

CinCam Application Beam Quality M^2 - CinSquare -

The CinSquare CS200 / CS300 system is a compact and fully automated tool to measure the beam quality of cw and pulsed laser systems from the UV to NIR spectral range. This system consists of a fixed focusing lens in front of a motorized translation stage carrying a CinCam CCD/CMOS/InGaAs beam profiler. To analyse the beam caustic according to ISO 11146-1/2 the software calculates the beam size of several measurement planes via 2nd Moment method. The whole measuring process is fully automated and controlled by CINOGY's software RayCi.

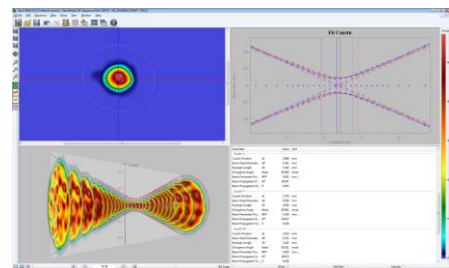
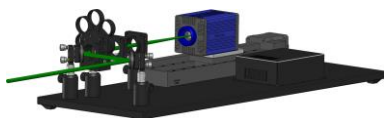
The CinSquare measurement system is equipped with two alignment mirrors for exact positioning of the laser beam through the measurement set-up. An additional filter wheel allows incremental beam attenuation. Its operational robustness and reliability ensures continuous use applications in industry, science, research and development.

- Confirm to ISO 11146-1/2
- Robust and compact system in industrial design
- Up to 6 focusing lenses and 6 ND filters assembled
- Reliable and fully automated M^2 measurement in <1 minute (~30s fast scan)
- Camera-based system
- 'CinCal' algorithm for high measurement accuracy
- 2D- and 3D-Caustic fit
- Compatible with cw and pulsed laser systems
- Measurement data as printable protocol (pdf)

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|----------------------------|--|
| Spectral response: | 250nm-950nm@CCD / 350nm-1320nm@CMOS / 900nm-1700nm@InGaAs |
| Pixel size: | 3.75 μm^2 @CCD / 5.3 μm^2 @CMOS / 15 μm^2 @InGaAs |
| Number of pixel: | 1.3MPixel@CCD / CMOS / 0.3MPixel@InGaAs |
| Technology: | CCD / CMOS / InGaAs |
| Data output: | 14Bit / 10Bit / 14Bit |
| Beam diameter ($1/e^2$): | 0.5-10mm |
| Stage length: | 200mm (400mm)@CS-200 / 300mm@CS-300 |
| ND filter: | up to 6 ND filters pre-assembled |
| Focusing lens: | up to 6 lenses pre-assembled |
| Input power: | up to 50W |
| Software: | RayCi-Pro |
| Dimensions CS200: | 560 x 220 x 190mm ³ |
| Dimensions CS300: | 745 x 220 x 190mm ³ |

The software RayCi reports M^2 , K, beam waist diameter, beam waist position, divergence angle, Rayleigh length, etc. Incomparable visualization modes, extensive analytical capabilities and new developed algorithms ensure the highest accuracy for beam quality measurements.

For scientific beam quality measurements CINOGY Technologies provides a pre-assembled and flexible measurement set-up in open design.



CINOGY's experienced team provides CinSquare systems tailored to customer's requirements.