RADIANT
VISION SYSTEMS

VIP™ (Vision Inspection Pack)

Machine Vision Extension for TrueTest™ Software

Applications

- Automated visual inspection of backlit icons, text, and unique shapes; for example: illuminated indicators, buttons and controls, LED-backlit components (functional, accent), instrument panels, and avionics
- Photometric and colorimetric measurement within a region
- Location and registration of regions for precise measurement and defect detection
- Rapid inspection of a series of components in production

Benefits

- Simultaneously inspect the integrity of icons and shapes while measuring photometric values
- Accurately register measurement regions and POI even if components move or rotate, simplifying component placement and system fixturing
- Inspect multiple illuminated regions in a single measurement image
- Capture values correlated to human visual perception of light and color
- Apply user-controlled test sequences and pass/fail criteria
- Supports testing to standards:
  - MIL-DTL-7788 (formerly SAE AS7788)
  - FMVSS 111

Software extension that adds machine vision functionality for photometric measurement

Radiant Vision Systems TrueTest™ Software provides a comprehensive set of tests for image analysis within a flexible framework that enables evaluation using a single test, or multiple tests in sequence. Test sequencing and pass/fail reporting functionality make TrueTest the ideal software package for production environments. TrueTest Software can be combined with any Radiant ProMetric® Imaging Colorimeter or Photometer to create a complete testing system for light and color measurement, so multiple options are available to achieve the pixel resolution, dynamic range, and cost required for any application.

The VIP™ (Vision Inspection Pack) license for TrueTest Software enables machine vision functionality for dynamic location and registration of unique illuminated regions such as icons, text, and shapes. VIP simplifies the visual inspection process combining defect detection and photometric measurement.

The VIP software license provides:

- **Photometric and Colorimetric Measurement**
  Evaluate brightness (Lv) and color (CIE xy, u'v') within a region.
- **Defect Inspection**
  Ensure regions are free from defects like inclusions or exclusions.
- **Responsive Registration**
  Dynamically locate and register regions as component locations and orientations change.

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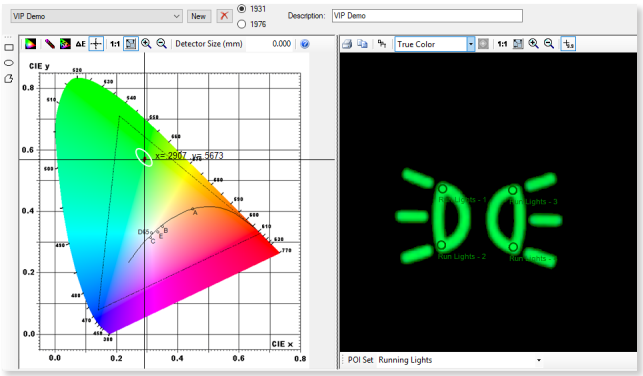
Key Features

- Adds machine vision inspection capabilities to Radiant TrueTest™ Software for advanced photometric measurement, including registration and defect detection.
- Fully integrated into standard TrueTest visual inspection functionality.

The VIP™ (Vision Inspection Pack) software license includes a range of functions, in addition to what is offered in standard TrueTest Software:

- VIP: Points of Interest
- VIP: Image Variation
- Advanced registration functions
- Detection of inclusions/exclusions
- Pass/fail on luminance, color, and overall quality

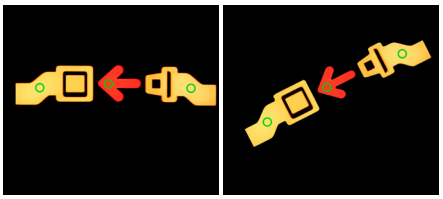
Examples of VIP™ functions:



Evaluation of photometric and colorimetric qualities: Measure within the precise area of an icon or shape to report overall luminance (Lv) and chromaticity (CIE xy, u'v'). Apply custom points of interest (POI) within each region to measure only POI values. Set pass/fail criteria based on measurement results for whole regions or only for applied POI.

Inspection and defect detection: Evaluate the integrity of icons and shapes against trained templates. Ensure regions are free from defects, such as unintended inclusions or exclusions, caused by inaccurate laser etch or errors in overlays, filters, and other substrate layers.

Precise registration: Register the exact measurement areas of icons and shapes for accurate photometric measurement and defect detection.



Responsive registration: Automatically locate and register icons or shapes in new orientations (as parts move or shift), with consistent POI placement.

VIP™ (Vision Inspection Pack) System Requirements

- ProMetric® Imaging Colorimeter or Photometer
- TrueTest™ version 1.8 or later
- Windows® 10, 64 bit
- 16-32 GB RAM
- Additional system requirements vary by camera. See hardware specification sheet.

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