VDU 65-CF 2D Spectral Imaging Colorimeters

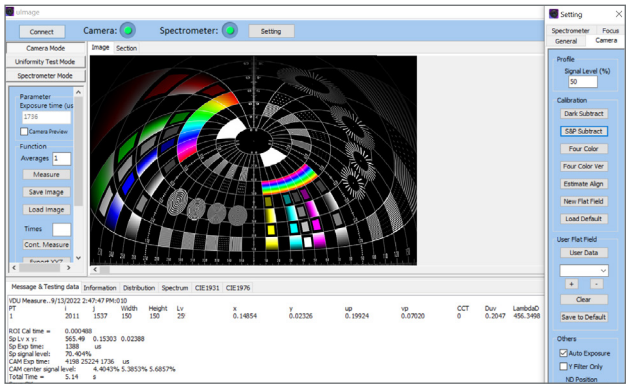
The VDU 65-CF is the next generation family of 2D spectral imaging colorimeters that includes a 2D CCD image sensor, CIE matching filters and high performance spectroradiometer (optional) for the optimization of the CCD, which are used to minimize the uncertainty due to spectral mismatch for DUT with highly saturated colors. This results in a rapid, highly accurate, and repeatable measurements system covering luminance, CIE chromaticity (XYZ value, x, y, u', v'), correlated color temperature (CCT), dominant wavelength, peak wavelength, spectral power distribution, and uniformity. The system is particularly well suited for test and characterization of LCD, Mini LED, OLED and quantum dot displays and backlight, automotive applications, and lighting. Laboratory grade accuracy and flexibility are combined with high speed and durability for demanding production environments.

High Resolution, Rapid, and Repeatable Display Characterization

Features

Lv, x/y, uniformity by luminance and color for:

- Size of OLED, LCD, and Mini LED displays
- Ultra-small size displays like LCOS, micro OLED, and micro LED displays
- Automotive applications including CID, HUD, instrument panels, interior lighting, tail lights, camera monitoring systems (CMS), mirrors, and more
- Keyboard or mini LED backlight module
- Indoor, outdoor, street, and tunnel lighting products



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GAMMA SCIENTIFIC

Camera Specifications		
Active Image (H x V)	9,344 x 7,000 (65 MP)	
Pixel Size	3.2 µm	
Sensor Size	37.36 mm Diagonal	
Measurement Range	0.01 cd/m² to 50,000 cd/m²	
Luminance*1*4	Accuracy	±1% compared to external spectroradiometer
	Repeatability	0.10%
Color*1*4	Accuracy	±0.001 in CIE1931 x, y compared to spectroradiometer
	Repeatability	0.0005 in CIE1931 x, y
Measurement Parameters	Luminance (cd/m²) Correlated color temperature (CCT) CIE chromaticity coordinates (1) CIE 1931 x,y coordinates (2) CIE 1931 XYZ value CIE (1) CIE 1931 x/y; (2) CIE 1931 XYZ Delta uv (Duv)/CIE 1960 uv Dominant Wavelength LambdaD Uniformity	

Spectroradiometer Specifications			
Wavelength Range (nm)	380 to 780		
Wavelength Data Increment (nm)	1		
Wavelength Reproducibility	± 1 nm		
Stray Light	-25 dB max.		
Polarization	< 3%		
Integration Time Range	100 µs to 5000 ms		
Luminance	Measurement range (for Accuracy and Repeatability)	0.05 ~ 5,000 cd/m²	
	Accuracy	±2%	
	Repeatability (2σ)	±0.2%	
Color	Measurement range (for Accuracy and Repeatability)	0.05 ~ 5,000 cd/m²	
	Accuracy	±0.002 in CIE1931 x, y	
	Repeatability (2σ)	0.0005 in CIE1931 x, y	
Dimensions (mm) with 50 mm lens	270 W x 263.6 L x 170 H		<6.5 kg
Environmental	15 to 35 °C, relative humidity 70% or less without condensation		

Field of View (FOV) with Different Lens Options		
Sensor Pixel Resolution	4,096 x 3,000 (12.3 MP)	9,344 x 7,000 (65 MP)
Field of View*3 (Full Angle, H x V degrees)	18 mm 43° x 32° 35 mm 23° x 17° 50 mm 16° x 12° 100 mm 8° x 6°	18 mm 79° x 64° 35 mm 46° x 35° 50 mm 33° x 25° 100 mm 17° x 13°

*1. Luminance and color testing are based on Gamma Scientific standard light source.
*2. Measure in normal mode with temperature 23 ±2°C and relative humidity 50% or less.
*3. Field of view is calculated. Actual field of view may vary depending upon setup.
*4. Accuracy and repeatability specifications are for 100-5000 nit range.
*5. Specifications are subject to change without notice.

Rev. 10.27.23

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