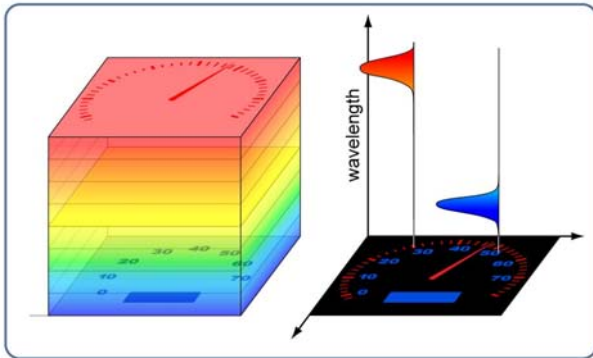




STiR 1.4 Spectrally Tunable Imaging Radiometer

- 1.4 MegaPixels
- 400-720 nm
- 1 nm accuracy
- 1E8 electronic dynamic range
- Calculation of spectral, chromaticity and radiometric quantities



A hyperspectral data cube is constructed by acquiring radiance images (layers) at many wavelengths. The spectral radiance at any point in the composite image is available for further analysis.

The Lumetrix **STiR 1.4 Spectrally Tunable Imaging Radiometer** combines a scientific grade 1.4 MPixel CCD camera with a Liquid Crystal Tunable Filter (LCTF), calibration and software. This novel imaging system enables accurate spectroradiometric measurement capabilities in line with today's spot spectroradiometers and at 1400x1040 resolution. By providing the spectral radiant power distribution at every point in a scene, the STiR 1.4 allows users to discriminate imaged artifacts like never before. Luminance and chromaticity results are more accurate than results obtained using imaging tristimulus colorimeters.

The system is sensitive enough to accurately and easily measure luminance and chromaticity of today's LED and fluorescent backlit displays below 1cd/m². Reducing imager resolution (CCD binning) can increase the sensitivity by up to 64X.

Applications

- Electronic Displays (LCD, PDP, ELP, OLED, CRT)
- Digital Projectors
- Automotive Interior Displays and Indicators
- Light Sources
- Lamps and Luminaires
- LEDs, OLEDs
- Indoor & Outdoor Scene Analysis

