MICROVISION

SS450 Display Measurement System

OVERVIEW:

The SS450 Display Measurement System provides the ability to make color, contrast, luminance, uniformity and gamma measurements at numerous locations instantly. The measurements are made with either a standard lens configuration for displays/projection screens, or a cosine diffuser option can be used for measuring projection engines directly. (lux).

The SS450 system is excellent for production applications and for any testing where short test duration is crucial. With simultaneous sampling of all detectors, a full 16-point uniformity test could be performed in the click of a button. There would be no time wasted waiting for a positioning system to travel across the screen.

These measurements are all accomplished using a diffraction grating spectrometer, eliminating filter matching errors inherent to color filter measurement systems. Microvision's multiple detector configuration also eliminates lens correction problems found in single lens systems that collect data on the entire display in one "snapshot".

The system uses the newly developed "Multi-Spec" selection process (a single ccd detector is used to view the spectral output of several fiber optic lens assemblies) to monitor points on the UUT with the fiber optic lens assemblies mounted on a transparent panel. A pattern generator can used to drive the unit under test and automatically present the proper test pattern necessary for each test. The detectors are mounted to the panel at the desired measurement points of the UUT. Up to 16 detectors can be used and the detector location can be quickly and easily changed.

The SS450 can also be used for multiple panel testing, for example, two side-by-side displays or projection engines can be set up and alternatively tested, thereby decreasing test time. Similarly, the same panel may be set up to measure different sizes of displays/projection engines. With up to 16 detectors, some can be set up for large displays while the rest can be set up for smaller.

The user can quickly and easily program the system to only collect data at the desired detectors. For instance, 5-point and 9-point tests can quickly be programmed without having to move detectors. The results of these measurements can be posted to a spreadsheet with pass/fail criteria.

The SS450 is unique in its ability to perform extremely fast testing on any size display. For projection systems, measurements can be made with or without the screen in place. The cosine diffuser option will allow the user to measure the projection engine directly. Either way, the spectrometer based test results are returned quickly and accurately for high throughput and quality.

SS450 SPECIFICATIONS:

UUT Size Limitation:	None

Optical System

12 bit CCD camera
Collimated Lens or Cosine Diffuser attached to fiber optic cable

Spectrometer

Spectral Range:	380 to 800nm
Spectral Resolution:	7nm
Luminance Range:	0.01 to 500K cd/m^2 **
Luminance Accuracy:	+/-3% @ 2856K illuminant "A"
Repeatability:	RSD over 30 minutes < 0.5%

0.05-1.0 cd/m2 sensitivity is specified at 5-10% RSD

Color Accuracy (x&y):	+/-0.002 @ 2856K
Color Repeatability:	+/- .0005 @ 2856K
Optics:	12mm collimated/Cosine Diffuser
Acceptance Angle:	1.5° standard
Calibration:	NIST traceable certified for 12 months

** range includes use of Neutral Density Filters

World-Wide Sales Reps:

See ***www.microvsn.com*** for a complete list.

MICROVISION

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