TOPCON

Ultra-low luminance Spectroradiometer

SPECTRORADIOMETER **SR-UL2**

For Ultra Low Luminance

Measuring more deep black with high speed

- Achieving ultra-low luminance as low as 0.0005cd/m^2
- High speed measuring about 17sec. at 0.005cd/m^2
- Wide dynamic range
  (0.0005 ~ 300,000cd/m^2)
- No warm up time required

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SR-UL2

Supporting Mega-contrast FPD with high accuracy at 0.0005cd/m²

Spectroradiometer SR-UL2 for ultra-low luminance, in response to the demands for the instrument, can be used for not only design and developing purpose but also quality control purpose.

■Feature

For FPD field

- **Shorten measuring time of gray scale evaluation by using High Speed mode.**
- **Accuracy is guaranteed at 0.005cd/m²**
- **Measuring time is about 17sec. at 0.0005 cd/m². (High Speed mode)**
- **The SR-UL2 can detect slight difference of gray scale evaluation.**

For Lighting field

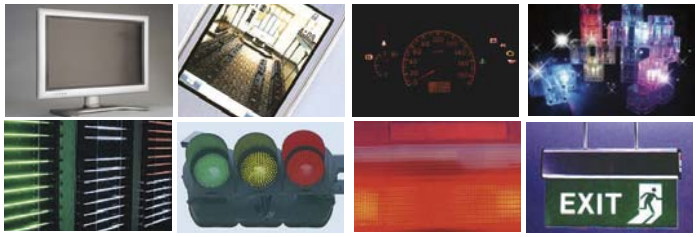
- **The SR-UL2 can measure the Spectral radiance at 1nm steps, The Color Rendering Index, The Dominant wavelength, and The Excitation purity.**

For Others

- **No warm-up time required.**

■Usage

For optical characteristic evaluation of Flat panel display such as Liquid crystal display, Organic EL, Plasma display.
Measurement in luminance, chromaticity, color rendering of CCFL, LED back light. Measurement of transparent characteristics of Polarizing film.
Large size television, Car navigation, Mobile computer, Meter in Automotive, LED, CCFL, Traffic light



■Specification

Optical system	Objective lens: f= 82 mm F2.5, Eyepiece lens: 5° view field, Diopter adjustment range: ±5diopter								
Dispersing element	Diffraction grating								
Photodetector	Electronically cooled linear CCD								
Measuring angle	2° ／1° ／0.2° ／0.1° Motor drive								
Measuring distance	350 mm to ∞ (distance from metallic tip of objective lens)								
Measuring diameter (mmφ)	Measuring angle	Measuring distance (mm)(distance from metallic tip of objective lens)							
		350	400	500	600	800	1000	2000	5000
	2°	10.0	11.7	15.1	18.6	25.4	32.2	66.4	169
	1°	4.99	5.84	7.55	9.26	12.7	16.1	33.2	84.4
	0.2°	1.00	1.17	1.51	1.86	2.54	3.22	6.64	16.9
	0.1°	0.50	0.59	0.76	0.93	1.27	1.61	3.32	8.44
Wavelength range	380nm to 780nm								
Spectral accuracy	±0.3 nm (on Hg emission line)								
Spectral band width	5 nm to 8 nm(half width)								
Wavelength resolution	1nm								
Measurement mode	Auto/manual (integral time/frequency), external vertical sync signal input								
Measuring object	Spectral radiance (W, sr^{-1}, m^{-2}, nm^{-1})								
Calculation function	Radiance (Le; W, sr^{-1}, m^{-2}), luminance (Lv; cd, m^{-2}), CIE1931 chromaticity coordinates xy, CIE1976 chromaticity coordinates u'v', tristimulus value XYZ,Correlated color temperature (Tc; K) and deviation (duv), CIE standard observer 2°/10°								
Accuracy	Luminance : ±2% Chromaticity(x,y) : ±0.002 (for standard illuminant A)								
Repeatability	Luminance ※1	1.5% (0.0005 to 0.005cd/m²)							
		0.4% (0.005 to 0.1cd/m²)							
		0.3% (0.1cd/m² or more)							
	Chromaticity ※2	0.005 (0.0005 to 0.005cd/m²)							
		0.0015 (0.005 to 0.1cd/m²)							
		0.0005 (0.1cd/m² or more)							
Range of guaranteed luminance accuracy (cd/m²) (for standard illuminant A) ※3	2°	0.0005 to 3,000							
	1°	0.0015 to 9,000							
	0.2°	0.0375 to 70,000							
	0.1°	0.15 to 300,000							
Polarization error	Luminance 1% or less Spectral radiance 2% or less (400nm to 780nm)								
Measurement time	NORMAL SPEED MODE: About 1 to 248seconds. HIGH SPEED MODE: About 1 to 17seconds.								
Interface	RS-232C Baud rate: 4800/9600/19200/38400 bps,								
	Parity: Odd/even/none Date length: 7/8 bits Stop bit: 1/2 bits								
	USB:USB2.0 (Full speed: 12Mbps)								
Power supply	Provided AC adapter AC100V-240V, 50/60Hz, DC12V								
Power consumption	Approx.36W								
Operating conditions	Temperature: 5℃ to 30℃ Humidity: 70%R.H. and below (No condensation)								
Storage condition	Temperature: 5℃ to 30℃ Humidity: 70%R.H. and below (No condensation)								
External dimensions	About 406 mm x 150 mm x 239 mm (L x W x D)								
Weight	About 5.5 kg (main unit only)								

※1 2σ from 10 times continuous measurement at measuring angle 2° in normal speed mode
※2 Max value - Min value from 10 times continuous measurement at measuring angle 2° in normal speed mode
※3 Measurable range in Normal and High speed mode.
※The measuring distance is the distance from the end of the objective lens metal fixture.
※The values of this table are design reference values and they are sometimes a little different from the actual values.

ISO 14001 JACO EC97J1081 — UKAS ENVIRONMENTAL MANAGEMENT 051

JCSS 0073

※Some screens are simulated.
※The specifications and external appearances of product in this catalogue may be changed without prior notice due to improvements.
※The catalogue includes products that are sold separately.
※The actual color of products may differ slightly from the catalogue due to lighting and printing conditions.

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Note Make sure to carefully read the "User's Manual" to ensure that you use the product properly and safely.

http://www.topcon-techno.co.jp/eng/