

MK350S Premium Handheld Spectroradiometer



The MK350S Premium is a stand-alone, handheld multi-function spectrometer. In addition to a full range of spectrometer functions, it can also be used as a Quantum PAR Meter or an oscilloscope. Users can choose from more than 40 light measurement units. Data can be downloaded via USB or Wi-Fi connection for storage and analysis, and uSpectrum™ / uFlicker™ software downloads are included, free of charge.

Precision, Power and Portability In a Compact & Lightweight Package

With an intuitive, user-friendly interface, the MK350S Premium offers a dynamic range from 1 to 150,000 lux. Automatic dark calibration is embedded to reduce noise interference over a range of operating temperatures and lighting environments.

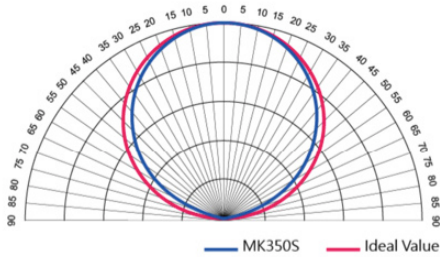
- Completely Stand-Alone Operation - no other equipment necessary (e.g., PC, Smartphone, etc.)
- Conforms to JIS AA Class & DIN Class B Requirements
- Built-in file browser allows for quick access to previously saved data
- 4.5" color touch screen with intuitive menu selection
- Wi-Fi remote control option with IOS or Android applications
- Automatic continuous measurements with data-save to an SD card
- PAR, Blue Light Hazard and Lux Image Distribution modes built-in
- NIST Traceable calibration

MK350S Premium Spectrometer

Key Measurement Modes & Display Results

Integrated Cosine Receptor

The integrated cosine receptor is optimized to conform to both JIS AA and DIN B standards.



Blue Light Hazard Mode

Based on IEC 62778 and IEC 62471 for the assessment of BLH light sources and luminaires, a variety of measurement features can be used to assess lighting parameters in the range of 400 to 500nm.



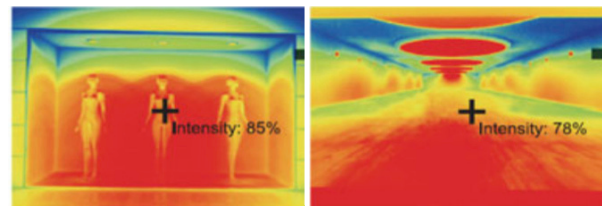
TM 30-15

This standard, developed by the Illuminating Engineering Society (IES) in 2015 provides for an accurate and consistent method of measuring lighting parameters such as CRI, GAI and CQS.



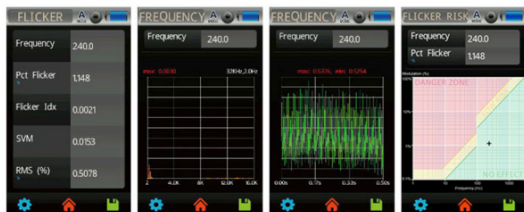
LUX Image Distribution

Lighting designers often prefer visual depictions of lighting intensity and uniformity. The MK350S Premium offers display modes perfectly aligned with this need.



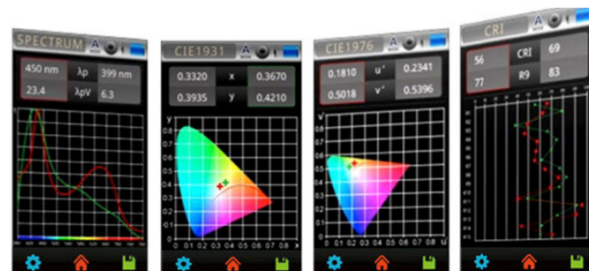
Flicker

With a sampling rate of 100kHz, parameters such as Flicker percentage, Flicker Index and Stroboscopic Effect Visibility and Flicker Risk Mode can be accurately determined.



Measurement Comparison Mode

The data interface allows data to be analyzed over time with side-by-side comparison of results.



Other Measurement Modes

LED BIN rating per ANSI78.377 functions are also built in. A log mode also allows for user-set exposure time, interval, counts and color change monitoring in real time. User-customizable pass/fail parameters can also be established in the Quality Checker Mode.

