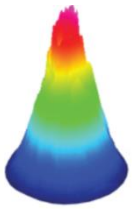
HAAS Laser Technologies Inc.
Your Single Source Solution for Laser Beam Delivery Systems

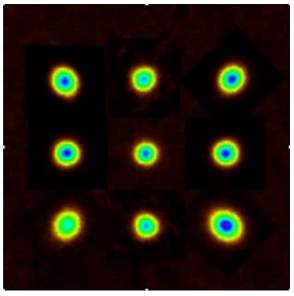


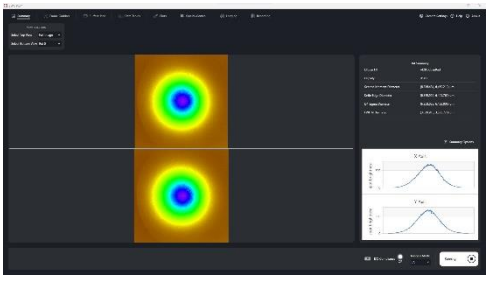
BeamMapper™

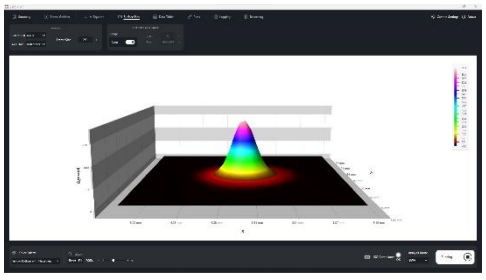
BeamMapper

The Haas LTI BeamMapper is a patent pending technology that allows the user to determine how the laser is focusing within the scan field of the galvo system with a compact attenuation system and innovative beam dumping. With our newly redesigned BWA-PRO™ 2.0 software, no matter what your laser application is, BeamMapper will help document the performance of your laser galvo system.

The BeamMapper is modular in design and can be configured for most applications and laser wavelengths. Most galvo scanner lenses are not telecentric, so the spot seen at fields beyond the center will be elliptical or have aberrations from a poorly designed lens system. The BeamMapper will help you determine how well the scanner is working at all locations of the scan field.







Powers of more than 1 kilowatt can be measured with a suitable beam dump attached. Configurations available for powers up to 30 kilowatts and fiber core sizes from single mode to any multimode size are available.

Visit our website at www.HAASLTI.com for additional information and product videos
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Ph: (973) 598-1150 | info@haaslti.com

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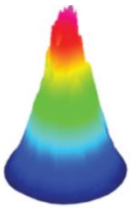


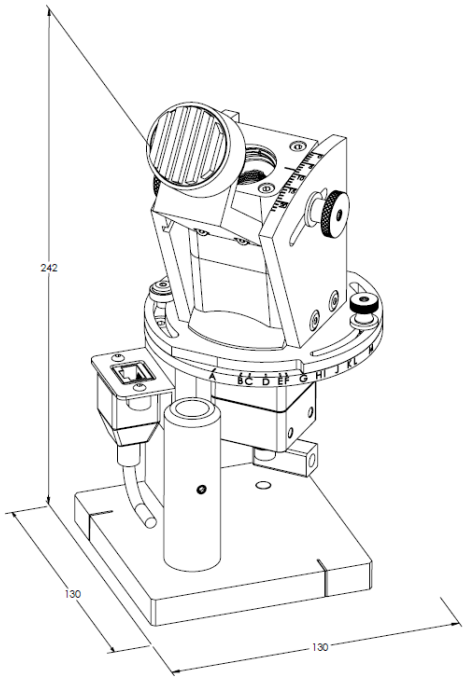
Features

Optical	
Inherent Attenuation	< -8 Optical Density
Maximum Beam Diameter	7.0 mm
Minimum Spot Size	48 microns (optional 27.4um minimum spot size sensor available)
Auto Tracking of ROI	Software Auto Sizes and Tracks Region of Interest (ROI)
QC Measurement	All Beam Quality Metrics Monitored and Flagged for External Interlocking Control
Extended Report Generations	ISO Report Generator of all Beam Quality Metrics
Logging & Recording Capability	All Beam Quality Metrics and Record Live Camera Measurements for Offline Playback
Attenuation	Additional space for optical or attenuation filters
Optional High-Power Attenuator	For Power Levels to 30 kilowatts and above
Scan Field	Nominal 250mm x 250mm, but custom build plate sizes available
Options	Automatic, motorized version upon request

Specifications

Parameter	Description	Units
Sensor	CMOS, 1" (2.5:2)	
Pixel Area	2590 x 2048 Monochrome	
Pixel Size	4.8 x 4.8	µm
Active Sensor Area	12.44 x 9.83	mm
Scanning System	Progressive (Global Shutter)	
Gray Level	10	bits
Frame Rate (in 8-bit mode)	20	fps
Trigger	Auto or External (DIN 6)	
†Power Consumption	3.9	W
Interface	POE 1 GigE	
††Dimensions (L x W x H)	~ 130 x 130 x 232	mm
Weight	~2.5	kg
Temperature Range	0 - 50	°C
Relative Humidity (non-condensing)	20 - 80	%
Wavelengths	350 - 1200	nm
Built-in Attenuation	-0.8	OD

†Power Over Ethernet (POE) Injector or switch, 48V 15.4W Power Over Ethernet, IEEE 802.3af Compliant, 10/100/1000Mbps and Category 5e, 6, or 6a cables only are not included with system.
††Does not include powder bed alignment plate.



Specifications subject to change without notice. Consult a Haas Laser Technologies engineer (973) 598-1150 for the latest specification changes or any additional assistance. Technical drawings of our products are available at www.haaslti.com. Contact sale@haaslit.com for ordering information.