ensures repeatable mounting and calibration.

"The FluxGage system measures LED luminaires and, therefore, needs an LED calibration standard as opposed to the typical tungsten standard," said Dr. Efi Rotem, CTO, Ophir Photonics. "This does away with a number of major calibration uncertainties. There are no longer spectral and angular distribution mismatches between the tungsten standard and the measured LED sources. Stray light in the spectrometers is eliminated by removing the excess infrared radiation emitted by tungsten sources."

To ensure reliability, the FGC100 is calibrated at Ophir using a NIST-traceable source. The spectral flux data is provided on USB drive. The FGC100 controller includes an hour meter that indicates the total working time of the unit. After 50 hours, the FGC100 should be sent to Ophir for recalibration.

Availability & Pricing
The FGC100 LED calibration standard is available now. The FluxGage™ compact, all-in-one LED luminaire measurement system is priced separately. OEM prices available on request.

FGC100 DATA SHEET: http://ow.ly/PPy330ezhFL
FluxGage™ DATA SHEET: http://ow.ly/Cp8f30ezhBs

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, MKS, through its Ophir brand, 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 CO^2 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. Their modular, customizable solutions serve manufacturing, medical, military, and research industries throughout the world. For more information, visit http://www.ophiropt.com/.

###

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
www.ophiropt.com/photonics

Shari Worthington, PR
Telesian Technology
49 Midgley Lane, Worcester, MA 01604
Tel: +1 508-397-6345
E-mail: sharilee@telesian.com