System Specifications

Capture Function	One-time or continuous			
Operation Mode	Stand-alone, WiFi or USB (to PC, mobile device or tablet)			
Integration Mode	Auto or Manual			
Automatic Dark Calibration	Auto mode			
Measuring Modes	Basic CIE 1976 Chromaticity Log Flicker Browser	Spectrum BIN Chart QC Checker Frequency Option	CRI TM30-15 Measurement Compare Flicker Risk	CIE 1931 Chromaticity Lux Image Distribution Transmit Blue Light Hazard
Measuring Capabilities	Light & Color Parameter	Illuminance (lux) or Foot-candle (FC) Correlated Color Temperature (K) CIE Chromaticity Coordinates CIE 1931 x,y CIE 1976 u', v' CIE 1931 XYZ ΔX, ΔY, ΔU', ΔV' Delta UV; DUV Dominant wavelength; Hue, λd (nm) Chroma Purity (%) Scotopic and Photopic ratio: S/P		
	Light & Color Evaluation	BIN ANSI C78.377 or customized Standard Deviation Color Matching (SDCM) Color Rendering Index (CRI, Ra) R1 to R15 Color Quality Scale (CQS) Gamut Area Index (GAI) TM-30—15 (Rf, Rg, Color Vector Graphic) Television Lighting Consistency Index (TLCI)		
	Flicker	Flicker Frequency (Hz) Flicker Percentage (%) Flicker Index Stroboscopic Effect Visibility Measure (SVM) Flicker Risk – IEEE PAR 1789		
	Photosynthetically Active Radiation	PPF 400-700 nm μmol/m ² /sec PPF UV 380-400 nm μmol/m ² /sec PFD-B 400-500 nm μmol/m ² /sec PFD-G 500-600 nm μmol/m ² /sec PFD-R 600-700 nm μmol/m ² /sec PFD-FR 700-780 nm μmol/m ² /sec		
	Spectral Radiation	Spectral Power Distribution (SPD) mW/m ² Peak Wavelength (λp) nm Peak Wavelength Value (λpV) mW/m ² Transmittance %		
	Blue Light Hazard	Blue Light Weighted Irradiance (EB) W/m ² Blue Light Hazard Efficacy of Luminous Radiation (K _{B,V}) W/Im Blue Light Hazard Risk Group (RG)		

System Specifications

Sensor	CMOS linear image sensor	
Illuminance Meter Class	Directional response conforms to JIS C 1609-1:2006 for General Class AA Directional response conforms to DIN 5032 Part 7 Class B	
Wavelength Range	380 nm to 780 nm	
Wavelength Data Increment	1 nm	
Spectral Bandwidth	12 nm	(half power bandwidth)
Wavelength Reproducibility	± 1 nm	(assumes stable input light source)
Measurement Range	1 to 150000 lux	
Illuminance ¹	Accuracy	± 2.5%
	Repeatability (2σ)	± 0.2% from 100 to 150,000 lux ± 0.5% from 5 to 100 lux ± 1 from 1 to 5 lux
Color ^{1,2}	Accuracy	x y: ± 0.002 from 100 to 150,000 lux x y: ± 0.0025 from 5 to 100 lux x y: ± 0.003 from 1 to 5 luxv
	Repeatability (2σ)	x y: ± 0.0002 from 500 to 150,000 lux x y: ± 0.0004 from 30 to 500 lux x y: ± 0.001 from 5 to 30 lux x y: ± 0.002 from 1 to 5 lux
CCT Accuracy	± 2%	
CRI Accuracy at Ra	± 1.5%	
Stray Light	-25 dB maximum	(550 ± 40nm monochromatic source)
Integration Time Range	60 μsec to 5 sec	
Digital Resolution	16 bit	

Flicker

Measurement Range	1 to 150,000 lux
Sampling Rate	100 kHz
Frequency Range	5 to 50 kHz
Frequency Resolution	2, 4, 8, 16, 32 Hz
Flicker Accuracy	± 5%

System Configuration

Display	800 x 480 mm (4.3 in) resistive touch LCD	
Maximum Files	21,000 with 8 GB SD card, compatible with Excel® and JPG	
Battery Operation	Up to 4 hours, onboard 3.7 V Li-ion	
External Power	Adapter (included), 2500mAh via USB connector	
Data Interface	SD card (SD2.0.SDHC up to 32 GB) or mini USB port (USB 2.0) or WiFi SD card (IOS or Android)	
Dimensions	163 mm (6.4 in) H x 81 mm (3.2 in) W x 26.6 mm (1.1 in) D	260 g (0.6 lbs) including battery
Language Options	English, Traditional Chinese, Simplified Chinese, Japanese, Spanish, German, French, Italian, Russian	
Camera Resolution	2M pixels	

¹ At 23 ± 2° C and relative humidity ≤ 50%

² Illuminant A at 2,856 K at 20,000 lux

³ 0 Hz AC/DC 10% sine wave unless otherwise specified

Specifications are subject to change without notice.