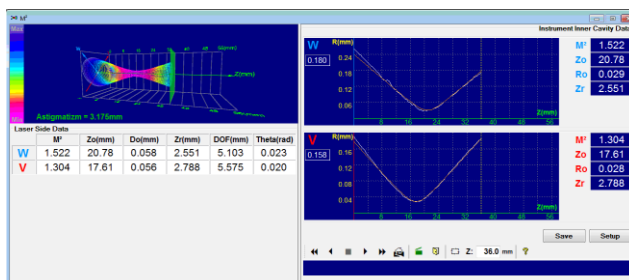


M² HP – 1 kW

NEW

Advanced High Power Laser Beam Analyzer for CW lasers



Specifications

Input Beam

Input aperture	9 mm
Minimum beam size at focal point	10 microns (Warning: Beam should be positioned within measuring range per attached drawing)
Residual Power	To beam dump by customer
Measuring Method	Tomographic Knife-edge beam reconstruction – see Tutorial Fundamentals of Laser Beam Measurements
Measuring Parameters	Beam Size, Power, 2D – 3D Beam Profile specific location
Beam Propagation Parameters	BPP over up to 50 mm range, M ² and depth of focus along propagation direction, see Tutorial Fundamentals of M2 Beam Propagation
Resolution	Better than 1 micron @ waist position
Position Accuracy Measurement	Better than ±5 microns
Optional	ND Filters according to application
Spectral Range	350 - 1100 nm (Si version), IR version available
Beam Power Range	Up to 1000W (with supplied internal filter) Continuous Operating Duration – Limited to 10 seconds @ 2 kW and up (<i>Depending on power, see user manual</i>)
Number of Knife-edges	7
Beam size	Input diameter- 8 mm max.
Maximum power density	Power density at input aperture- 0.4 kW/mm ² Absolute Maximum Power Density- 2 kW/mm ²
Air-Cooling requirement	6 mm hose with filtered pressurized air 5 [bar]

Main Features

- A unique instrument for measuring high power lasers, M² & BPP, up to 1 kW
- Small & Large beam measurement at waist position, down to 10 microns
- Unique beam sampler (samples a fraction of the laser without distortion)
- Patent pending air-cooling at input aperture

Software Features

- Real-time M² and BPP measurements of focused beams
- Automatic measurement by a moving stage along 50 mm (Maximum measured beam propagation)
- Data logging and detailed statistics
- ActiveX package to control software from your application
- Detailed analysis of beam selected by the user

Accuracy:
M² Value: ±5%
Position Accuracy along propagation axis ± 10 micron
Resolution: 1 microns
Distance from input aperture to measuring area: 46 ± 0.5 mm

DUMA OPTRONICS LTD.



Website: <http://www.dumaoptronics.com>

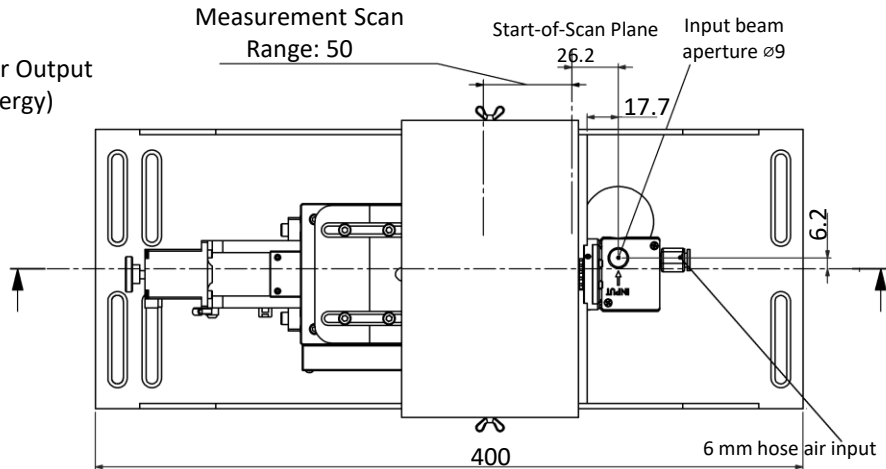
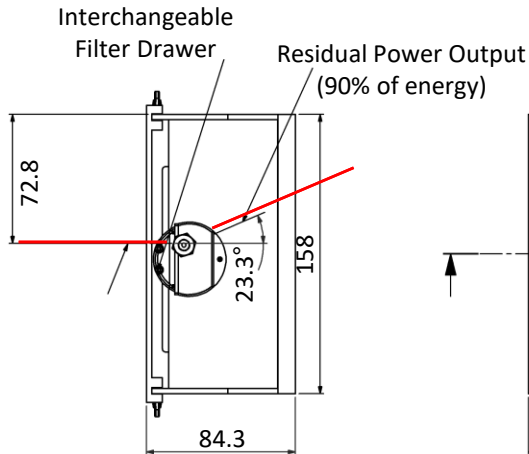
E-mail: sales@duma.co.il

April 2022

M² HP – 1 kW

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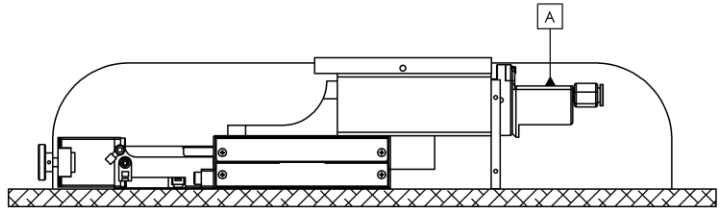


Optical distance from input plane **A** to detector plane: 46 +/- 0.5

Scanned area 50 mm from plane **A**

Warning: For focused beams, focal point must be at least 30 mm after input plane **A** (towards the sensor).

Focusing on input optics will damage the optical system!



Dimensions are in mm.

Ordering Information

M² HP/1 kW BD:

The system consists of BA7-Si-USB sensor head with 2.5 [m] long attached cable, USB 2.0 manifold box, NG4 & NG9 filters in housing, an integral beam sampler, a moving stage 50 mm range, mounting plate, software on CD/Flash Drive

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April 2022