

M² Measurement System



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CNI proudly introduces its advanced **M² Measurement System**, featuring a compact all-in-one design integrated with a high-precision motorized translation stage and a high-resolution beam profiler for capturing laser spot images. This system utilizes Independently developed analysis software to accurately measure critical beam quality parameters, including: **M² Factor, Beam Divergence Angle, Focus Diameter, Beam Waist Position, Rayleigh Length and other essential laser beam characteristics.**

Engineered to deliver overall accuracy within $\pm 5\%$, the system meets rigorous demands for beam quality analysis. It is widely applicable in laser technology, fiber-optic communications, biomedical research, and laser-based manufacturing. The product has short lead times, rapid after-sales support, high cost-effectiveness. It will be an economical and efficient alternative to imported beam quality analyzers.

Performance Advantages:

- ◆ Capable of measuring the quality of continuous and pulsed laser beams
- ◆ Spectral detection range 340-1100nm
- ◆ Detection accuracy 5%
- ◆ Easy to operate, fast one click measurement

Application Area:

- ◆ Advanced Manufacturing
- ◆ Scientific Research
- ◆ Medical & Life Sciences
- ◆ Defense & Aerospace

Model	CN0310VIS-M2-B
Operating Wavelength	340-1100 nm
M ² Measurement Range	1 -50
Max Input Spot Size	≤ 5 mm @ 355 nm (1/e ²) ≤ 7.5 mm @ 532 nm (1/e ²) ≤ 10 mm @ 1064 nm (1/e ²)
Measurement Accuracy	$\leq 5\%$
Focus Position Accuracy	$\pm 10\%$
Pixel Size	3.2 μ m
Max Resolution	2448 \times 2448 pixels
Laser Power Handling	CW: 1 μ W – 10 W/cm ² Pulsed: 10 μ J – 10 mJ/cm ²
Bit Depth	12-bit
Attenuator	OD 0.5 / OD 1 / OD 1.5 / OD 2 / OD 3 / OD 4
Interface	USB 3.0
Scanning Range	200 mm travel (Double optical path length)
Repositioning Accuracy	± 5 μ m
Controller	RS232 interface, dual-axis motorized stage
Weight	<15 kg
Dimensions	500 \times 250 \times 175 mm (reference design)

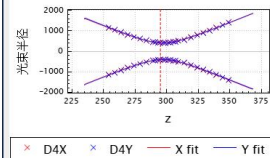
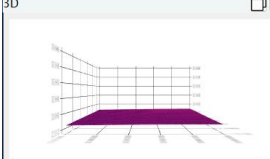
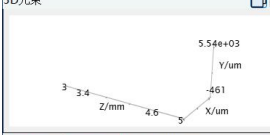
Operating Software

LaslescopeM2_20241024 [DT95_20X.m2Data]

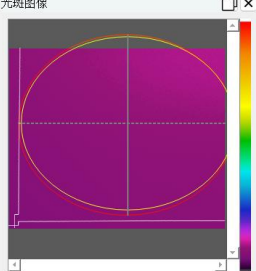
主菜单 计算 工具 语言 中文

光斑 测量点图像 报告 电机设置 3D光束
拟合曲线 数据 自动测量 3D

拟合曲线 报告 简图 数据编辑

	X	Y
当前帧		
激光		
M2	51.9021	51.1130
BPP	10.4454	10.2866
发散角	2.8027	2.7253
束腰直径	14907.4528	15098.09
束腰位置	-816.3143	-632.896
瑞利长度	5318.9159	5540.053
像散	0.0338	
对称性	1.0128	
聚焦后		
发散角	50.7741	51.0355
束腰直径	822.8891	806.2279
束腰位置	296.5986	297.3399
瑞利长度	16.2069	15.7974
像散	0.0463	
对称性	1.0207	
光纤测试		
耦合镜焦距	1.00	
数值孔径	7616.1185	7655.328
模场直径	2.7430	2.6874



	D4X/ μm	D4Y/ μm	椭圆度	坐标
4	1607.98	1640.18	0.98	269.130
5	1398.92	1426.86	0.98	274.130
6	1205.46	1228.67	0.98	279.130
7	1041.16	1056.72	0.99	284.130
8	919.42	920.94	1.00	289.130
9	882.99	881.26	1.00	291.130
10	859.04	852.84	0.99	293.130
11	843.69	831.90	0.99	295.130
12	839.49	821.69	0.98	297.130
13	846.23	823.62	0.97	299.130
14	862.64	836.96	0.97	301.130
15	890.22	861.69	0.97	303.130

质心X 4645.40 质心Y 2929.09
D4X 8345.70 D4Y 6780.10
DpkX 8072.31 DpkY 6524.65
DTX 7157.24 DTY 5987.76
帧数 6 峰值 426.44

添加行 清空 保存 打开 拟合

相机状态 相机校准 X:0.000000e+00um,Y:0.000000e+00um 1:314 7.67%