

PM-KB™

Illuminated keyboard evaluation software



Applications

- Illuminated keyboard / keypad production testing and quality control
- Color and luminance uniformity testing
- Verification of correct keycap installation
- Testing for any configuration of illuminated icons
- For all keyboard types (keys of any size, placement, character, or language)

Benefits

- Easy-to-use interface simplifies test set-up and interpretation of results
- Graphical presentation of test results improves productivity
- Enables quantitative, repeatable assessment of quality for illuminated keyboards and keypads

Software module with tests for automated inspection of illuminated keyboards and keypads

Radiant Vision Systems PM-KB™ is an integrated system that combines application-specific software and a ProMetric® Imaging Colorimeter to perform rapid, automated inspections of back-illuminated keyboards and keypads for character luminance, character chromaticity, and overall keyboard luminance and color uniformity. PM-KB also tests to ensure keycaps are installed in the correct location and orientation.

PM-KB is designed for high speed and high flexibility, specifically in production environments. A PM-KB solution enables an administrator or engineer to define a complete set of measurement conditions and pass / fail criteria for specific points of interest on the keyboard or keypad.

PM-KB pass / fail criteria includes:

- Total number of allowed individual character failures
- Minimum luminance uniformity between characters
- Maximum color difference between characters (when color is measured)
- Keycap placement

In production, PM-KB is run in operator mode, which presents a simple, easy-to-use interface for operators on the production line, with test initiation commands and pass / fail indications. PM-KB can be set up to record barcodes as part of the testing process and to generate test reports. A database of keyboard models and their associated points-of-interest (POI), keycap locations and pass / fail criteria definitions is maintained by PM-KB to simplify operations where multiple keyboards or keypads are used.

PM-KB application software can be paired with any ProMetric Imaging Colorimeter, allowing multiple options to achieve the pixel resolution, dynamic range, and cost required for the application.



Key Features

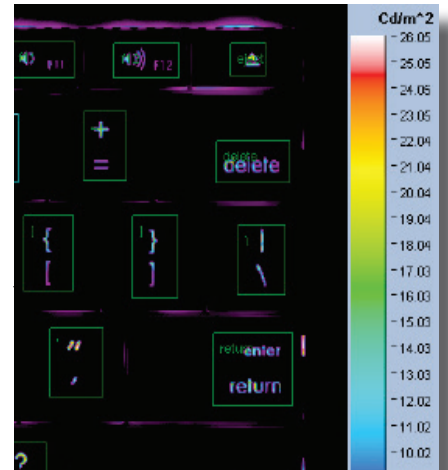
- Measures luminance uniformity and color differences between illuminated keyboard / keypad characters
- Allows operator to define custom points- and regions-of-interest to test characters with specific pass / fail criteria
- Tests to verify correct keycap installation, including location and orientation
- Access to ProMetric® Software tools for further post-measurement analysis
- Compatible with ProMetric I and Y series systems, providing Ethernet-based communication, electronic lens version, and high CCD pixel resolution (to 43MP)
- Tests uniformity within a character (16MP or higher resolution required)



Specifications*

Software	
Measured quantities	Luminance (cd/m ²), chromaticity (CIE, (u', v'))†
Pass/fail parameters	Minimum luminance uniformity, maximum color difference†, maximum allowable character/icon failures
User interface modes	Password-protected Administrator mode and Production (Operator) mode
Measurement templates	Configurations can be selected on-the-fly for multiple keyboard / keypad models
Operations integration	Radiant Vision Systems supports software integration with factory automation systems

Recommended Hardware Options	
IP-PMY16	Minimum resolution for Uniformity within a character function. Imaging Photometer with 4896 x 3264 pixel CCD resolution.
IP-PMY29	Can be used for Uniformity within a character function. Imaging Photometer with 6576 x 4384 pixel CCD resolution.
IP-PMY43	Can be used for Uniformity within a character function. Imaging Photometer with 8040 x 5360 pixel CCD resolution.
IC-PMI08	Imaging Colorimeter with 3296 x 2472 pixel CCD resolution.
IC-PMI16	Minimum resolution for Uniformity within a character function. Imaging Colorimeter with 4896 x 3264 pixel CCD resolution.
IC-PMI29	Can be used for Uniformity within a character function. Imaging Colorimeter with 6576 x 4384 pixel CCD resolution.



System Requirements

- ProMetric® Imaging Colorimeter or Photometer
- Windows® 10, 64 bit
- 16-32 GB RAM
- Additional system requirements vary by camera. See hardware specification sheet for more information.

* Specifications subject to change without notice.

† Chromaticity measurements require an imaging colorimeter.