Instrument Systems
KONICA MINOLTA Group

DMS 100

Multi-Viewing Angle Display Measurement System

Key features at a glance

- Multi-viewing microscope optics for fast, angle-resolved measurements
- Data from up to 16 viewing angles captured in one measurement cycle
- High-speed, high-throughput performance with CAS140D spectroradiometer
- Seamless workflow integration via the DMSOcto app
- Designed for production and quality control environments

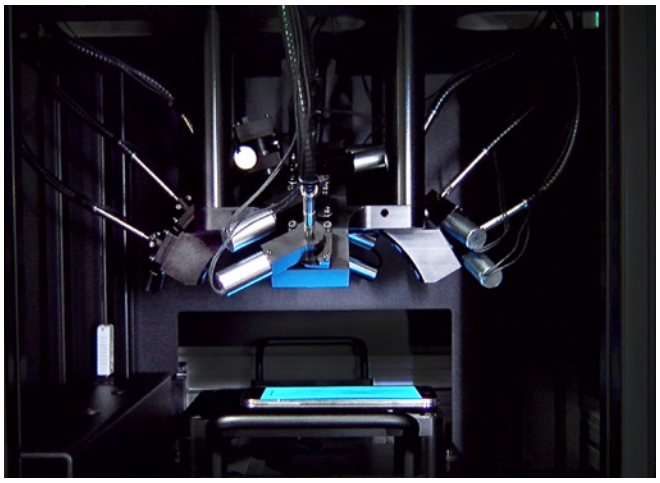
The DMS 100 is Instrument Systems' compact and versatile solution for high-speed, angle-resolved display measurements. Tailored to the needs of production lines and quality control, it combines multi-angle viewing capabilities with a robust optical setup to deliver fast and reliable data on luminance and color performance. Whether used inline or as an audit station, the DMS 100 ensures efficient and reproducible results in demanding display testing environments.

\\ HIGH-SPEED MULTI-ANGLE SPECTRAL DATA

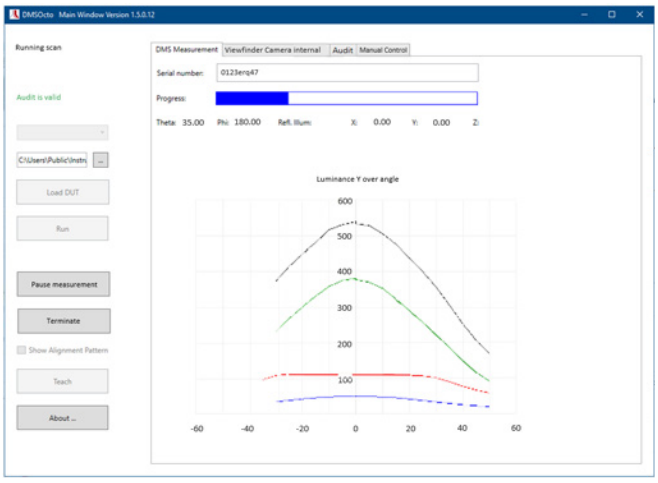
With its multi-channel microscope optics, the DMS 100 captures luminance and color shift data from up to 16 viewing angles. This enables efficient and accurate characterization of display performance, especially for high-end applications such as smartphones, smartwatches, monitors and microOLED panels.

\\ COMPACT AND INTEGRATION-READY

Designed for seamless integration into production workflows, the DMS 100 supports intuitive operation via the DMSOcto app and offers optional automation features such as an XY translation stage. In combination with the proven CAS 140D spectroradiometer, it delivers reliable, high-throughput results that meet the highest standards of display quality.



Interior view of the DMS 100 with multi-channel microscope optics. Optical heads are arranged in a circular layout around the display under test, enabling data collection from up to 16 different viewing angles.



DMSOcto app, showing measurement progress and luminance vs. angle graph.

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\\ TECHNICAL SPECIFICATIONS

DMS 100 Multi-Viewing Angle Display Measurement System	
Mechanics	
Scan range theta inclination	0° to 60°
Scan range phi rotation	0° to 360°
Min. step Theta/Phi	15° / 90°
Scan range X/Y translation	±100 mm
Min. step X/Y/Z	0.1 mm
Positioning accuracy X/Y/Z	X/Y: 0.005 mm
Resolution X/Y/Z	X/Y: 0.001 mm
Sphere of confusion (all axis)	300 µm
DUT dimensions	
Max. diagonal	300 mm x 300 mm
Orientation of DUT surface	Horizontal
Dimensions	
DMS mechanics (L x W x H)	900 mm x 900 mm x 1850 mm
Weight	
DMS mechanics	250 kg
Facility Requirements	
Power main system	200 – 250 VAC (230 V nominal), 50/60 Hz, 16 A, 1 phase. Supplied cable length: 2000 mm
Space (footprint)	2020 mm x 1500 mm
Operating temperature	23 °C (±5 °C) relative humidity 0 – 60%, non-condensing

CAS 140D Spectroradiometer	
Spectral range	360 – 830 nm
Slit	250 µm
Integration time	4 ms – 65 s
ND filter wheel	OD0.5 / OD1 / OD1.5 / OD2 / OD2.5 / OD3
Sensor dynamic range	37,000 : 1
Non-Linearity	±0.5%
Spectral resolution @250 µm	5.1 – 5.2 nm (FWHM 400 nm – 750 nm)
Luminance range	1 mcd/m² – 1000 kcd/m²
Accredited calibration	DIN EN ISO / IEC 17025 / ISO 11664 in-house and on-site on request
Interface	USB

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