ProMetric™ software is a Windows-based software suite that provides equipment control, data acquisition and image analysis when used with ProMetric Imaging Photometers and Colorimeters. Together, this combination provides rapid and accurate measurement of luminance and color for a broad range of light sources, flat panel displays, keypads / keyboards and optical materials.

PM-HL, the headlamp evaluation module for ProMetric™ software, enables accurate evaluation of headlamp beam patterns. It also permits conversion of headlamp beam patterns into roadway illumination distributions.

A typical PM-HL system consists of:

- IC-PMG2 Imaging Colorimeter
  - 1536 x 1024 pixel full-frame, cooled scientific-grade CCD
  - 14-bit dynamic range; > 16,000 gray levels
  - Internal ND 0, 1, and 2 filters
  - Internal CIE-matched color filters
  - Multiple lens options for any Field of View
- PM-HL software
PM-HL System Requirements

- Windows® 7 or 8
- 2.0 GHz or faster processor
- 3GB or greater RAM
- SXGA or larger monitor
- Ethernet port
- USB 2.0 interface

Key Features

- Point of Interest set that contains both US and ECE POIs
- Conversion between illuminance distribution, luminous intensity distribution and roadway illumination distribution
- Representation of a road overlaid on the measurement bitmap
- Automatic determination of the “beam elbow” datum position and alignment of camera image to that position
- Evaluation of ECE Reg 20 test points for left or right hand drive
- Headlamp cut-off gradient calculation per regulation
- Multiple data analysis functions, including bitmaps, isoplots, cross-sections, gradient lines and more
- Simplified pass / fail testing
- Head Lamp Analysis Report to document results of evaluations

Examples of PM-HL analyses:

- The Gradient Line POI is a line analysis sampling tool with 3 parameters: Start Point, End Point and Detector Size. The value, Lv, of maximum gradient along the line is displayed.
- The 2D Isometric plot can be used to display the Road Illumination plot, here overlaid with a representation of the road.
- A PM-HL analysis form used to evaluate ECE Reg. 20 test points or Custom test points. Shown here is the ECE Reg. 20 Left-Hand Traffic Test.
- Derived distributions include Luminous Intensity Distribution and Illuminance Measurement on the Road.