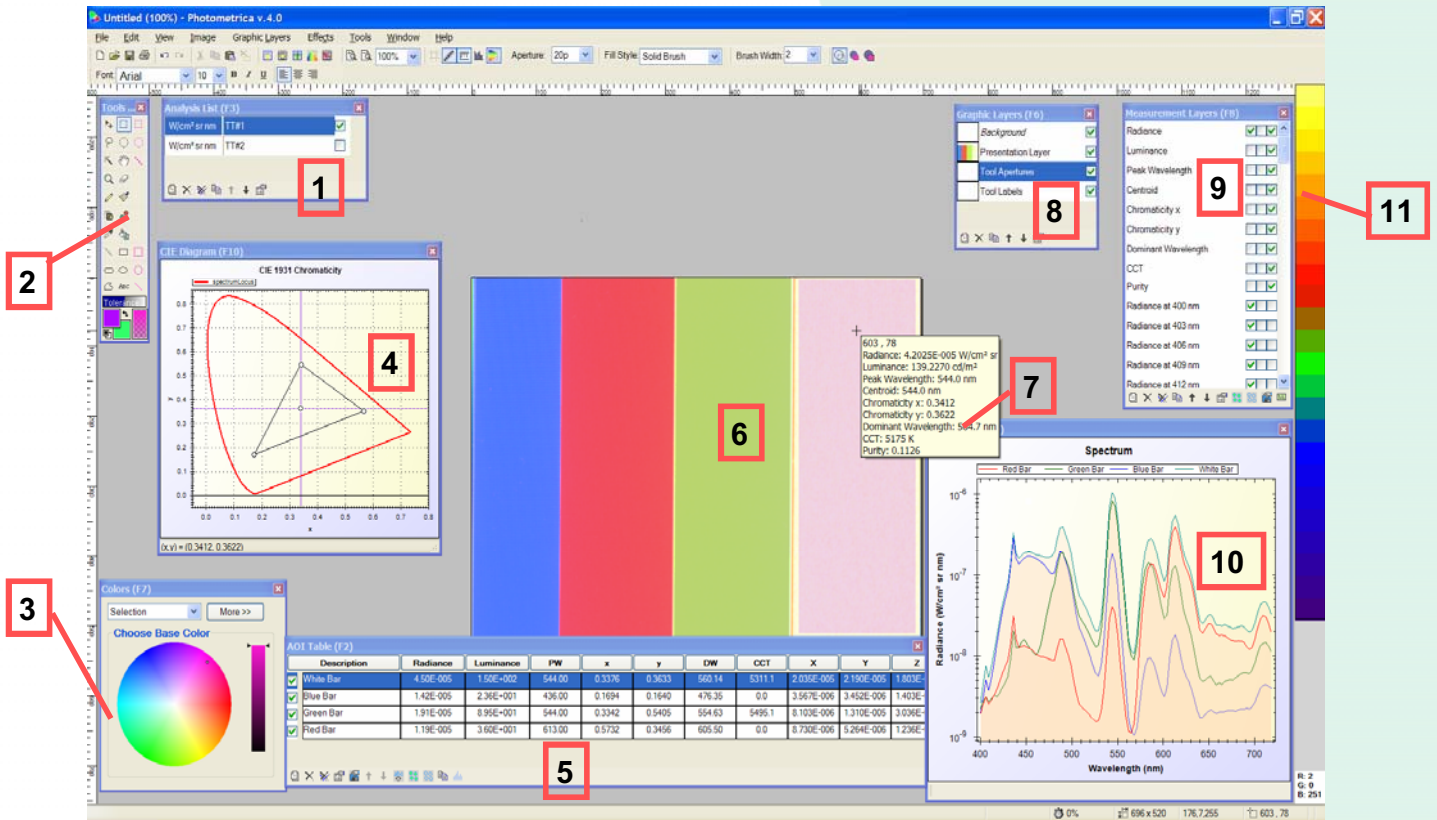
STiR 1.4 Specifications ^{*1}	
Image Resolution (binning)	1392 x 1040 pixels (1 x 1) 696 x 520 pixels (2 x 2) 348 x 260 pixels (4 x 4) 174 x 130 pixels (8 x 8)
Range	400-720 nm
Setting Accuracy	1 nm
Bandpass Resolution	7 nm
Stray Light	1E-5
Luminance Accuracy	3%
Noise (typical 20 pixel diameter aperture) ^{*2}	4.0E-12 W/cm ² sr nm
Max Radiance (excluding ND or iris factors) ^{*2}	1.1E-06 W/cm ² sr nm
Scanning Speed	variable from 2 sec to 30 sec per wavelength

^{*1} Subject to change without notice

^{*2} At full resolution

Photometrica hyperspectral software allows the mapping of any radiometric, spectral or colorimetric image layers. Up to hundreds of measurement layers are possible. Typical layers include:

- Radiance (at measured wavelength)
- Radiance (integral)
- Peak Wavelength
- Centroid Wavelength
- Luminance
- CCT
- Dominant Wavelength
- Purity
- RGB
- U', V'
- x, y



1. Analysis List
2. Tools for selecting Areas of Interest (AOI) and drawing
3. Color Palette for tools, etc.
4. Rendering of AOI in CIE color space
5. AOI Table with results
6. Pseudo color rendering of measurement layers
7. Tool tips reveal values of any layers at the cursor tip
8. Overlay/display layer selection (graphical overlay layers with variable transparency)
9. Layers for selection
10. Log/linear plotting for AOI
11. "Thermometer" for pseudo-color mapping of layers

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