

greater focal lengths, such as in remote laser welding,” said Reuven Silverman, General Manager, Ophir Photonics. “That means using laser systems that combine larger beams, lower M^2 , and longer focal length lenses. This results in smaller focal spots at longer distances from the laser and Rayleigh lengths of up to 20 meters. To support ISO11146 standard measurement of such lasers, BeamSquared is the only M^2 system that now provides long focal length lenses with high focal length accuracy.”

The **BeamSquared** systems include the BeamSquared M^2 software and a long optical train. The software measures beam propagation characteristics on both the X and Y axes, including waist diameters, full angle divergences, waist locations, Rayleigh lengths, M^2 or K and BPP factors, astigmatism, and asymmetry. The system displays 2D or 3D beam profiles for visual verification of beam behavior through focus. Functions include a 3D slice display and the ability to add 3D displays to reports. Reports can also incorporate a beam caustic chart, in addition to setup information, laser measurements, and a variety of statistics. An Automation interface via .Net components allows users to build custom applications that incorporate the laser beam analysis and processing power of the BeamSquared system.

BeamSquared is a camera-based system that can be mounted horizontally or vertically to optimize bench space. The **Ophir BSQ-SP920** silicon CCD camera accurately captures and analyzes wavelengths from 190nm - 1100nm. It features a compact design, wide dynamic range, unparalleled signal to noise ratio, and reduced blooming.

Availability & Pricing

The **Ophir BeamSquared** M^2 beam propagation system is available now. Cameras and manual M^2 software are priced separately. OEM prices available on request.

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

DATA SHEET: <https://tinyurl.com/fc39z9ut>

About MKS Instruments

MKS Instruments, Inc. (NASDAQ: MKSI), is a global provider of instruments, systems, subsystems and process control solutions that measure, monitor, deliver, analyze, power and control critical parameters of advanced manufacturing processes to improve process performance and productivity for our customers. Our products are derived from our core competencies in pressure measurement and control, flow measurement and control, gas and vapor delivery, gas composition analysis, electronic control technology, reactive gas generation and delivery, power generation and delivery, vacuum technology, lasers, photonics, optics,

precision motion control, vibration control and laser-based manufacturing systems solutions. We also provide services relating to the maintenance and repair of our products, installation services and training. Our primary served markets include semiconductor, industrial technologies, life and health sciences, research and defense. Additional information can be found at www.mksinst.com.

About the Ophir Brand

Ophir is a brand within the MKS Instruments Light & Motion division. The Ophir product portfolio consists of laser and LED measurement products, including laser power and energy meters, laser beam profilers measuring femto-watt to hundred-kilowatt lasers, high-performance IR and visible optical elements, IR thermal imaging lenses and zoom lenses for defense and commercial applications, OEM and replacement high-quality optics and sub-assemblies for CO₂ and high-power fiber laser material processing applications. Ophir products enhance our customers' capabilities and productivity in the semiconductor, industrial technologies, life and health sciences, research and defense markets. For more information, visit www.ophiropt.com.

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