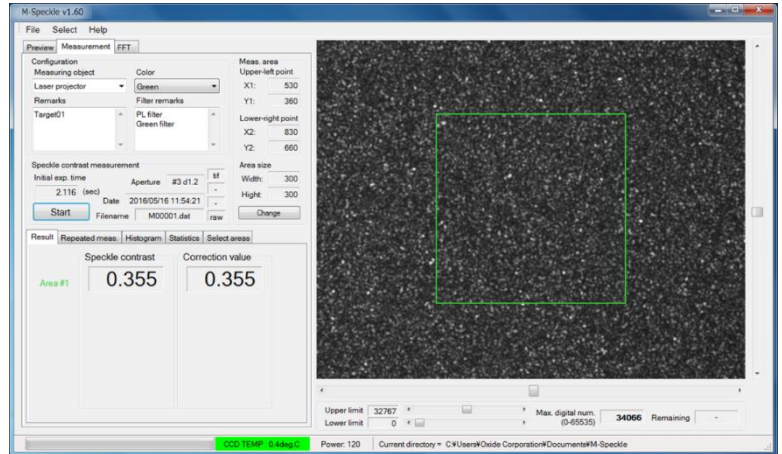


Speckle Contrast Measurement System

Dr. SPECKLE Model: SM01VS09



Product appearance



Dedicated software **M-Speckle**

Speckle evaluation tool for laser display development

Speckle is a random laser interference pattern formed on human eye retina. Speckle noise may degrade the image quality of laser displays seriously. Accurate evaluation of speckle noise is the first step to reduce speckle noise.

Features

- The only measurement system fully compliant with the international standard, IEC 62906-5-2 (measuring method).
- CCD camera optical system accurately reflects the optical characteristic of human eye such as the point spread function and its auto correlation function.
- The speckle contrast calculable as a quantitative measurement index of speckle noise.
- Portable size and weight.

**Compliant with
IEC62906-5-2
(measuring method)**



レーザー学会産業賞 貢献賞
Laser Industry Contribution Award

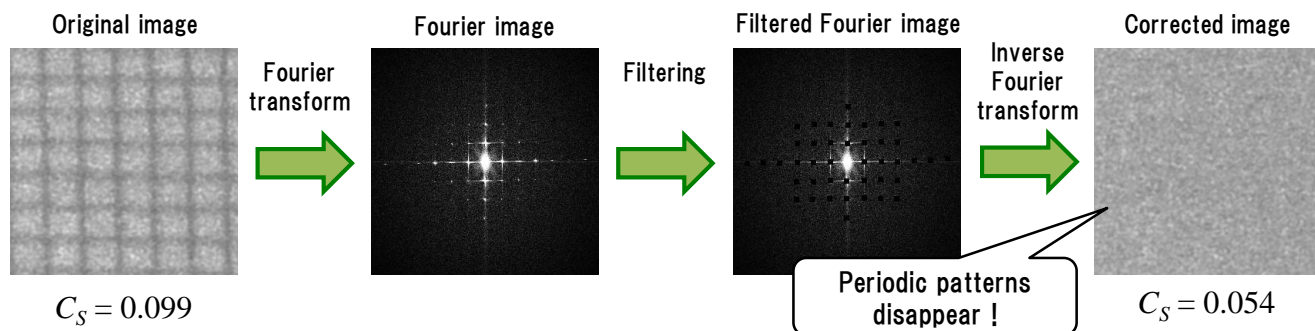


13th New JSPMI Prize
(The Director-General's Prize)

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Spatial-frequency filtering correction (Premium edition)



Off-line analysis mode (Premium edition)

With the function mode, measurement and analysis are performed separately.

- A complete raw data file can be loaded in the off-line analysis mode.
- Recalculation of speckle by changing the measurement area and the correction conditions in the off-line mode.

Specifications

Speckle measurement	Measurement value	Speckle contrast $C_S = \sigma / I_{bar}$ (σ is standard deviation and I_{bar} is average intensity of captured image)
	Range	0.01 ~ 1.00 (Measurement resolution: Significant to two decimal places)
Measurement conditions	Luminous Flux	10 lm (lumens) or over (monochromatic) *Assuming a scanning type laser projector
	Observation distance L	300 mm to 1000mm (TBD)
	Observed area on screen	13 mm square ($L = 300$ mm) ~ 40 mm square ($L = 1000$ mm) *Imaging area is 300×300 pixels.
	Wavelength	Visual light region
	Projection image	Light beam with spatial uniform and temporally static image
Camera	CCD device	Sony image sensor with external cooling system, 1.4 million pixels (1360×1024)
	Imager size	8.8 mm \times 6.45 mm (pixel size 6.45 μ m \times 6.45 μ m)
	Shutter	Electronic shutter
	Cooling method	Peltier cooling (Air cooling, 0 degrees C)
	A/D Conversion	16-bit (65,536 gradation)
	Color	Black & White
	Lens	Nikon Single focal length lens f 50mm/F1.4
	External trigger (Optional)	Synchronous photography by a TTL CMOS 5V falling edge signal
Aperture size		Pinhole diameter: $\phi 0.8$ mm, $\phi 1.0$ mm, $\phi 1.2$ mm, $\phi 1.5$ mm (selectable)
Filter wheel (Optional)		Filter type: Red, Green, Blue, ND (OD: 2.0) (selectable)
Consumption		100W (without computer)
Outer dimensions and weight	Speckle meas. unit	257 (L) \times 160 (W) \times 213 (H) mm, 4.8 kg (5.2kg with the filter wheel control)
	Power supply box	248 (L) \times 180 (W) \times 118 (H) mm, 2.3kg

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