

PM-FPMS™ Flat Panel Measurement System

Radiant Imaging's PM-FPMS™ system combines the benefits of CCD-based uniformity measurements with a goniometric system capable of measuring view angle performance with a single set of measurements.

RADIANT



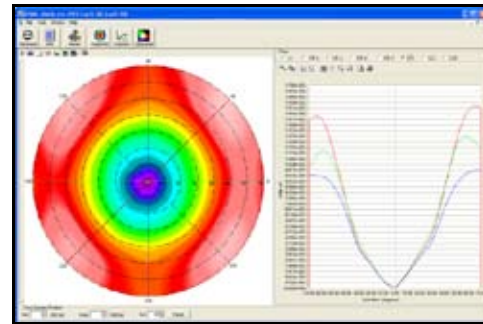
PM-FPMS™ performs brightness and color uniformity measurements as a function of viewing angle for flat panel displays. It is intended primarily for developers of LCD, PDP, OLED and LED displays, as well as LED, CCFL and lamp-based backlights. The system can produce qualitative display images, as well as an extensive variety of quantitative plots, such as isoplots, CIE color analyses and radar plots, for any sampling area size and view angle; these measurements accurately eliminate the effect of the view angle to the camera. In addition, the system can even perform Mura defect detection. The PM-FPMS™ includes an automated goniometric motion system and system control, data acquisition and image processing software. The system operates with one of our PM Series™ Imaging Photometers and Colorimeters, which is selected independently.

Mechanical Specifications*

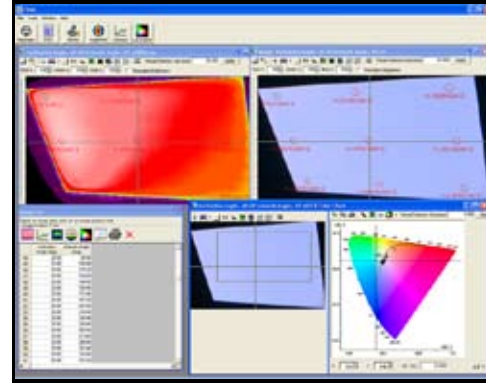
| Parameter | PM-FPMS 400 | PM-FPMS 800 | PM-FPMS 1500 |
|----------------------------------|-----------------|------------------|-------------------|
| Maximum DUT Size (mm) | 500 x 380 | 865 x 535 | 1325 X 760 |
| Maximum DUT Diagonal (mm) | 630 | 1000 | 1500 |
| Overall size (mm) (W x D x H) | 900 x 360 x 600 | 1200 x 750 x 770 | 1200 x 800 x 1800 |
| Operating footprint (mm) | 970 x 970 | 1400 x 1400 | 1780 x 1780 |
| Maximum DUT Load (kg) | 5 | 10 | 80 |
| Precision (deg) | 0.25 | 0.25 | 0.25 |
| Range of Motion Upper Axis (deg) | +88 to -88 | +88 to -88 | +88 to -88 |
| Range of Motion Lower Axis (deg) | +88 to -88 | +88 to -88 | +88 to -88 |
| Approximate Unit weight (kg) | 30 | 40 | 360 |

Operating Software

- Viewing Angle Radar Plots for User Defined Points of Interest:
 - True Color as a function of view angle
 - Luminance as a function of view angle
 - Color (x, y, u', v') as a function of view angle
 - Tristimulus (X, Y, Z) as a function of view angle
 - CCT as a function of view angle
 - Color Difference ($\Delta u'v'$) as a function of view angle
 - Contrast as a function of view angle
 - Cross Section graphs
 - Histogram (Luminance, CCT, or color)
 - 3-Dimensional surface Plot
 - 2-D Isometric surface Plot
 - CIE Color Chart plots
- Analysis of each measurement at each angle:
 - True Color
 - Luminance
 - Color (x, y, u', v')
 - Tristimulus (X, Y, Z)
 - CCT
 - Color Difference ($\Delta u'v'$)
 - Cross Section graphs
 - Histogram (Luminance, CCT, or color)
 - 3-Dimensional surface Plot
 - 2-D Isometric surface Plot
 - CIE Color Chart plots
- Intensity plots (near field and far field)
- View animated images of DUT from different measurement angles
- User interface with scan alignment and notes information
- Simple software backup and installation
- In-program documentation and help files



PM-FPMS™ Screen Capture
Radar Plot - $\Delta u'v'$ vs. View Angle



PM-FPMS™ Screen Capture
View Angle Images with Color Plot

Any of the Radiant Imaging ProMetric® camera systems can be used with the PM-FPMS™ goniometer. Cameras with higher resolution will create larger, more detailed, models. Color cameras are required for color measurements. Please contact your Radiant Imaging Sales Associate to determine the best camera for your application.

* Specifications subject to change without notice.

