

GS-1164-6 Six-View Angle Spectroradiometer



The GS-1164-6 spectroradiometer provides six view-angles of display measurement with one click. Displays can be tested simultaneously from the six different view-angles to provide characterization and immediate insight into how they will be viewed in the real-world.

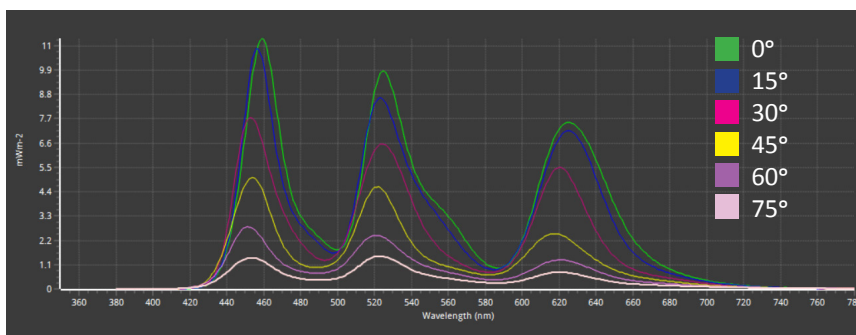
As part of the Vector line of Display View Angle Color Testers, this is **the only available six-angle spectroradiometer system** providing one-click, simultaneous six-angle display testing.

The cutting edge technology empowers laboratories and production companies to perceive what their customers will see from the different viewing angles for all their display-driven technologies. This enables laboratories and production to create better quality products, streamline their processes, and decrease their costs.

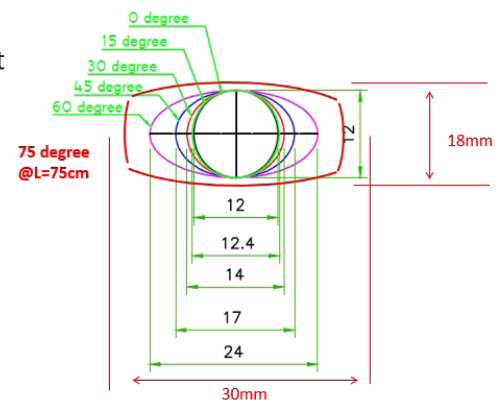
1 Click, 6-Simultaneous View Angles for Rapid, Accurate and Repeatable Display Characterization

Features

- Simultaneous luminance and color measurements at six different angles
- Rapid and accurate simultaneous measurements optimize the testing process with repeatable results
- Measure the true spectral content of color at six view angles
- Especially well-suited for high color saturation or wide color gamut OLED, micro-LED, and quantum dot displays
- Integrated flicker sensor: 100K samples/second
- Luminance, CCT, CIE x, y, u', v' and spectrum
- Contrast, white balance and color gamut determination
- Auto darkness correction
- USB 2.0 and RS232 SCPI command compliant and SDK/API library support



Simultaneous 6-angle spectral measurement of an OLED display



Measurement Spot Size according to angles

In addition to our exceptional technical and functional capabilities, Gamma Scientific is ISO/IEC 17025 accredited by NVLAP (NVLAP lab code 200823-0).

Measurement System			
Sensor	CMOS Linear Image Sensor		
Wavelength Range	380 to 780 nm		
Wavelength Data Increment	1 nm		
Numbers of Angles	6 angles, 0/15/30/45/60/75 degrees		
Measurement Spot Size	12 mm at 64.5 mm distance at 0 degrees		
Wavelength Reproducibility	± 1 nm* ⁶		
Spectrum- Single Angle Measurement Specifications			
Luminance* ^{1,2}	Measurement range	0.005~5,000 cd/m ²	
	Accuracy	± 1.5% 100 to 5,000 cd/m ²	
		± 2% 0.2 to 100 cd/m ²	
		± 4% 0.05 to 0.2 cd/m ²	
	Repeatability (2σ) ³	± 8% from 0.005 to 0.05 cd/m ²	
		± 0.2% 100 to 5,000 cd/m ²	
± 0.5% 0.2 to 100 cd/m ²			
Color* ^{1,2}	Measurement range	0.01 ~ 5,000 cd/m ²	
		Accuracy	±0.002 in CIE1931 x, y for white 100 to 5,000 cd/m ²
			±0.002 in CIE1931 x, y for white 0.2 to 100 cd/m ²
	Repeatability (2σ) ³	±0.003 in CIE1931 x, y for white 0.05 to 0.2 cd/m ²	
		± 0.006 in CIE 1931 x,y for white from 0.01 to 0.05 cd/m ²	
		0.0005 in CIE1931 x, y for white 100 to 5,000 cd/m ²	
Stray Light	-25 dB max* ⁴	0.001 in CIE1931 x, y for white 0.2 to 100 cd/m ²	
		0.002 in CIE1931 x, y for white 0.05 to 0.2 cd/m ²	
		± 0.006 in CIE 1931 x,y for white from 0.01 to 0.05 cd/m ²	
Polarized Error	< 2%		
Integration Time Range	100 μs to 5,000 ms (fast mode/normal mode)		
Measurement Speed* ⁵	1 to 2 samples/sec for Y at 0.5 cd/m ²		
	15 to 30 samples/sec for Y at 10 cd/m ²		
	20 to 30 samples/sec for Y at 50 cd/m ²		
	20 to 30 samples/sec for Y at 100 cd/m ²		
Digital Resolution	16 bits		
Flicker			
Measurement Range	≥5 cd/m ²		
Sampling Rate	100k samples/sec (adjustable)		
Contrast	Accuracy	±1% (30 Hz AC/DC 10% sine wave)	
	Reproducibility	±2% (60 Hz AC/DC 10% sine wave)	
JEITA	Accuracy	1% (20 to 65 Hz AC/DC 10% sine wave)	
	Reproducibility	±0.5 dB (30 Hz AC/DC 10% sine wave)	
Measuring Parameters (Flicker)	±0.3 dB (30 Hz AC/DC 10% sine wave)		
Max/Min, Average, RMS, Frequency, JEITA, VESA, Flicker Percentage (IES) and Flicker Index (IES)			
Features			
Capture Function	One time/Continuous		
Operation Mode	1. USB 2.0: High speed device , using LightTouch uSpectrum library. 2. RS-232: For PC and embedded purposes, using SCPI command.		
Integration Mode	Auto/Manual		
Dark Calibration	Yes (Auto)		
System Configuration			
Dimensions	310 x 190 x 64 mm (H x W x D)		
Weight	3.3 ±0.2 kg		

*1. Luminance and color testing are based on standard light source at 2856K, 6500K and 9300K.
 *2. Measure in normal mode with temperature 23 ±2° C and relative humidity 50% or less.
 *3. Repeatability test is based on the status of shutter opening
 *4. Input the 550 nm monochromatic light and measure the stray light ratio at 550 nm ± 40 nm.

*5. Testing condition: Sync mode at 60 Hz. Sample speed depends on the measured sample. If the sample uses PWM, it will take longer
 *6. Input source must be a stable light source.
 Specifications are subject to change without notice.