

# BEAMAGE-M2

Automated  $M^2$  Measurement System

PRELIMINARY

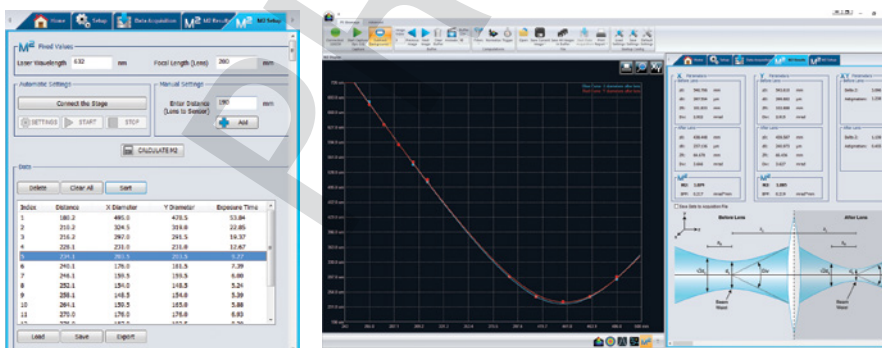
NEW



## KEY FEATURES

- 1. LARGE APERTURES**  
The only  $M^2$  system on the market equipped with a complete set of 50mm (2") optics. Also, the sensor is 11.3 x 11.3mm
- 2. SIMPLE ALIGNMENT**  
Two beam-steering mirrors are included for quick and easy alignment of your laser into the system. The internal mirrors are factory-aligned and the pre-set height also simplify the alignment
- 3. COMPACT**  
The low-profile ingenious mechanics make it easy to fit the device on any optical table
- 4. ISO COMPLIANT**  
The calculations are based on the second order spatial moments and are fully compliant to the ISO 11146 and 13694 standards
- 5. FAST ACQUISITION**  
Make a complete, ISO-compliant measurement in only 20 seconds with the ROI feature and in less than a minute with full-frame acquisition
- 6. FLEXIBLE & INTUITIVE SOFTWARE**  
In the easy-to-navigate software, both automatic and manual settings are available, so data points can be added or removed even after an automatic scan is completed

## USER INTERFACE



Enter measurement parameters in the  $M^2$  Setup tab.

View and save results with the comprehensive  $M^2$  Results tab.

## SEE ALSO

ACCESSORIES FOR BEAM DIAGNOSTICS  
LIST OF REGULAR ACCESSORIES

# BEAMAGE-M2

PRELIMINARY

## SPECIFICATIONS

BEAMAGE-M2*	
<b>SENSOR TECHNOLOGY</b>	Beamage-4M included
<b>EFFECTIVE APERTURE</b>	Ø 48 mm optics 11.3 x 11.3 mm sensor
<b>MEASUREMENT CAPABILITY</b>	
System Wavelength Range	350 - 1100 nm
Attenuation Range	3 Flip-mount attenuators for 8 levels of attenuation: no attenuation, ND0.5, ND1, ND2, ND1.5, ND2.5, ND3, ND3.5
Beam Diameter Range <sup>a</sup>	55 µm to 11.3 mm
Translation Stage	
Mechanical Travel Range	200 mm
Effective Optical Path Range	400 mm
Lens Focal Length	3 AR-coated lenses included: 200 mm, 250 mm and 300 mm
Typical M <sup>2</sup> Accuracy <sup>b</sup>	±5%
Typical M <sup>2</sup> Repeatability <sup>b</sup>	±2%
Applicable Light Sources	CW and pulsed
Typical Measurement Time	45 sec with full-frame acquisition
<b>DAMAGE THRESHOLDS <sup>c</sup></b>	
Maximum Average Power	1 W with ND filter
Maximum Density (1064 nm)	CW: 10 W/cm <sup>2</sup> ; Pulsed: 300 µJ/cm <sup>2</sup>
<b>PHYSICAL CHARACTERISTICS</b>	
Dimensions	
Main Enclosure	357 mm (L) x 165 mm (W) x 135 mm (H)
Total (including external mirrors)	602 mm (L) x 193 mm (W) x 172 mm (H)
Optical Axis Height	86 mm
Weight	6.6 kg
Power Supply	48V DC, 1.25A out
<b>SOFTWARE</b>	
Displays	2D, 3D, XY, Beam Tracking and M <sup>2</sup>
Beam Diameter Definitions	1/e <sup>2</sup> along crosshairs (13.5%) for ISO-compliant M <sup>2</sup> measurements
Beam Quality Definitions	Laser beam quality M <sup>2</sup> : M <sup>2</sup> <sub>x</sub> , M <sup>2</sup> <sub>y</sub> (ISO compliant) Beam Propagation Factor: BPP <sub>x</sub> , BPP <sub>y</sub> Width at waist: W <sub>x</sub> , W <sub>y</sub> Waist location and offset: Z <sub>x</sub> , Z <sub>y</sub> , ΔZ Divergence angle: θ <sub>x</sub> , θ <sub>y</sub> Rayleigh length: Z <sub>Rx</sub> , Z <sub>Ry</sub> Astigmatism
Printing and Reports	Full report in print-ready format
<b>ORDERING INFORMATION</b>	
Product Name	Beamage-M2
Product Number	
Specifications are subject to change without notice	

\* Available in October 2017

Specifications in the table above are for the use with a Beamage-4M beam profiler (included in the Beamage-M2 kit)

- a. At the Beamage sensor  
 b. Depending on the beam quality and optical configuration  
 c. With ND4 filter at the Beamage