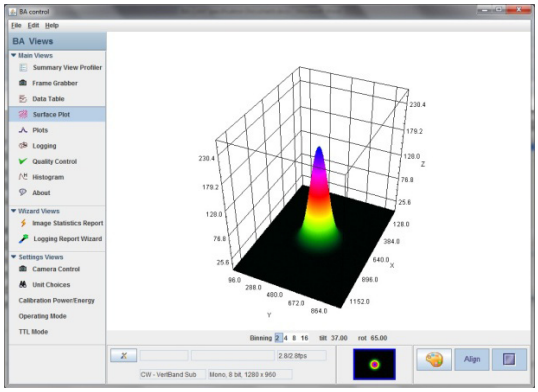
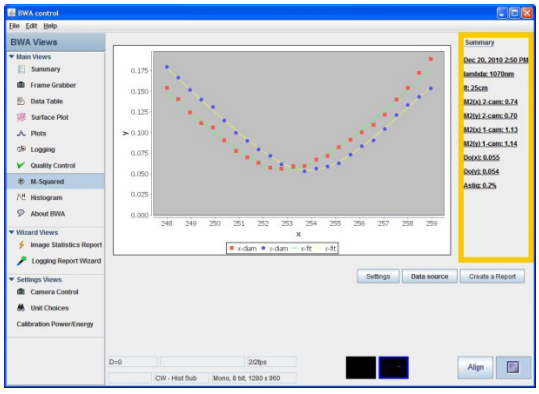
HAAS Laser Technologies Inc.

Laser Beam Diagnostics

In every laser application, the laser beam profile provides valuable information for the most efficient use of the laser. By monitoring the laser beams spatial profile, circularity, centroid, astigmatism and M2 values, you have early warning of any problems with the laser and entire beam delivery optical system. This relates to increased quality, process reliability, and reduced scrap.

The **Haas Laser Technologies** Laser beam Analyzer System is modular design. The system includes Software, Cameras, Beam Reduction Optics, Attenuation modules and filters which enable “real-time” laer beam diagnostics from low to high power CW and pulsed lasers. The design provides both near-field and far-field instantaneous laser beam measurement, analysis and monitoring with **“*no moving components*”**.





The **BA-CAM** and **BWA-CAM** software is designed based on ISO 11146 and ISO 13694 international standards. Full image based second moment techniques, knife edge and equation fitting (Gaussian, Super Gaussian, and Super Donut) techniques are used to determine quick and reliable standard beam parameters.

Calculated results can be viewed in tabular form as well as logged to view changes over time. Visualization windows include X and Y axis plots, 3D view of laser beam, histograms and database reports.

Contact us today to discuss the best options for your specific application.

Visit our website at **www.HAASLTI.com** for additional information and to view product videos

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Laser Beam Diagnostics

Beam Analyzer Camera (BA)

Beam Waist Analyzer Camera (BWA)

BA CAM & BWA CAM Dual System

Beam Waist Analyzer Monitor (BWA-MON)

Laser Diagnostic Accessories

BA-CAM

The **Beam Analyzer (BA-CAM)** provides "Real-Time" far-field viewing, measurement, analysis and monitoring of laser spatial distribution, laser power, beam diameter, beam ovality, beam center and beam centroid. The **BA-CAM** can also monitor the laser beam for degradation, stability, power, alignment and tuning.

BWA-CAM

The **Beam Waist Analyzer (BWA-CAM)** provides "Real-Time" near-field M2 measurements with no moving components. The **(BWA-CAM)** provides instantaneous analysis and monitoring of the laser beam and all active optical elements.

BA-CAM + BWA-CAM

The dual systems incorporates both the **Beam Analyzer (BA-CAM)** and the **Beam Waist Analyzer (BWA-CAM)** to provide "Real-Time" near-field and far-field viewing, measurements and analysis of the laser beam.

BWA-MON

The **BWA-MON** is a modular focus head design configured for the **Beam Analyzer (BA-CAM)** and the **Beam Waist Analyzer (BWA-CAM)** for most applications and laser wavelengths. The design contains no "moving components" and provides instantaneous measurement and analysis of the laser beam and its optical elements.

Accessories

Many laser beam splitter, attenuators, filters, beam reduction telescopes are available for the above components.

(Patent 8237922 & 8427633 with several additional patents pending)

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