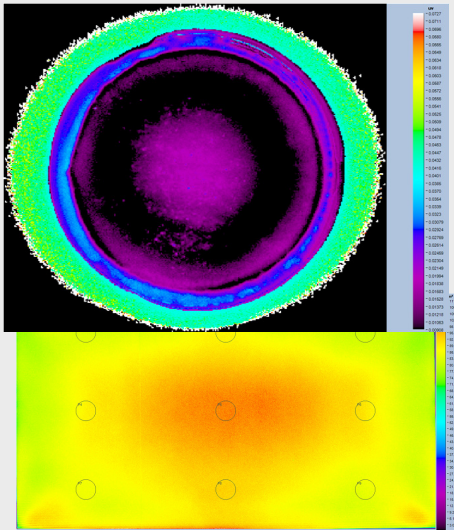




# Radiant Zemax



## ProMetric® G2 Imaging Colorimeter



**Measurement results for illumination measurement and ANSI brightness test for FPD display uniformity.** The ProMetric G2 imaging colorimeter is ideally suited for FPD production testing and characterization as well as light source and lighting system characterization.

### ProMetric G2 Highlights

- Optimized for accuracy, precision and ease of use
- Color and light measurements that are highly correlated with human visual perception
- Incorporates industry-first Smart Technology™ innovations
- Flexible system, capable of addressing multiple applications now and in the future
- Works seamlessly with Radiant Zemax TrueTest™ automated optical inspection systems

The most versatile and easiest to use imaging colorimeter - ever.

ProMetric G2 is the next generation of Radiant Zemax imaging colorimeters, incorporating new features that combine to deliver repeatable measurement accuracy and unmatched ease of use. ProMetric G2 offers an excellent balance of wide dynamic range, high spatial resolution, large field of view and speed. It provides 14-bit measurements using a scientific grade thermoelectrically cooled full-frame CCD sensor with a 1,536 x 1,024 pixel resolution.

ProMetric G2 incorporates industry-first **Smart Technology™** innovations, including:

#### Smart Control™ for fast, precise setup

Smart Control features allow you to electronically adjust both the focus and aperture settings for your lens. This eliminates the need to make manual adjustments, and allows for precise measurement setup.

#### Smart Touch™ for full control at the imaging colorimeter

The ProMetric G2 imaging colorimeter has been designed for ease of use, including the addition of a Smart Touch user interface on the case. Now you can complete your measurement setup and acquisition, and review measurement results at the imaging colorimeter.

#### Smart Calibration™ for automatic high-accuracy results

The ProMetric G2 is available with a variety of electronically controlled lenses. Each lens is calibrated over a wide range of working distances and aperture settings. The ProMetric G2 system monitors focal distance and aperture settings and automatically applies the correct image calibration. This greatly simplifies setup and ensures accurate measurement results.

ProMetric G2 has been optimized for spatial color and light measurements on light fixtures, light sources, flat panel displays and projection displays. It is ideal for use in a variety of environments, including engineering, quality assurance and production testing. Every system includes Radiant Zemax ProMetric software with API support, which provides complete measurement control and an extensive suite of image analysis functions. In addition, ProMetric G2 is backed by the industry's best product warranty, including direct access to the Radiant Zemax technical support team to maximize the benefits for your application.

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## Key Features

- 14-bit, full frame, thermoelectrically cooled 1536 x 1024 CCD sensor
- CIE matched color filters and neutral density filters
- Supports a range of lenses with different FOV
- Smart Calibration provides accurate results over a wide range of distance and aperture settings
- Smart Touch user interface
- ProMetric control and analysis software

## Specifications

CCD resolution	1536 x 1024 pixels
CCD Type	Cooled, Full-Frame
CCD A/D dynamic range and full well capacity	14 bits = 16,384 gray scale levels 100,000 electrons
Luminance range	0.001 cd/m <sup>2</sup> minimum 10 <sup>10</sup> cd/m <sup>2</sup> maximum with optional ND filters
System accuracy*	Illuminance ± 3% Luminance (Y) ± 3% Color Coordinates (x,y) ± 0.003
Short-term repeatability**	Illuminance ± 0.5% Luminance (Y) ± 0.5% Color Coordinates (x,y) ± 0.0006
Lens Type	Automated. Electronic focus and aperture
Camera field of view*** (Full Angle, HxV degrees)	20 mm lens - 38° x 26° 50 mm lens - 15° x 10° 100 mm macro - 7° x 5°
Measurement time (for 100 cd/m <sup>2</sup> )	Photopic = 2.3 seconds Color = 8 seconds
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/m <sup>2</sup> , nit, W/sr/m <sup>2</sup> , footcandles, lux, lx*s, W/m <sup>2</sup> , W*s/m <sup>2</sup> , candela, W/sr, CIE (x,y) and (u', v'), Kelvin (CCT)
Communication Interface	USB 2.0, 3.0 Ethernet 100/1000
LCD Touch panel	Resolution: 800 x 600 Diagonal: 125 mm
Dimensions (H x W x D)	181 mm x 238 mm x 230 mm
Weight	4.9 kg
Operating temperature	0 - 30° C
Operating humidity	20 - 70% non-condensing



Smart Touch user interface on the ProMetric G2 imaging colorimeter enables quick setup.

## System Requirements

- 2.0 GHz or faster processor
- 4GB or greater RAM
- Windows 7
- USB 2.0, 3.0 or Ethernet

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

\*\* At every point within the field of view of the camera, based on a virtual detector size of 1% of FOV.

\*\*\* Other lenses are also available. Contact Radiant Zemax for more information.