RADIANT IMAGING

CCD Imaging Colorimeter

PM-1200 Series

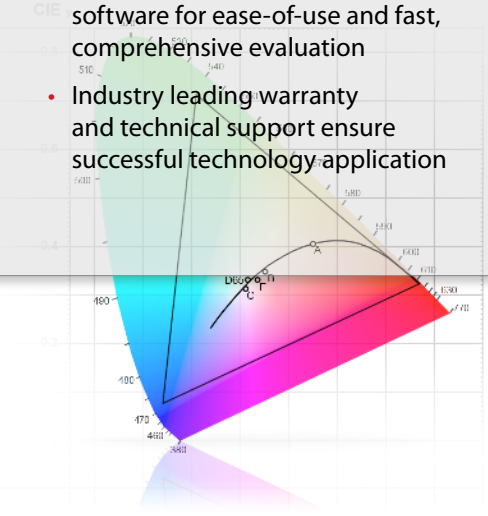
High performance, low cost system for basic imaging colorimetry applications

Applications

- Brightness and color uniformity testing for display technologies, including LCD, plasma, OLED, backlights, and front and rear projection displays
- Instrument panel and lit keypad feature measurement
- Brightness and color testing for LED lighting strips and arrays
- General lighting system illumination distribution measurement

Benefits

- Provides quantitative measurements that correspond to human perception of brightness and color
- Multiple system configuration options allow the best, most cost-effective, system to be chosen for each application
- Sophisticated measurement control and image analysis software for ease-of-use and fast, comprehensive evaluation
- Industry leading warranty and technical support ensure successful technology application



The PM-1200 imaging colorimeter has been specifically designed to deliver the ideal combination of price and performance for cost sensitive development and production line testing applications.

With multiple lens choices and optional integrated neutral density filters, the PM-1200 can be configured for a broad range of information display measurement applications, including flat panel display quality testing, illumination measurement, and light source characterization.

The PM-1200 uses a 12-bit (4,096 gray levels), 1,392 x 1,040 pixel, interline transfer CCD for high speed imaging along with CIE matched color filters for accurate color measurement. This delivers far superior color accuracy compared to systems using color filters integrated on the CCD in a Bayer pattern or 3 CCD configurations.

The optional integrated neutral density filters are on a filter wheel, so that all imaging combinations of color and ND filters are software controlled. Multiple lens options allow the PM-1200 to be configured for with a field of view that matches the application requirement.

The PM-1200 comes complete with a full version of Radiant Imaging's ProMetric control and analysis software, which provides detailed measurement control and an extensive suite of image analysis functions. ProMetric software functions can be externally accessed through PMEngine™ .Net (Framework 2.0) controls so users can build custom test and analysis sequences.

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PM-1200 Series

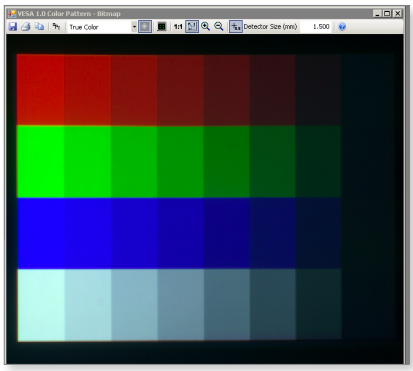
Key Features

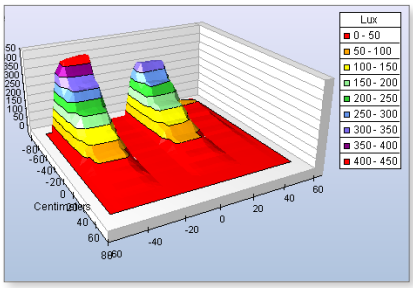
- High speed, calibrated colorimetric measurements
- Integrated CIE matched color filters and optional integrated ND filters
- Complete ProMetric control and analysis software support
- Multiple configuration options to meet different application needs

Specification*

Spatial measurement capabilities	Luminance, Radiance, Illuminance, Irradiance, Luminous Intensity, Radiant Intensity, CIE Chromaticity Coordinates, L*a*b* Color Scale, Correlated Color Temperature (CCT), Dominant Wavelength	
Units	Footlambert, Cd/cm^2, Cd/m^2, Nit, Mnit, mnit, W/sr/m^2, W/sr/ft^2 , W/sr/cm^2, mW/sr/m^2, Footcandles, Lux, mLux, Mlux, Lux-Sec, W/m^2, W/ft^2, W/cm^2 , mW/m^2, MW/m^2, W-Sec/m^2, Candela, W/sr, CIE (x,y) and (u', v'), Kelvin (CCT)	
CCD resolution	1,392×1,040 pixels	
CCD A/D dynamic range	12 bits = 4,096 gray scale levels	
Luminance range	0.05 nit minimum 10^{10} nit maximum with optional ND filters	
System accuracy	Illuminance Luminance (Y) Chromaticity Coordinates (x,y)	± 3%$_1$ ± 3%$_1$ ± 0.005$_1$
Short-term repeatability	Illuminance Luminance (Y) Chromaticity Coordinates (x,y)	± 0.5%$_2$ ± 0.5%$_2$ ± 0.001$_2$
Interface	USB2.0	
Minimum measurement time (for 100 cd/m^2)	5 seconds	
Camera field of view	2° to 32°	
Dimensions	242mm x 154mm x 76mm (HxWxD)	
Weight	2.5kg	
Operating temperature	0 – 30° C	
Operating humidity	20 - 70% non-condensing	

** Specifications subject to change without notice*





System Requirements

- 2.0 GHz or faster processor
- 1GB or greater RAM
- Windows® 2000, XP or Vista
- USB 2.0 interface

1 Based on Illuminant A, D 65, or user calibration for specific spectra. Based on a virtual detector size of 100 pixels. Specification is for every point within the field of view of the camera.

2 At every point within the field of view of the camera, based on a virtual detector size of 100 pixels.

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